Liberia

Education Sector Analysis

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November 2016

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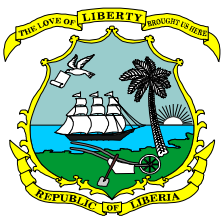

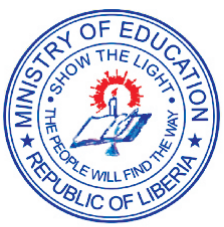

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Ministry of Education
Republic of Liberia
November 2016
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Acknowledgements

This report is the result of a collaborative effort by the Government of Liberia, the World Bank and other education sector stakeholders in Liberia. This Education Sector Analysis (ESA) serves three purposes: (i) to assess the recovery and performance of the Liberian education sector since 2006, (ii) to evaluate the influence and effectiveness of policies, interventions, and investments, and, (iii) to inform the development of new strategic priorities, plans, and policies in Liberia's Education Sector.

The core ESA team included members from the Department of Planning of the Ministry of Education, led by Deputy Minister A. Nimely, and supported by E. Jappah, M. Gorveaboe, T. Clarke, M. Prowd, A. Mbolonda, M. Hinneh, N. Sikeley, R. Beyan, Jr., B. Massaquoi, T. C. Kollie, J. Gbasakollie, L. Gaydeh, and D. Baysah. This team developed the outline of the ESA chapters, and identified critical themes and issues in each thematic area.

The ESA drafting team is grateful for the engagement of the Minister of Education, G. Werner; Deputy Minister for Instruction, R. Horton; Deputy Minister for Administration, A. Tingba; Assistant Minister for Fiscal Affairs and Human Resource Development, G. Gbilia; Assistant Minister for Basic and Secondary Education, F. Doe-Sumah; Assistant Minister for Teacher Education, A. Wright; Assistant Minister for Planning, A.D. Gbormie; Assistant Minister for ECE Y. Amnon; Assistant Minister for TVET, S. Dukuly; Assistant Minister for Student Personnel Services, A. Kuleh; Assistant Minister for General Administration A. Kimber and support from K. McLaren and N. Makan. The MoE EMIS team, led by L. Zinnah, played an important role in providing updated school census data for the 2015 school year.

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Preface: Liberia Education Sector SWOT

The Liberia Education Sector and the Ministry of Education have several strengths that can be drawn on to drive reform. The Education Sector Analysis provides background data and analysis for each of the issues identified in the table below. Strengths include a robust demand for education coupled with the strong human development and education reform agenda outlined in the Getting to Best Education Sector Plan. Key to the reform agenda is a focus on addressing priority quality issues identified in the ESA. Priority issues in quality include a focus on improving learning outcomes, ongoing professionalization of the teaching force, and strengthening of school level management, support and supervision systems.

Positive reform momentum, government commitment to increasing education financing, and the presence of a broad constituency supporting education reform are forces which can be drawn on to accelerate progress toward sector goals. Momentum for reform has been built on the success of several recent reforms. The presence of a broad-based reform constituency, inclusive of the Ministry of Education, Cabinet, Parliament, Development Partners, civil society stakeholders and stakeholders to the system at decentralized levels, is an additional strengthen that can be leveraged by reformers. Threats to reform are primarily 'outside' of the sector and include external shocks (e.g., macro-economic, environmental, food and climate shocks, and disease); population vulnerabilities (e.g., high levels of poverty, insecurity, and malnutrition); and patterns of marginalization and exclusion (e.g., gender, spatial and income inequality). Importantly, Ministry of Education (MoE) policy and programming could play a critical role in mitigating some of the effects of these threats.

The Liberia Education Sector Analysis builds on previous analytical and planning exercises, as well as new data and consultation, to identify the strengths and weaknesses of the Liberian education sector, as well as opportunities for, and threats to, reform. This analysis is intended to contribute to efforts to orient the sector toward attaining the developmental vision outlined in the Agenda for Transformation, namely that Liberia move toward a more equal, just, secure and prosperous society.

LIBERIA EDUCATION SECTOR SWOT

Strengths	Weaknesses
• Robust demand for education • Recent successful reforms • Focused reform agenda • Large non-government supply of education • Strong history in rebuilding the sector	• Educational quality: learning outcomes, quality standards, teachers • Teacher support and supervision • Sector financing
Opportunities	**Threats**
• Positive reform momentum • GoL commitment to increase funding to education • Broad reform constituency	• External shocks • Population vulnerability • Patterns of marginalization and disparity

Executive Summary

This Education Sector Analysis serves three purposes: (i) to assess the recovery and performance of the Liberian education sector since 2006, (ii) to evaluate the influence and effectiveness of policies, interventions, and investments, and, (iii) to inform the development of new strategic priorities, plans, and policies in Liberia's Education Sector.

County Context

Liberia, a small English-speaking West African country, became independent on July 26, 1847 and is Africa's oldest Republic. In 2003, after nearly 30 years of intermittent war which claimed an estimated 270,000 lives, Liberia transitioned to a state of peace and stability. Liberia has a population of approximately 4 million people, 60 percent of whom are under the age of 24 (LISGIS projections, 2014). Liberia is organized into 15 counties. The majority of the population resides in Montserrado County (which includes the country's capital, Monrovia), followed by Lofa, Bong, Nimba, and Grand Bassa counties.

Since the advent of peace, Liberia has made significant gains in human development; however the country's human development indicators remain low relative to neighboring countries. Since 2003, Gross National Income (GNI) per capita in Liberia has nearly doubled and life expectancy at birth has increased by more than eight years. Notably, female literacy has increased significantly over the course of the past eight years, with Demographic and Household Survey (DHS) household surveys reporting that female literacy increased from 41 percent (in 2007) to 48 percent (in 2013). In 2013, 69 percent of 15 to 19-year-old females were literate, compared to 29 percent of females aged 40 to 44-years-old, which suggests significant success in increasing literacy among younger females. However, even with these significant gains, Liberia's human development is low relative to its neighbors. In 2015, Liberia's Human Development Index placed 177 out of 188 countries surveyed by the UN Human Development Report 2015.

Poverty in Liberia remains a considerable challenge, with approximately 70 percent of the population living on less than $1.90 per day. The incidence of poverty in Liberia is 20 percentage points higher than most other developing countries in sub-Saharan Africa.

A large share of Liberian children and youth are vulnerable, with many facing multiple forms of exclusion. A number of social and economic factors contribute to the vulnerability of Liberian children and youth, including: malnutrition (which leads to stunting in childhood), poor health or disability, low levels of food security, and extreme poverty. Children and youth in poor households are also more vulnerable to external shocks (i.e., drought/flooding, disease/epidemics), and are more likely, at an early age, to be engaged in

household economic and income generation activities. Notably, surveys indicate that 32 percent of Liberian children suffer from stunting (WHO, World Bank statistics 2013), and approximately 40 percent of adolescents (aged 15 to 17) are working (SWTS, 2012). Other forms of disparity, such as rural status, being a girl child, going to an inadequately resourced school, or having a poorly educated parent, contribute to the likelihood that some children are less likely to benefit from the improved life chances related to completing a basic education, than others.

Poverty and economic inequality are deeply rooted in the bifurcated structure of the Liberian economy. Formal economic activity, which provides a small number of well-paying jobs, is primarily concentrated in, and in support of, the production and export of commodities (primarily rubber and iron ore). The majority of Liberian workers, however, are engaged in vulnerable and low paying informal and agricultural work. Such work includes subsistence agriculture, piecework, small-scale shops and services and other livelihood-supporting activities. It is worth noting that the public sector also accounts for a large share of formal employment.

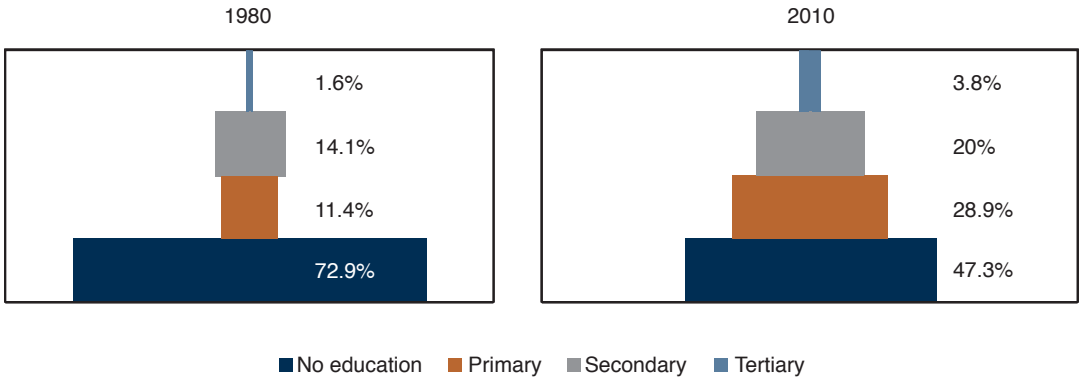
Liberia has made substantial political, economic and social progress since the cessation of the civil war in 2003. The transition to peace and stability enabled families and communities to rebuild their lives and for the Liberian government to support post-conflict reconstruction and stabilization. In 2013, following a decade of peace and increasing stability, the Government of Liberia outlined an Agenda for Transformation (AfT). The AfT seeks to further consolidate peace and promote inclusive growth.

Liberia is struggling to recover from the twin shocks, in 2014, of the Ebola crisis and the sharp decline in global commodity prices. Prior to the Ebola outbreak, Liberia had experienced rapid economic growth, with the annual Gross Domestic Product (GPD) growth rate averaging 7 percent between 2009-13, then one of the highest economic growth rates in the world. However, with the decline in commodity prices in 2014, and its concurrent negative effects for mining activities, the economy had been projected to decline in 2014. With the added shock of the Ebola crisis, the economy plunged into depression and deteriorated further in 2015. In 2014 Liberia's rate of GDP growth was only 0.7 percent; it fell to 0.3 percent in 2015. The IMF forecast a modest recovery for the economy in 2016 with GDP growth projected at 2.5 percent (WEO, 2016).

Human Capital Formation

The Liberian population has realized great gains in educational attainment since 1980. Between 1980 and 2010, the percentage of the population with "no education" declined by 25 percent. During the same timeframe, the share of the population that had attended primary education and the share of the population that had attended tertiary education more than doubled (ES-A). Nevertheless, in Liberia, 47.3 percent of the population has not attended school, a share that is well above the regional average of 34 percent.

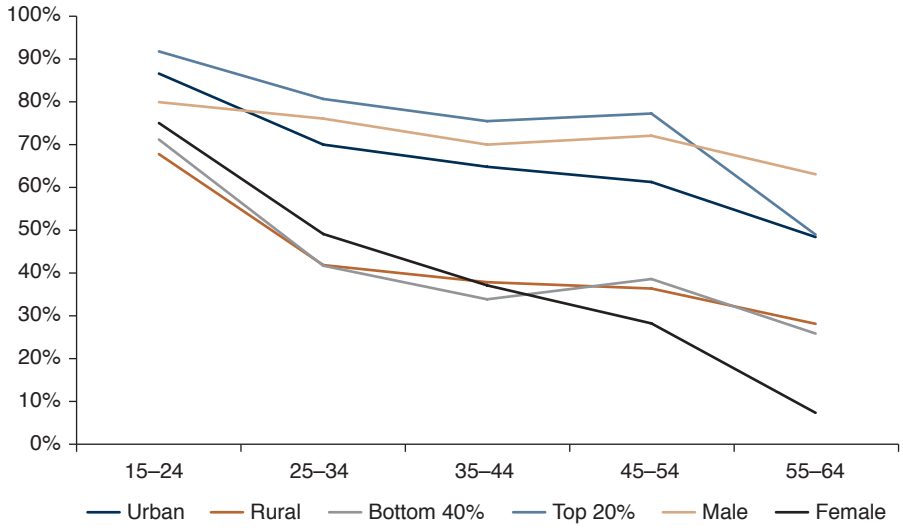
FIGURE ES-A Educational Attainment of the Whole Population



Source: Barro-Lee 2010.

Literacy attainment among the population varies, and shows significant inequality, by gender, locality and income (ES-B). People who are female, poor, and living in rural areas are less likely to be literate than their male, wealthy and urban counterparts. Strikingly, as illustrated in the figure below, in the three middle age cohorts (cohorts 25 to 34, 35 to 44 and 45 to 54 years of age) literacy gaps remain almost constant over time. This trend may in part be explained by the impact of the civil war—during which formal education nearly ceased to exist. Promisingly, in the youngest age-cohort, the literacy gap between males and females, and evidence of spatial and income related inequities, has narrowed. However, with the exception of gender, gaps in literacy attainment remain large at approximately 20 percent.

FIGURE ES-B Literacy by Gender, Locality and Wealth



Source: HIES 2014.

TABLE ES-1 Number of Students Enrolled in School by Level, Various Years

Level	1981	1984	2005/06	2007/08	2015
ECE	91,394	96,813	358,210	491,564	539,660
Primary	155,166	146,476	488,438	539,887	655,049
Junior High	34,365	40,307	98,448	102,642	166,957
Senior High	22,243	25,359	33,776	55,600	105,875
Total	**303,168**	**308,955**	**978,872**	**1,189,693**	**1,467,541**

Source: EMIS in respective years, World Bank 2010.

Enrollment, Completion and Exclusion

Over the past thirty-five years, enrollment in Early Childhood Education (ECE), basic education and secondary education in Liberia has increased nearly five-fold. Table ES-1 presents selected enrollment data from 1981 to 2015. In 1981, the system enrolled 303,168 students, while in 2015, 1.46 million students were enrolled. More children are enrolled in Junior High School (JH) and Senior High School (SH) than at any previous time in the country's history. While increased enrollment provides greater opportunities for more Liberian children, it also increases pressure on government resources, including the provision of teachers and classrooms.

Non-governmental schools (i.e., private, mission and community schools) account for 46 percent of student enrollment (Table ES-2) in Liberia. At the JH and SH levels, non-government schools account for the majority of student enrollment. In 2015, private and mission schools accounted for 41 percent of ECE enrollment, 44 percent of primary school enrollment, 55 percent of JH enrollment and 77 percent of SH enrollment. It is notable that the share of primary enrollment in private schools has grown over the past eight years. The share of primary school enrollment in private schools increased from 18.3 percent in 2007/08 to 29.8 percent in 2015.

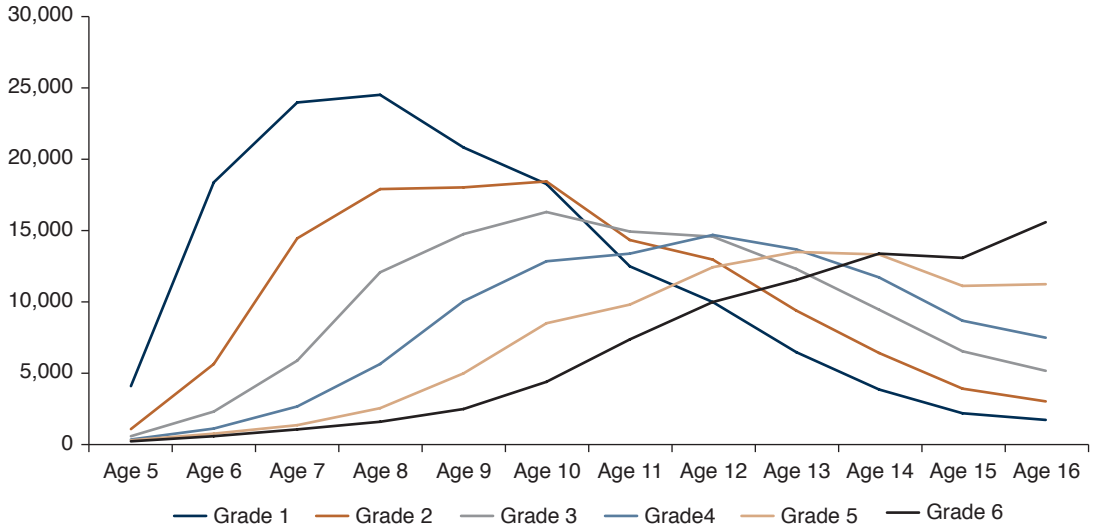
Overage enrollment is a significant challenge at all levels of the Liberian education system. Approximately 40 percent of primary school students are more than three years older than the age considered to be appropriate for the grade in which they are enrolled. Figure ES-C illustrates the age distribution of enrollment in primary education for grades 1 to 6. Each line represents a grade (the blue line is grade 1, the red line is grade 2, etc.). The x-axis plots age in years-of-age, while the y-axis plots the number of children enrolled for each age in each grade. The figure serves to highlight two critical features of overage enrollment in

TABLE ES-2 Share of Student Enrollment, by Ownership 2015

	ECE	Primary	Junior High	Senior High
Public	52.2%	51.5%	41.3%	30.9%
Private	28.7%	29.6%	36.8%	38.8%
Mission	12.6%	13.2%	18.8%	28.4%
Community	6.4%	5.7%	3.1%	1.9%

Source: EMIS 2015.

FIGURE ES-C Age Distribution of Enrollment, Primary Grades 1 to 6



Source: EMIS 2015.

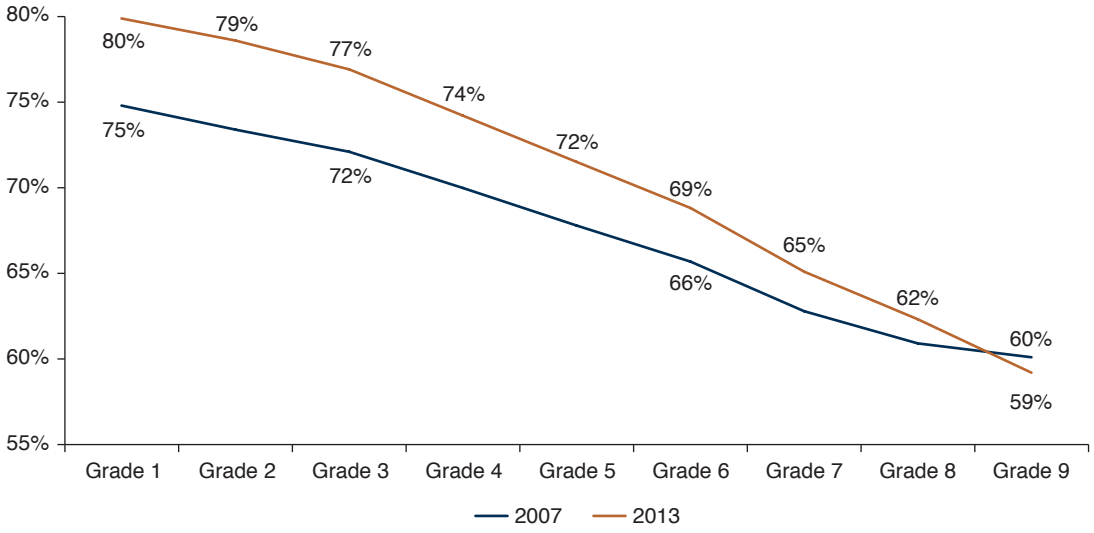
Liberia: (i) in all primary grades, the majority of enrolled students are three to six years older than the official age for the grade; and (ii) there is a wide distribution in the age range of students enrolled in each grade. Significantly, no one age group accounts for more than 20 percent of enrollment in any particular grade.

Children who are overage are less likely to attend school regularly, are less likely to become literate, and are more likely to face academic, social and disciplinary challenges. Overage children are also more likely to drop out of education compared to children who are at the appropriate age-in-grade (Ampiah, 2010, Lewin, et al 2011, UNESCO 2016, Liberia MoE 2010). Overage children are often silently excluded. In other words, while overage students may, technically, be enrolled in school, they are more likely to attend school less frequently or come to school late (because of household chores) and less likely to actively participate in learning activities.

The primary education completion rate (of children aged 15–24) increased from 44 percent in 2007 to 55 percent in 2013 (DHS 2007, DHS 2013). Of children who enroll in primary school, 69 percent 'survive' to grade 6 and 59 percent 'survive' to grade 9. Figure ES-D illustrates a cohort grade survival profile using DHS data from 2007 and 2013. The profile identifies the share of children who complete each grade and allows the reader to conceptualize the estimated grade-to-grade progression of a current cohort. The 2013 data illustrates an improved survival rate over students enrolled in 2007.[1]

[1] Note: The World Inequalities Database on Education draws on two different definitions to compute the primary completion rate. It is either (i) the percentage of children and young people aged 3–5 years above primary school graduation age who have completed primary school or (ii) the percentage of young people aged 15–24 years, who have completed primary school. In the ESA we use the second, more lenient definition. This is in part because of the severity of overage enrollment in primary schools.

FIGURE ES-D Cohort Grade Survival Profile, Children Aged 10–19, DHS 2007, 2013



Source: Filmer 2010 (using DHS 2007, 2013 data).

A number of supply and demand side variables contribute to overage enrollment and influence access to, and retention in, basic education. Based on a review of data sources (CWIQ 2010, DHS 2013, HIES 2014, UNICEF 2012) there are three prominent barriers to accessing basic education and undermining completion:

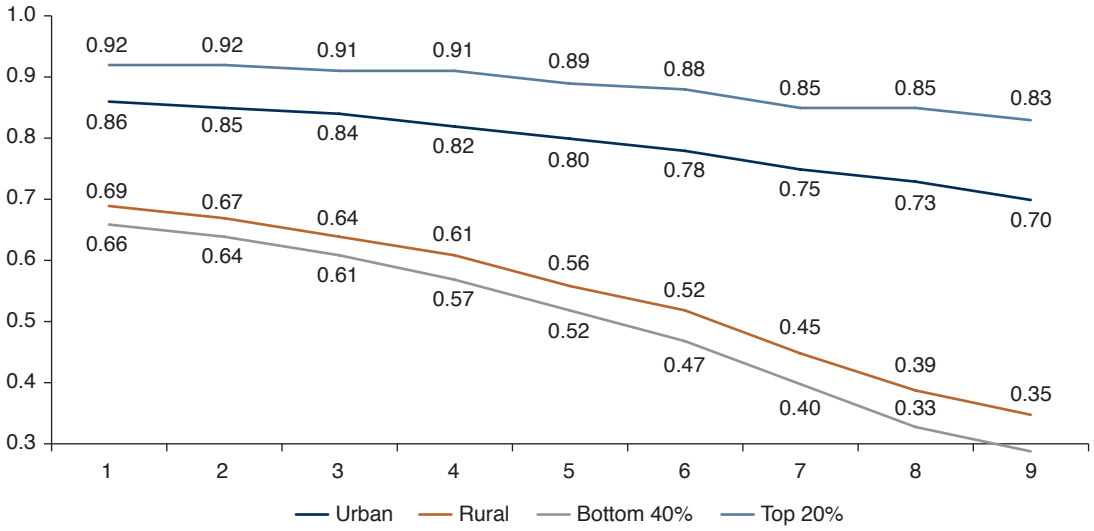
- the adverse effects of poverty, school costs and fees;
- the influence of household economic and income generating activities; and
- the significant negative influence of late enrollment and overage enrollment.

Decisions on the part of parents who believe that their child is too young for school, and distances between homes and schools, also contribute to late enrollment, which in turn, negatively affects retention. Gender represents an important demand side constraint impacting access and retention as evidenced by a primary completion rate of 63 percent for males compared to 48 percent for female students (DHS 2013).

Children from poor and rural households are less likely to complete basic education compared to children from wealthy and urban households (Figure ES-E). Analysis from DHS 2013 indicates that fewer than 47 percent of youth 10 to 19 years-of-age from households in the lowest two wealth quintiles survive to Grade 6. In comparison, 88 percent of equivalently aged youth from households in the highest quintile of wealth survive to Grade 6. In terms of locality, 70 percent of youth aged 10 to 19 years-of-age in urban areas survive to Grade 9, compared to only 35 percent of their peers in rural areas.

Nation-wide indicators are significantly influenced by a "Montserrado effect." Specifically, data and trends in Montserrado county significantly influence national datasets, but may not accurately reflect education trends outside of Montserrado county. Montserrado County is the country's

FIGURE ES-E Educational Attainment of Youth Aged 10–19 Disaggregated by Urban Rural Status and Wealth Quintile, DHS 2013



Source: Filmer 2010 (using DHS 2013 data).

economic hub, is home to more than one-third of Liberians, and, as a consequence is home to a significant share of the most educated Liberians. As a consequence, the inclusion of data from Montserrado in the national dataset can significantly influence national indicators.

The Junior High GER, female enrollment in primary school, the number of private schools, the number of female teachers, and Student to Qualified Teacher Ratios (SQTR) are each influenced by the Montserrado effect (Table ES-3). For example, in Montserrado County the GER at the JH level is 80.5 percent. This figure is 37 percent higher than the nationwide JH GER which stands at 52.7 percent. If data from Montserrado County are excluded, then the countrywide GER at the JH level falls to just 37.4 percent. In terms of female teachers, outside of Montserrado County, 21% of the teaching force is female. However, in Montserrado County, 32% of the teaching force is female—a figure that is 50% higher than the average posted by other counties.

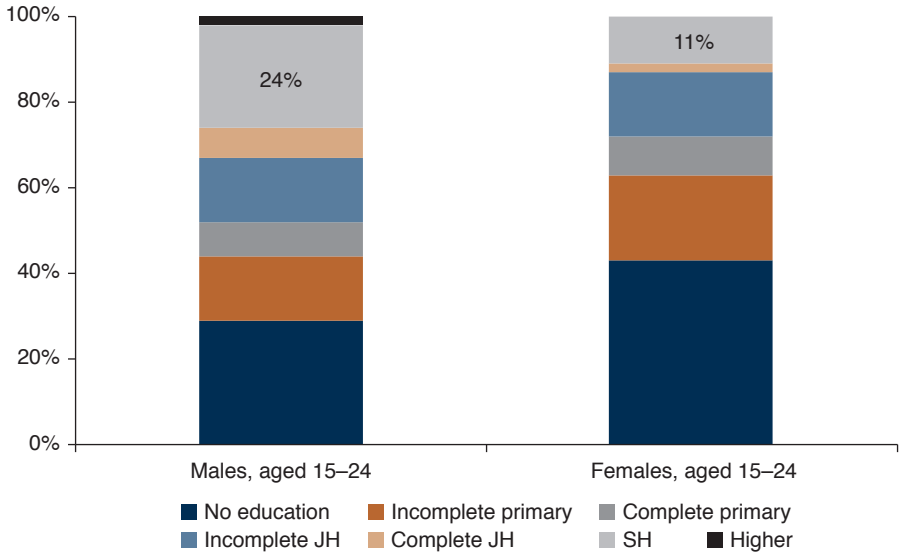
Over the course of the past eight years, female literacy and educational attainment rates have improved, however female educational attainment continues to lag that of males. Figure ES-F illustrates educational attainment

TABLE ES-3: Indicators Influenced by a Montserrado Effect

	Montserrado county	The rest of the country
Junior High School NER (Grades 7–9)	80.5%	37.4%
Female Enrollment Share (primary)	52.2%	46.9%
Number of private primary schools	1,126	432
Female share of the teaching force	32%	21%
PQTR	33.8	43.5 (mean)

Source: EMIS 2015.

FIGURE ES-F Education Attainment by Gender, HIES 2014



Source: HIES 2014.

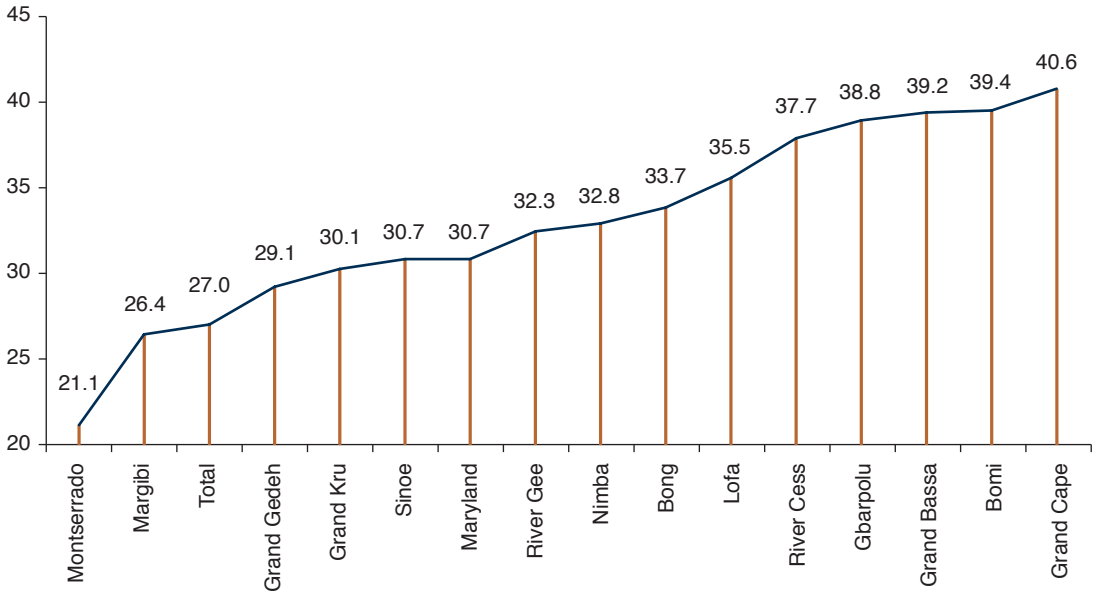
among 15 to 24 year-olds by gender. More than 30 percent of males in this cohort have completed JH or a higher level of education compared to fewer than 15 percent of females. Notably, 29 percent of males in this age cohort reported 'no education' compared to 43 percent of females.

Over the past eight years, girls have accounted for an increasing share of students sitting Grade 9 and Grade 12 exams. The Liberia Junior High School Certificate Examination (LJHSCE) and Liberia Senior High School Certificate Examination (LSHSCE), play a critical role in determining access to higher levels of education. Over the past several years the share of girls sitting for these exams has increased. During this same period, the pass rate of female students has lagged that of male students by approximately two to five percent.

The distribution of key educational inputs, including trained teachers, demonstrates high levels of disparity. The distribution of teachers, trained teachers, classrooms and textbooks among primary schools varies significantly. According to data collated through the Education Management Information System (EMIS) 2015 report, the student-teacher ratio (STR) across all schools and all levels of education ranges from 21.1 to 40.6, with a mean of 27.0. In six counties, the STR is above 35. Across all schools and all levels of education the SQTR ranges between 33.8 and 90.0, with a mean of 43.5. In eight counties, the SQTR is over 60 (Figure ES-G). These disparities compound efforts to address other challenges, due to the fact that: (i) teacher remuneration accounts for approximately 85 percent of MoE expenditure and (ii) access to a trained teacher is often associated with improvements in school quality and student learning outcomes.

Most sources of information indicate low levels of student literacy levels in early grades. Over the past eight years, there have been three baseline

FIGURE ES-G Student Teacher Ratio by County



Source: EMIS 2015.

studies of early grade literacy in Liberian schools. In each study, the mean score for Grade 3 students in connected text oral reading fluency was below 25 correct words per minute (see Table ES-4). In the Education Quality and Access in Liberia (EQUAL) study, the mean score for Grade 3 oral reading fluency was 19.9 correct words per minute, compared to a mean score of 25 correct words per minute on the EGRAPlus assessment, and an average of 18.9 correct words per minute for Grade 3 students assessed by the Liberia Teacher Training Program (LTTP) II study. International benchmarks associated with literacy and comprehension are set at an oral reading fluency of between 45–65 correct words per minute (RTI 2010).

Student performance on EGRA assessments is unevenly distributed, with a large share of students earning 'zero scores'. A 'zero score' is when a student fails to answer a single question on a sub-test correctly. In the oral reading fluency sub-section of the EGRA assessment, nearly 35 percent of Grade 2 students and 17 percent of Grade 3 students did not read a single

TABLE ES-4 EGRA Plus, LTTPII, and EQUAL Results of Grade 2 and 3 Students

Sub-test	EGRAPLUS		LTTPII		EQUAL	
	Grade 2	Grade 3	Grade 3 Cohort 1	Grade 3 Cohort2	Grade 2	Grade 3
Letter naming	55	67	72.0	65.2	69.6	84.2
Oral reading fluency (per minute)	14.5	25.1	7.6	18.9	10.4	19.9
Reading Comprehension (average score out of 5 questions)	22%	26%	10%	20%	—	—

Source: RTI 2009; King et al 2015, Hobbs and Davidson 2015.

TABLE ES-5 LSHCE Pass Rates, by Gender, 2012–2014

Year	Pass Rate (male)	Pass Rate (female)	Pass Rate (total)
2007	81.3%	79.8%	81%%
2012	74.8%	69.5%	72.5%
2013	69.5%	69.7%	69.6%
2014	48.5%	44.8%	46.8%

Source: WAEC 2015.

word (RTI 2009). The share of zero scores recorded by the EQUAL assessment were lower, with 20.9 percent of Grade 2 students and 7.5 percent of Grade 3 students earning zero scores in the oral reading fluency sub-test.

The uneven distribution of reading outcomes indicates that to acquire literacy some children are more likely to require additional or remedial support than others. In Liberia, poor households, and households in rural or remote areas, are more likely to be headed by an individual with lower levels of literacy and educational attainment than the general population (DHS 2013). Due to these structural disadvantages, children from poor and rural households are more likely to require additional support (e.g., access to effective teachers and reading materials and more instructional time) than children from a household where one or both parents can read and write in English.

While an increasing number of students are sitting the LJHSCE and the LSHSCE, pass rates have dropped, raising concerns about the quality of basic and secondary education. The LJHSCE pass rate dropped from 95 to 59 percent between 2007 and 2014, while the LSHSCE pass rates dropped from 81 to 48 percent over the same period. A further indicator for concern is that in 2015, not one of 25,000 students sitting for the University of Liberia entrance exam earned a passing score.

Liberia has made progress in increasing the number of solid and semi-solid classrooms, however high student enrollment, particularly in government schools, means that classrooms remain overcrowded as evidenced by high Student-Classroom Ratios (SCR). Since 2008, Liberia has constructed 372 government primary schools, equivalent to a 15 percent increase in the number of government schools offering primary education. However, due to high demand and limited resources to address supply constraints, 36 percent of ECE classrooms and almost 30 percent of primary school classrooms are located in "make-shift" and "partitioned" structures. Moreover, the SCR for ECE government schools stands at 64.4. In addition to the need to construct additional classrooms, there is significant demand for water, sanitation and hygiene (WASH) facilities (i.e., water points, latrines, and hand washing). The shortage of WASH facilities is most acute in rural schools (UNICIEF 2016).

The MoE has not finalized quality standards for schools, nor has it developed uniform tools for school inspection and the monitoring of school quality. The MoE has several policy documents and concept papers offering guidance on 'school quality' and frameworks for the development of school

quality standards and monitoring tools. However, these documents have not yet been developed into tools that can be used by district education officers (DEOs), school principals and communities to monitor and improve school quality.

Women and girls are under-represented in nearly all levels of education, including junior high, senior high, Technical and Vocational Education and Training (TVET), tertiary education, Rural Teacher Training Institutes (RTTIs) and the teaching force. Female students account for 37 percent of enrollment in higher education and just over 25 percent of students enrolled in the University of Liberia (NCHE 2012).

Pregnancy interrupts education for a large number of Liberian girls and young women. In a nation-wide study of out-of-school children conducted by UNICEF, 67 percent of households indicated that the main reason that a girl child in their household had dropped out of school was as a consequence of "pregnancy" (UNICEF 2012). For many students, drop-out is precipitated by being directed to attend night school whilst they are pregnant. A study conducted by UNFPA (2008) illustrates the scale of this challenge in its finding that 38 percent of women aged 20 to 24 had given birth by the age of 18.

Abuse, violence, sexual harassment and severe forms of gender-based violence are reported in many Liberian schools. The practice of sex for grades, sexual exploitation on the part of teachers who engage in transactional sex, has been documented in several reports (Passing the Test 2014, MoE 2015, Street Child 2016). Consultations informing this ESA suggested that addressing gaps in district level accountability (i.e., SRGBV reporting, referral and persecution) would be critical to more effectively responding to and reducing School-Related Gender-Based Violence (SRGBV). Encouragingly, several MoE-led and supported initiatives have commenced work toward addressing SRGBV and other school violence and safety concerns.

Several stakeholders to the sector expressed the need to raise awareness of inclusive education, and of the need to provide more policy clarity and implementation support for inclusive education and children with special needs. Issues identified during ESA consultations include: (i) the absence of policy and budget support for inclusive education; (ii) that EMIS significantly undercounts the number of children with special needs in Liberian schools; and (iii) that RTTIs provide no training for teachers with regard to inclusive education.

Over the course of the past eight years, the size of the Liberian teaching force more than doubled from 26,359 teachers to 55,243 teachers. The magnitude of growth in the teacher workforce has been greatest at the JH and SH levels, with a more than 50 and 80 percent increase, respectively. Due to the practice of some teachers working at multiple levels in the education system and the structure of the school census questionnaire, many teachers are double counted . Table ES-6 presents figures for the total number of teaching staff, including double counting, and the total number of teaching staff, not including double counting.

Table ES-7 tabulates the Liberian teacher workforce by level of education and type of school ownership for 2015. The majority of teachers work

TABLE ES-6 Number of Teachers by School Level, 2007/08 and 2015

Level	2007/08	2015
ECE	11,778	14,311
Primary	22,253	30,438
Junior High	8,228	12,983
Senior High	3,652	6,549
Total (double count)	**45,911**	**65,359**
Total teaching staff	**26,359**	**55,243**

Source: EMIS in respective years.

TABLE ES-7 Teacher Workforce by Sector and Type of School, All Schools, Unadjusted for Multi-Grade

Ownership	ECE	Primary	Junior High	Senior High	TVET & ALE	Total
Public	5,308	12,215	3,880	1,608	676	23,687
Private	5,668	10,808	5,537	2,890	356	25,259
Mission	2,479	5,676	3,072	1,916	69	13,212
Community	836	1,739	494	135	67	3,271
Total	**14,311**	**30,438**	**12,983**	**6,549**	**1,168**	**65,359**

Source: EMIS 2015.

in the primary school system. The majority of JH and SH teachers are employed in private and mission schools. Approximately 10,000 teachers work at multiple levels of the education system and as a consequence are counted twice in the below table. For example, a teacher teaching at the primary and JH level is captured as both a primary and JH teacher. While the school census counts each teacher only once (there are 55,243 teachers), due to the fact that just over 10,000 teachers teach at multiple levels, the "total" column adds up to 65,359.

Over the course of the past decade, the number and share of qualified ECE and primary teachers has realized significant increases (see table ES-8). The share of qualified JH and SH teachers, on the other hand, has declined significantly.

TABLE ES-8 Number and Share of Trained Teachers by School Level, Various Years

Level	2007/08		2015	
	#	%	#	%
ECE	3,392	29%	7,048	49.2%
Primary	8,952	40.0%	18,975	62.3%
Junior High	4,755	57.8%	4,295	33.1%
Senior High	1,918	53%	2,219	33.9%

Source: EMIS in respective years.

Female teachers are significantly under-represented in the MoE teaching force at all levels of education. In primary education, only 21 percent of teachers are female, while in JH and SH, female teachers account for eleven percent and seven percent of the teaching force, respectively. In ECE, 57 percent of teachers are female. While nearly half of Liberia's teachers work in rural areas; rural areas face severe difficulties in attracting and retaining teachers.

The MoE is in the process of conducting a teacher verification and testing exercise. To date 1,100 ghost teachers have been removed from the payroll, resulting in more than $1.5 million in payroll savings.

Approximately 26 percent of teachers working in government and community schools (ECE to senior high) are volunteer or "household" teachers. These are teachers who are not on the government payroll, but who are paid by households.

High levels of teacher absenteeism, long-term absenteeism, and teachers who abandon their post, are critical challenges facing the sector. In rural areas, teachers are often absent for many days due to the need to travel to banks in urban areas to collect salaries. The LTTP II (2016) noted that 'travel to collect paycheck' and 'money problems' accounted for 30 percent of teacher absenteeism. Teachers are also called on to attend workshops and training sessions which result in their absence from school. Unexcused teacher absence, and practices such as late arrival to work, or dismissing class early and going home, also contribute to losses of instructional time.

Many teachers encounter challenging working conditions on a daily basis, often with limited institutional support. A significant number of teachers work in unsafe or inadequate infrastructure, with few resources (chalk, textbooks, curriculum guides, etc.). Moreover, many teachers have challenging housing or living situations (insecure housing, the absence of clean water, no access to cell phone networks) and encounter additional challenges in the classroom (poor classroom discipline, unfavorable pupil teacher ratio, multi-age / multi-level learners, etc.). New teachers, many of whom are young and at the beginning of their careers, require support and guidance to be able to effectively respond to the challenges and opportunities they encounter as young professionals (MoE, draft Educator Management Policy, 2015).

There is growing demand for ECE, a sector already stretched with regard to government-provided human, financial and infrastructure resources. Notably, while the NER for ECE remains low (29.4 percent) the STR and SCR in government ECE schools are 37.7 and 64.4, respectively. Six counties report STRs for ECE of greater than 50.

The MOE has identified the strengthening of ECE quality as a key priority. With the exception of a small number of teachers who participated in ECE Bureau pilot initiatives, the vast majority of ECE teacher have not received ECE-specific training. ECE curricula, textbooks and teacher planners have been developed to cover the first four months of the academic year.

Many families, particularly in poor and deprived communities, may not understand the value of ECE. The levying of fees for ECE further contributes to the exclusion of children from poor households. Policy permits public ECE centers to charge a fee of 3,500 Liberian dollars per child on an

annual basis. ESA consultations and analysis of Household Income and Expenditure Survey (HIES) data indicate that fees constitute a significant barrier to children's enrollment in ECE classes.

There is a high incidence of overage enrollment at the ECE level: nearly fifty percent of children enrolled in ECE are of primary school age. According to the 2015 School Census, nearly 50 percent of children enrolled in ECE were between the ages of 6 and 11. Put another way, this means that there are over 250,000 children enrolled in ECE programs who should be in primary school.

Over the course of the past decade, Alternative Education has reached a substantial number of children and youth. The Accelerated Learning Program (ALP) and Alternative Basic Education (ABE) programs were designed to provide education to overage children and youth, as well as young adults not enrolled in mainstream schools. Following the announcement by the government to phase out ALP, enrollment in the program dropped dramatically from 75,820 in 2008 to 2,396 in 2015. In recent years, ABE providers have enrolled over 10,000 students annually. ABE enrollment is 58 percent female, and many students are young mothers.

The MoE in coordination with development partners and NGOs are working to develop a harmonized policy framework for alternative education. Such a framework would include space for an 'accelerated learning' program and adult education, and identify pathways to further education, training and the world of work.

Over the past four years, the share of government expenditure allocated to the education sector has ranged between 10.6 to 13.5 percent. In 2008, the share of public expenditure allocated to education was 11.4 percent. In the fiscal year 2015/16 the share of government spending allocated to education grew to 13.5 percent of government spending due to the Economic Stabilization and Recovery Plan (ESRP). The ESRP, which incorporated a particular focus on health and education sectors, was designed to guide the economy back to the path it had been on prior to the Ebola epidemic. Budget reductions planned for FY2016/17 will impose significant financial constraints on the education sector. The consolidated government budget for 2016/17 is projected at USD 556 million compared to USD 623 million in 2015/16. The share of public expenditure allocated to education is expected to rebound to 14.5 percent by the 2019/20 fiscal year.

TABLE ES-9 Education Expenditure, 2012/13–2019/20

	2012/13	2013/14	2014/15	2015/16
Education Budget	76,928,436	70,942,476	64,156,410	83,832,003
Total GoL Budget	672,050,000	582,931,413	605,900,000	622,743,420
% of Edu in GoL Budget	11.45%	12.17%	10.59%	13.46%
GDP (USD billion)	1.75	1.96	2.01	2.04
Education as % of GDP	4.41%	3.62%	3.19%	4.12%

Source: GoL national budget.

TABLE ES-10 Share of Each Level of Education

	2012/13	2013/14	2014/15
ECE	11%	11%	11%
Primary	40%	40%	40%
Junior Secondary	9%	9%	8%
Senior Secondary	4%	4%	4%
TVET	6%	5%	5%
Higher Education	29%	30%	32%

Source: Budget execution report and budget document (see ESA Annex).

The share of education funding allocated to primary education (Grades 1–6) has averaged 40 percent over the past three years (Table ES-10). Funds extended to primary education include the costs of pre-service training for primary school teachers. ECE accounted for 11 percent of sector expenditure, while JH (Grades 7–9) received approximately 9 percent of sector expenditure in the period under review. Higher education accounted for almost a third of expenditure in the sector over the past three years. Unit costs vary considerably by sub-sector, with TVET and teacher training standing out as relatively expensive.

Employee compensation accounts for the vast majority of education related expenditure, accounting for 86 to 94 percent of MoE spending between 2012/13 and 2014/15. Since the bulk of the funding allotted to the MoE services salaries and subsidies, there is very little room to meet the needs of the Ministry's numerous programs. For example, the government has been unable to devote significant resources to capital investment in education. As a consequence, the majority of funding for education related capital expenditures has come from external partners.

Payroll verification and reform and subsidy reform could result in substantial savings and efficiency gains. Envisaged payroll verification and reform will increase payroll efficiency by removing ghost teachers from the payroll, combine the supplementary payroll with regular payroll, and move staff of retirement age to the pension fund. In terms of subsidy reform, MoE expenditure on subsidies averaged approximately $2.5 million per annum over the past three years, with the exception of 2014/15. The provision of subsidies, including the transfer of public resources to private and faith-based institutions is currently done on an *ad hoc* basis.

Other sources of funding to the education sector include, inter alia**, support from development partners, household expenditure and concessional agreements.** In recent years, donor financing in support of the education sector has been equivalent to approximately half of the MoE budget. Available data suggests that Liberian households, particularly wealthy households and households in urban areas, spend a significant amount of money on education. Several large corporations are engaged in multimillion dollar concession agreements with the Government of Liberia to fund and support school systems in various counties (e.g., Firestone schools).

The Education Reform Act (2011) frames and gives content to MoE governance structures, management roles and responsibilities at all levels, and MoE accountability systems and processes. The passing of the Act (2011) resulted in changes to the MoE central office organogram and the establishment of county and district level governance and management structures.

The MoE has implemented two joint education sector reviews (JESR) since 2011. Notably, these exercises did not systematically appraise sector progress towards achieving the targets and priorities outlined in the Education Sector Plan (ESP) 2010-2020. The MoE produced JESR reports in 2013 and 2015, as well as annual school census reports for the years spanning 2012 to 2015. In 2011, the MoE changed their methodology for conducting and analyzing data from the annual school census. This transition resulted in some gaps in data collection between 2012 and 2014. The 2015 school census successfully addressed the majority of concerns identified in previous years.

Critical barriers to improving quality at the school level relate to school-level management, support and supervision. Particular issues in this regard include the need for more effective monitoring and enforcement of teacher discipline, including absenteeism and other violations of the code of conduct; the need to more effectively and systemically provide teacher and principal instructional, material and infrastructure support; and the need to develop systems that provide effective guidance for, and management of, school quality improvement efforts. Currently, principals, DEOs and County Education Officers (CEOs) are expected to address these issues. However, in most instances these staff have not received the relevant professional training, central office support, or the material resources required to effectively lead and implement their management and accountability responsibilities.

Several recent evaluations highlight the limited resources available to CEOs and DEOs and the extent to which a lack of petroleum, poorly maintained vehicles, and communication challenges (e.g., airtime, and access to networks) combined with the logistical challenges inherent in reaching rural areas restrict the ability of CEO and DEO personnel to execute key responsibilities of their jobs. As a consequence, critical components of the envisioned accountability system, such as holding administrative hearings on teacher offenses and conducting school inspections, do not occur with the regularity envisioned in policy.

The majority of school principals have not received training related to their key job responsibilities, and do not receive adequate resources or professional support to effectively execute their responsibilities. Since 2008, Liberia's sector plans and analyses have emphasized the need for providing professional development to school principals. While some small pilots have been implemented, the sector has yet to see a systemic program of school principal professional development and support.

International and local partners have extended technical expertise, provided financial and material support, and introduced innovative practices to Liberia's education sector. Partners have included multilateral funding agencies, international non-governmental NGOs, local NGOs and advocacy

groups, corporations implementing schools in concession areas, religious and private organizations, local and international foundations and trust funds, and many other organizations that work across sectors and geographic areas in Liberia. Over the life of the ESP 2010–20, external funders have made significant contributions to the following MoE priorities: professional development for teachers, Alternative Education (ALP and ABE), payroll verification, decentralization, infrastructure development, girls' education, cross-cutting gender initiatives, and Technical and Vocational Education.

Recent experience suggests that expectations on the part of donors and partners regarding the integration of externally funded programs into MoE systems should be tempered given the limited absorptive capacity of the MoE resource envelope and institutional structures. Recent externally funded programs in alternative education, decentralization and early grade reading have not yet been streamlined within MoE systems. Currently, programs to ensure textbook provision, the implementation of the annual school census, major school infrastructure projects and the training of a new cohort of 'B' certificate teachers rely on significant external funding. This does not mean that that these interventions and related funding are unimportant to the development of the sector. On the contrary, this analysis argues that, given the existing constraints on the MoE budget and fiscal space and the magnitude donor financial and human resource contributions to the sector, it may be unrealistic to expect that all externally funded initiatives achieve 'sustainability, or that they are transferred to full MoE ownership, in the near term.

Country Context

This chapter provides an overview of the demographic and macroeconomic context of the Liberian education sector. The chapter assesses demographic pressure on the education system to deliver basic education services for a growing school aged population and analyzes the socioeconomic factors that affect demand for education, such as poverty, health, and issues of fragility and vulnerability. The negative influence of these constraints can be mitigated, in part, through increased resourcing of the education sector. As a consequence, the chapter also reviews government financing of the sector.

Political Geography

Liberia, a small West African country, became independent on July 26, 1847 and is Africa's oldest Republic. Liberia is bordered by Sierra Leona, Guinea, and Cote d'Ivoire and the Atlantic Ocean. The country is organized into four regions: North Central, South Central, South Eastern and North Western. These regions are further sub-divided into a total of 15 counties. There are over 16 indigenous ethnic groups in Liberia, with the majority of the population being composed of indigenous people. The Kpelle, concentrated primarily in central and western Liberia, are the largest ethnic group. While English is the official language, Liberia is a multilingual country.

FIGURE 1-A Map of Liberia

Indigenous languages of Kpelle, Bassa, Mano, Klao, Loma, Dan and Kisi, for example, each have over 100,000 native speakers.

Liberia is a post-conflict country. In 1979, a *coup d'etat*, led by Samuel Doe precipitated a period of nearly thirty years of intermittent civil war and chaos. During this period, violence claimed the lives of an estimated 270,000 Liberians, and led to the forced displacement and migration of millions of citizens. In 2003, Liberia commenced a transition to a state of peace and stability and, as families and communities rebuilt their lives, the Liberian government began the work of post-conflict reconstruction and stabilization. By 2013, after a decade of post-conflict reconstruction, the Government of Liberia outlined an Agenda for Transformation. The AfT sought to build on ten years of stability and set the country on a path toward inclusive growth and development (MoPEA 2012).

The Demographic and Social Context

Demographic Trends

The government of Liberia has conducted four national censuses; the most recent census was carried out in 2008. The population of Liberia grew from approximately 1.0 million in 1962 to 3.5 million in 2008. In comparison with other countries in the region, the population of Liberia is relatively small. However, Liberia's annual population growth rate of 2.5 percent is relatively high. It is projected that Liberia's population will almost double between 2008 and 2030.

Following a period of de-urbanization in the mid-1990s, Liberia has experienced an increase in urbanization. Prior to the civil war, and during the Doe era, Liberia experienced increasing urbanization with the share of the population in urban areas growing from 35 to 58 percent between 1980 and 1991. However, between 1991 and 1997 the share of the population living in urban areas dropped to 43 percent. The process urbanization has since resumed, with the share of the population living in urban areas rising to 46 percent in 2005 and to 50 percent in 2015. The bulk of the urban population is concentrated in the Monrovia—Montserrado urban complex, which has a population of over 1.4 million people.

Liberia is a young country: approximately 40 percent of population is under the age of 15, and one-third of population aged between the ages of 15 and 35. The relatively high share of youth in the total population is expected to remain fairly constant for the next decade and will continue to place pressure on education services.

The uneven distribution of population and educational resources is a challenge for Liberia's education system. Approximately 75 percent of the country's estimated 4.5 million citizens live in the "big six" counties: Montserrado, Nimba, Bong, Lofa, Grand Bassa and Margibi. This pattern is consistent with the distribution of the school-aged population (see Annex I, population projections), one-third of which lives in Montserrado County.

TABLE 1-1 Demographic Trends and Projections, 1984–2020

	Census Year				Projection Year				
	1962	1974	1984	2008	2015	2017	2020	2030	2050
Population (thousand)	1,016	1,503	2,102	3,477	4,503	4,730	5,091	6,414	9,436
Average Annual Growth Rate (%)	—	3.3	3.4	2.1	3.2	—	2.6	2.6	2.4
Sex Ratio (number of male per 100 female)	—	—	108.0	104.3	—	110.0	—	—	—
Population Under 15 Years (% of total)	42.0	44.2	45.5	41.9	42.3	41.7	40.6	37.5	32.0
Urban Population (% of total)	20.0	29.5	39.8	47.1	49.7	50.5	51.8	56.2	65.2
Life Expectancy at birth, total(years)	35	42	47	58	61	—	63	66	70
Mortality rate, infant (per 1,000 live births)	211.4	177.5	155.9	72.5	52.8	—	—	—	—
Birth rate, crude (per 1,000 people)	49.2	49.1	48.1	38.3	34.6	—	32.7	29.5	23.2
Death rate, crude (per 1,000 people)	79.9	87.5	93.3	87.0	82.9	—	77.7	69.6	59.2

Source: LISGIS data (LISGIS, 2009), Health Nutrition and Population Statistics.

Socioeconomic Factors

Widespread poverty remains a considerable socioeconomic challenge for Liberia. Approximately 70 percent of the population lives on less than $1.90 per day, which is, on average, 20 percentage points higher than other developing countries in sub-Saharan Africa. While GNI per capita has nearly doubled since 2003, and life expectancy at birth increased by more than 8 years between 2003 and 2015, Liberia continues to exhibit one of the lowest human development indexes in the world, ranking 177th out of 188 countries surveyed in 2015 (UN Human Development Report 2015).

Several key health indicators demonstrate improvement since 2003. In particular, infant and under-five mortality rates have declined significantly. Infant mortality rate dropped from 101 to 52 deaths per 1000 live births between 2003 and 2015, under-five mortality also dropped from 194 to 71 deaths per 1000 live births between 2003 and 2013. Malaria remains Liberia's leading cause of morbidity and mortality, followed by diarrhea and acute respiratory infections. The national HIV/AIDS prevalence rate is 1.5 percent compared to an estimated rate of 5.2 percent in 2006. Malnutrition, primarily among women and children, remains widespread with 32 percent and 15 percent of children under the age of five demonstrating stunting and being underweight, respectively (World Bank statistics 2013).

Fragility and Vulnerability

Liberia enjoys a relatively stable and democratic system of government. President Ellen Johnson Sirleaf is due to complete her second and final six-year term in 2017. Presidential and Legislative elections are scheduled to take place in October 2017, and a newly elected government will be inaugurated in January 2018. The expected political transition has created some uncertainty.

On 30 June 2016, the Government of Liberia assumed responsibility for the nation's security from the UN Mission in Liberia (UNMIL). Concurrently, there was a drawdown of UNMIL's presence by nearly 3,260 personnel. The handover of security responsivities to the sovereign government represents an important milestone for Liberia and the international community, but has the potential to contribute to uncertainty in the security environment. The president of Liberia has requested UNMIL to remain in Liberia until after the 2017 elections. In December 2016, the UN Security Council extended the mandate of UNMIL for a final period until March 2018. The Council further reduced the size of the military deployment from 1,240 personnel to a ceiling of 434 personnel.

Poverty and economic inequality are deeply rooted in the bifurcated structure of the Liberian economy. Formal economic activity is primarily concentrated in activities related to the export of commodities (primarily rubber and iron ore) and is exposed to the macro-economic uncertainty and fluctuations in global commodity prices. The majority of Liberian workers are engaged in livelihood-supporting activities and vulnerable informal and agricultural work (for example, subsistence agriculture, piecework, small-scale shops and services).

Three-quarters (75 percent) of the working population is engaged in some form of vulnerable employment. Labor force participation in Liberia is 62.8 percent. The profile of the labor force is that 30.8 percent work in the formal sector, 36.6 percent work in agriculture, and 28.9 percent are retained in informal or household employment. The remaining 3.7 percent are not employed (Labor Force Survey 2010). The vulnerable employment rate, equivalent to the proportion of self-employed workers and family workers as a share of total employment, is 77.9 percent. The share of workers engaged in the informal economy is 68 percent (2010 Labor Force Survey). Economic insecurity and other forms of household vulnerability result in many children and youth having to participate in economic activities to support the household, and, as children get older, to participate directly in income generating activities.

In Liberia, there are high and persistent levels of gender and income inequality. Female literacy has demonstrated an upward trajectory, off a low base, over the course of the past eight years, rising from 41 percent in 2007 to 48 percent in 2013 (DHS 2007, DHS 2013). Intergenerational improvements in female literacy are attested to by the fact that in 2013, 69 percent of 15 to 19-year-old females were literate compared to just 29 percent of females between the ages of 40 and 44. However, international surveys attest to comparatively high levels of gender and economic inequality in the country. Liberia ranks 146th out of 155 countries surveyed by the UN Gender Inequality Index and most sources point to relatively high levels of income inequality (UN Human Development Report 2015). The Government of Liberia, through the Ministry of Gender, is implementing several initiatives aimed at addressing gender inequality, and is mainstreaming gender programming in other ministries.

A large share of Liberian children and youth are vulnerable, and face multiple forms of exclusion. A number of social and economic factors

contribute to the vulnerability of Liberian children and youth, including: malnutrition (which leads to stunting in childhood), poor health or disability, low levels of food security, and extreme poverty. Children and youth in poor households are also more vulnerable to external shocks (for example, drought, flooding, disease and epidemics), and are more likely, at an early age, to be engaged in household economic and income generation activities. Vulnerability, when coupled with other forms of disadvantage, such as rural status, being a girl child, going to an inadequately resourced school, or having a poorly educated parent, contribute to the likelihood that some children are less likely to benefit from the improved life chances related to completing a basic education than others.

The Government of Liberia, inclusive of the Ministry of Education, has funded several interventions to mitigate the causes and effects of violence, gender inequality, the marginalization of rural and remote populations, and the exclusion of children with disabilities. Existing and emergent plans continues to work to address these issues, in part with an increased focus on better targeting programs toward vulnerable populations.

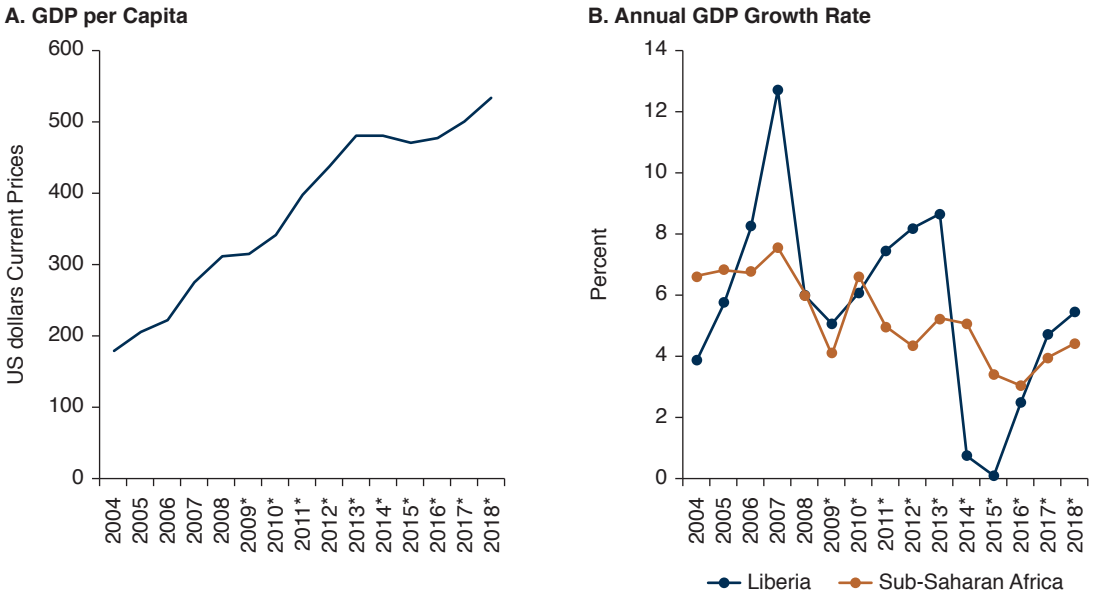
The Macroeconomic Context

Liberia is in the process of recovering from the twin shocks of the Ebola crisis and the effects of a sharp decline in global commodity prices. Prior to the Ebola outbreak, Liberia experienced rapid economic growth, with the annual GPD growth rate averaging 7 percent between 2009–13. However, with the decline in commodity prices in 2014, and its concurrent negative effects for mining activities, the economy stalled in 2014. In 2014 Liberia's rate of GDP growth was only 0.7 percent; GDP growth fell to 0.3 percent in 2015. The IMF forecast a modest recovery for the economy in 2016 with GDP growth projected at 2.5 percent (WEO, 2016).

Liberia faces severe macro-economic and budgetary constraints and weak growth prospects in the medium term. The continued shock derived from a significantly deteriorated terms-of-trade and the reversal of private investment inflows due to the outbreak of the Ebola Virus Disease (EVD) have prolonged Liberia's post-Ebola economic recovery. Economic recovery is expected to be driven by a new gold mining concession coming on stream and improved services as rural and urban markets re-open. Major downside risks remain for Liberia, given its disproportionate dependence on the export of rubber, iron ore and oil palm to drive growth, employment and revenues for the fiscus.

Liberia is under pressure to create sustained economic growth. Post-conflict economic performance resulted in average annual GDP per capita growth of 3.5 percent between 2004 and 2014. The volume of GDP per capita tripled during this period as illustrated in Figure 1B (panel A). Nevertheless, GDP per capita remains very low on an internationally comparative basis. Current economic headwinds have significantly slowed GDP per capita growth. GDP per capita was $455 in 2015, still significantly below the average for Africa's low-income countries of $800 per capita.

FIGURE 1-B GDP Trends and Projections



Source: IMF 2016.

Government Finance

Between 2004 and 2013, government revenues as a share of GDP steadily increased. During this period, tax revenue increased and external debt was significantly reduced through substantial debt relief. Prudent fiscal policies and the strengthening of public financial management practices contributed to a near doubling of government revenue, the resumption of direct budget support, and the initiation of large infrastructure development projects without the accumulation of expenditure arrears.

The Liberia Revenue Authority (LRA) continued to demonstrate improved revenue collection capacity even in the midst of the Ebola crisis. The projected tax revenue for FY2015 budget was revised down by 18 percent to accommodate the impact of the Ebola crisis. Nevertheless, the tax collected by the LRA exceeded the pre-Ebola estimate by 0.7 percent, contributing to an accommodative fiscal position during the crisis. Due to the effects of tax reform and ongoing economic recovery, it is expected that domestic revenue will increase by 1.7 percent as a share of GDP in FY2016 (IMF, 2015a).

It is likely that Liberia will continue to rely on external support in the medium term. Thanks to strong support from the international community, the government has maintained the fiscal deficit at a manageable size (8.1 percent of GDP in 2015 and 8.5 percent of GDP in 2016). Donors pledged approximately $1.1 billion in additional Ebola-related assistance in 2015, including $231 million in budget support. Timely disbursements of these funds is essential to ensure smooth implementation of the FY2015 budget. At the same time, significant external and fiscal financing needs remain,

TABLE 1-2 Fiscal Operations of the Central Government, FY2009–18

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013*	FY 2014*	FY 2015*	FY 2016*	FY 2017*	FY 2018*
	(Percentage of GDP)									
Total Revenues	28.0	32.3	36.6	27.8	29.9	27.4	32.3	31.2	30.6	27.2
Revenues	25.2	30.8	36.6	26.1	27.5	23.5	22.4	22.5	23.1	24.1
Grants	2.8	1.5	3.9	1.7	2.4	3.9	9.9	8.7	7.5	3.1
Expenditure/ Net Lending	29.7	31.6	37.4	31.0	31.5	29.3	40.4	39.7	35.7	33.1
Current expenditures	25.7	28.0	30.2	27.0	26.6	24.3	31.8	29.2	27.5	25.4
Capital expenditure	4.0	3.5	7.2	4.1	4.9	5.0	8.6	10.5	8.2	7.8
Overall Balance										
Including Grants	–1.7	0.7	–0.8	–3.2	–1.6	–1.9	–8.1	–8.5	–5.1	–6.0
Excluding Grants	–4.5	–0.8	–4.7	–4.9	–4.0	–5.8	–18.1	–17.2	–12.6	–9.0

Source: Liberian authorities and IMF staff estimates and projections.

*: projections

particularly for FY2016, which need to be covered by grants, inasmuch as possible, to avoid worsening Liberia's debt burden (IMF, 2015b).

Liberia plans a widening fiscal deficit in the medium term in alignment with their second Poverty Reduction Strategy (PRS2). The government has articulated a five-year development plan (in PRS2) in support of the country's goal to achieve middle income status by 2030. The government's plan focuses on five strategic pillars, with an estimated FY 2012/13 to FY 2016/17 implementation cost of $3.3 billion. Activities are aimed at increasing productivity, boosting economic growth, and improving social inclusion. Implementation is expected to streamline current spending by 1 percent of GDP to finance the fiscal gap. The government has concurrently been working to clean the payroll, by eliminating ghost and duplicate workers, with an estimated savings of 1.5 percent of GDP.

Government expenditure was significantly scaled up after the Ebola outbreak. In order to balance increased expenditure with the need to maintain effective fiscal management, the government placed a moratorium on all non-essential purchases, such as vehicles and office supplies, reduced fuel and lubricant expenditure by 25 percent and limited non-essential foreign and domestic travel. However, maintaining government spending has been critical for supporting demand in the economy and preventing a further collapse in confidence and general business activity.

Education finance in Liberia is derived from multiple sources including the government, donors and private out-of-pocket contributions. The share of donor financing, at over 50 percent, is relatively high. However, there is no systematic mechanism to track donor contributions to the sector. Rather, tracking comes from reports, such as public expenditure review exercises implemented on an ad hoc basis. The majority of donor supported

BOX 1 Impacts of Ebola Outbreak

The Ebola Virus Disease (EVD) outbreak severely impacted Liberia's economic and social progress. Liberia experienced 10,675 EVD cases and 4,809 deaths between the outbreak of the epidemic in March 2014 and the World Health Organization's (WHO) declaration that the country was Ebola-free on September 3, 2015.

Economic impacts: In the short-term, the crisis caused a significant disruption of economic activities resulting to lower levels of employment, investment, income and demand for goods and services. The mining sector, which accounted for 56 percent of exports in 2013, experienced delays in the expansion of production and curtailed new investment. A slightly below average harvest was projected for the agricultural sector, with reductions in areas hardest hit by Ebola and flooding in the southeast region. The services sector, which comprises approximately half of the economy, and provides employment to approximately 45 percent of the labor force, was severely hit. Wholesale and retail traders reported a 50 to 75 percent decline in turnover. In the medium-term, the agriculture sector may encounter delays in recovery due to disruptions to farming, which may have adversely affected the production cycle, for example with regard to seed and fertilizer procurement. Delayed investment in mining and infrastructure projects may dampen medium-term growth prospects.

Social Impacts: Poor households were most adversely affected by the crisis, and faced a significant reduction in already low incomes. Surveys indicated that 64 percent of self-employed workers in urban areas, and approximately 35 percent of rural subsistence farmers, had lost their livelihoods by November 2014. Food insecurity has risen due to a decline in the supply of food, and diminished purchasing power. Approximately 5,900 Liberian children lost one or both parents to Ebola and schools were closed between May 2015 to February 2016.

Ebola Recovery Plan: The Liberian government has worked intensively in implementing the Liberia-Economic Stabilization and Recovery Plan (ESRP). The plan includes three broad strategic interventions: Recovering Output and Growth; Strengthening Resilience and Reducing Vulnerability; and Undergirding Public Finances and Ensuring Services Delivery. The Plan is to be implemented in FY2015-16 and FY2016-17 with a financing gap of $812 million.

Source: World Bank (2014), IMF (2015) and IMF (2016).

development funds are channeled outside the national budget system and directly to implementing agencies.

Public expenditure in support of the education sector includes all funds spent by any line ministry or government institution that contributes to the sector. The volume of public education expenditures has increased by 80 percent since 2009, however, the share of total education spending as a share of total government spending has remained relatively constant, at approximately 13 percent over the past six years, even in the period spanning 2009/10 and 2011/12 when government expenditure as a share of GDP rose. From a regional perspective, Liberia's share of education spending as a proportion of total public expenditure remains low. Education spending in Liberia, as a share of total public expenditure, is below the 20 percent Global Partnership for Education's minimum benchmark and the government's target of 20 percent as articulated in the Education Sector Plan 2010–20.

Developmental Vision

The Government of Liberia has articulated the following developmental vision for Liberia: that Liberia move toward a more equal, just, secure and prosperous society. The Agenda for Transformation (AfT) affirmed the

TABLE 1-3 Education Expenditure, 2010/11–2015/16

	2010/11	2012/13	2013/14	2014/15	2015/16
Education Budget	53,005,030	76,928,436	70,942,476	64,156,410	83,822,000
Total GoL Budget	408,380,000	672,050,000	582,931,413	605,900,000	622,740,000
% of Edu in GoL Budget	12.98%	11.45%	12.17%	10.59%	13.46%
% of Edu in GoL Budget	13.00%	11.60%	12.50%	10.30%	13.50%
GDP (USD billion)	1.54	1.746	1.962	2.01	2.02
Education as % of GDP	3.44%	4.41%	3.62%	3.19%	4.15%

Source: GoL national budget.

government's commitment towards the achievement of these developmental goals, and recognizes the significant challenges facing government and the Liberian people. Liberia has realized significant gains towards improving human development, stability and democratic governance over the course of the past decade, however, these gains remain fragile.

The Government of Liberia and the MoE have articulated their support for the Sustainable Development Goals (SDGs). The MoE has reinforced its commitment to the SDGs (Table 1-4) in recent policy documents and statements, including the Ministry's commitment to improving the quality of education and affirming the role that education can play in supporting the development of more just and inclusive societies.

TABLE 1-4 Sustainable Development Goals Related to the Education Sector

SDG 4	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
SDG5	Achieve gender equality and empower all women and girls
SDG8	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
SDG 10	Reduce inequality within and among countries
SDG 16	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

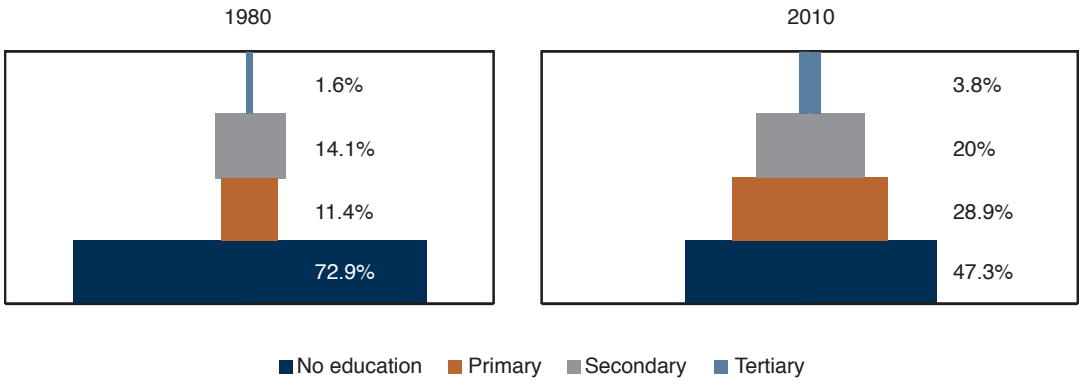
Human Capital Formation

Education Attainment

The Liberian population has realized great gains in educational attainment since 1980. Between 1980 and 2010, the percentage of the population with "no education" declined by 25 percent. During the same timeframe, the share of the population that had attended primary education and the share of the population that had attended tertiary education more than doubled (2-A). Nevertheless, in Liberia, 47.3 percent of the population has not attended school, a share that is well above the regional average of 34 percent.

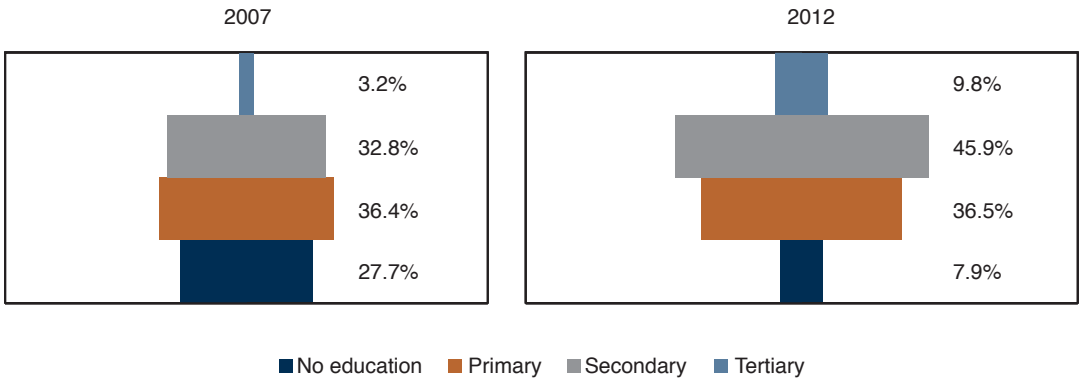
Youth have realized significant gains in educational attainment. More than half of the youth population (age 15–35) in Liberia has gained access to secondary and/or higher education. Over the course of the past seven years, youth have demonstrated gains in access to post-primary education and more youth are accessing secondary education than at any time in Liberia's history.

FIGURE 2-A Educational Attainment of the Whole Population



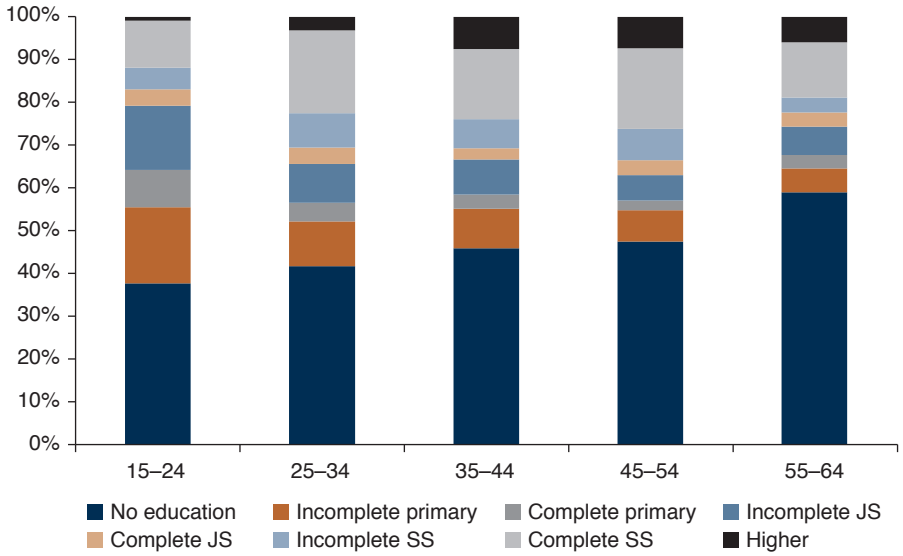
Source: Barro-Lee 2010.

FIGURE 2-B Educational Attainment of the Youth (age 15–35)



Source: DHS 2007 and SWTS 2012.

FIGURE 2-C Education Attainment by Age Cohort



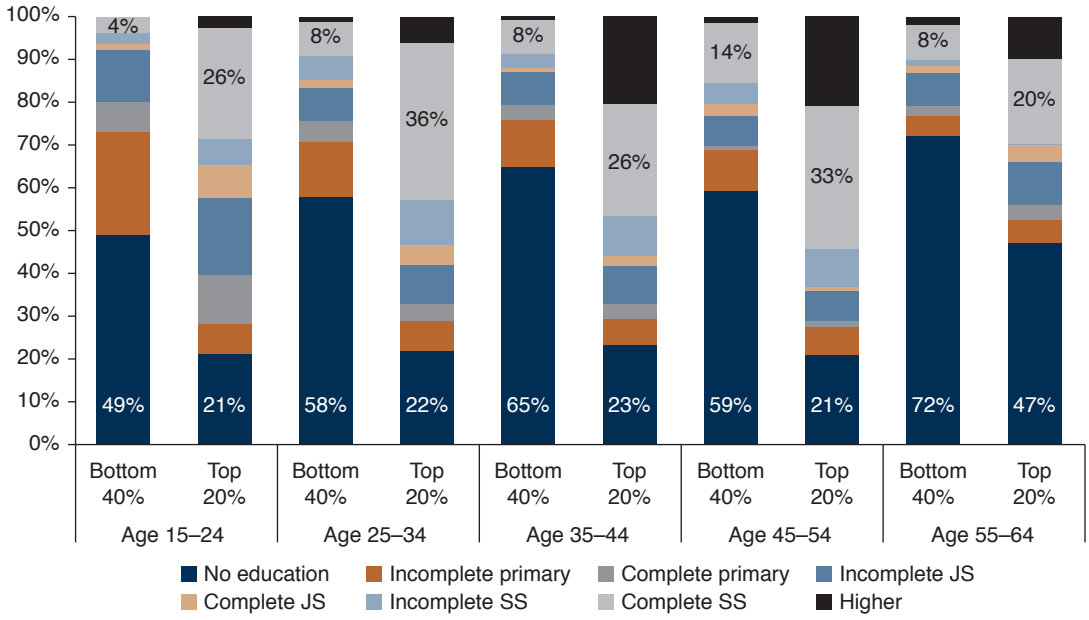
Source: HIES 2014.

Educational attainment varies significantly across generations. Importantly, an increasing number of Liberians have accessed education at all levels—from primary to tertiary. The influence of the civil war is seen in the cohort aged 35 to 44 years of age, which demonstrates lower levels of access to secondary school than the cohort aged 45 to 54 years of age. Decades of civil conflict undermined the quality of education provision, to the extent that the generation that was of school-going-age during the war demonstrates significantly lower literacy and educational attainment compared to older generations.

Poverty is one of the main barriers to achieving higher levels of educational attainment (Figure 2-D). Approximately half of the population in the poorest two wealth quintiles (the poorest 40 percent of households) have never gone to school (HIES 2014). Additionally, individuals from poor households are more likely to dropout, as evidenced by lower completion rates for all levels of education. Finally, individuals from poor households are the least likely to access to higher education. The impact of income on educational attainment is evidenced by the fact that 36 percent of 25 to 34 years old from high wealth households complete secondary school compared to just 8 percent of their peers in the lowest two wealth quintiles. Secondary and higher education are the main conduits to formal employment and higher levels of income. As such, the current education system does not extend many opportunities to children from poor households to improve their life chances. Note: Figure-D illustrates percentages with "no education" and "complete secondary school."

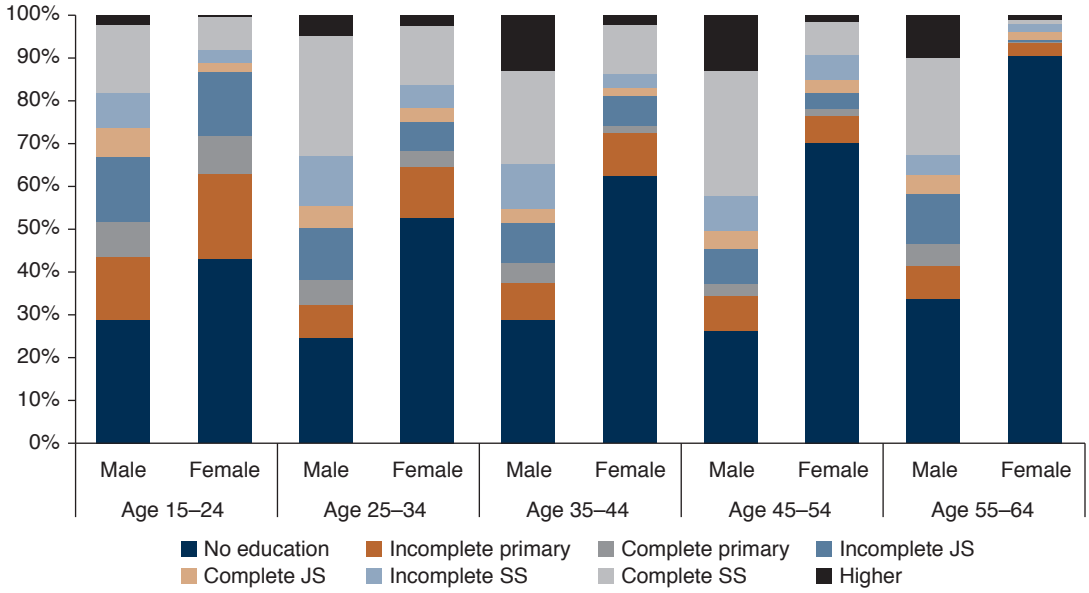
The male population in Liberia demonstrates, on average, higher levels of educational attainment compared to the female population (Figure 2-E). The proportion of males without any education is relatively constant, at approximately 30 percent, across age cohorts, while the share of females without any education has consistently fallen with each age cohort. For instance,

FIGURE 2-D Education Attainment by Wealth



Source: HIES 2014.

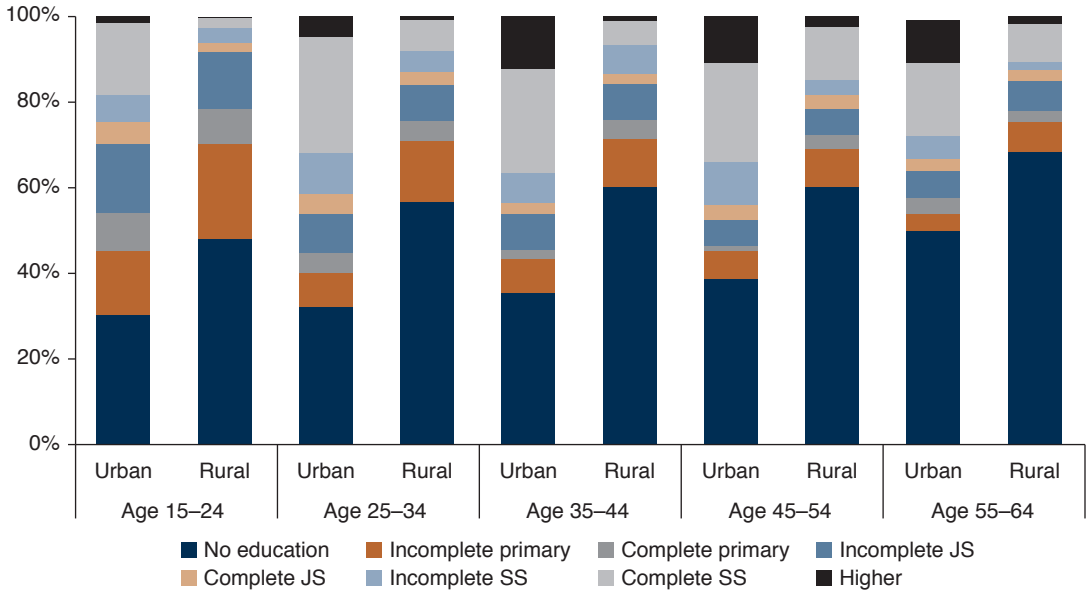
FIGURE 2-E Education Attainment by Gender



Source: HIES 2014.

90 percent of the female population aged 55 to 64 has no education, while for females aged 15 to 24 the share of the female population with no education dropped to 43 percent. Despite the increase in female education attainment, females at all levels demonstrate lower levels of educational attainment relative to males of the same age.

FIGURE 2-F Education Attainment by Residency Area



Source: HIES 2014.

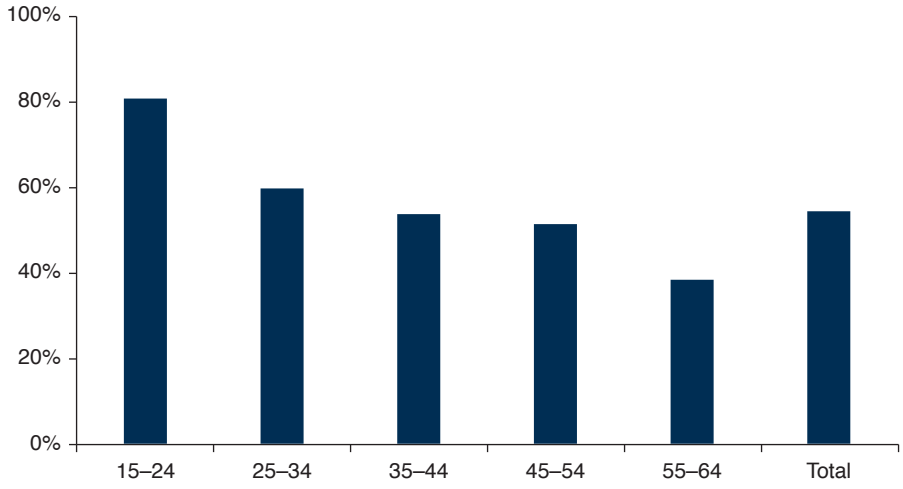
A large gap in education attainment is evident between urban and rural populations (Figure 2-F). Liberia has undergone rapid urbanization over the course of the past a few decades. Currently, half of all Liberians live in cities and have better access to education than those living in rural areas. Relative to their rural counterparts, urban populations are also more likely to complete upper secondary education and/or access higher education. For example, for Liberians between the ages of 25 and 34 years of age, 32 percent of the urban population had completed upper secondary education or attended tertiary education, compared to just 8 percent of the equivalent age group in the rural population. Moreover, Figure 2-F also shows that the proportion of the population with higher educational attainment has declined (compare 25–34 age cohort with 35–44 cohort). This is likely attributable to the impact of the civil war.

Literacy

Across generations, adult literacy shows an increasing trend (Figure 2-G). In general, younger age cohorts demonstrate higher rates of literacy than older age cohorts. However the impact of war is evident in the comparatively poor literacy rate of the generation that was of school-going age during the civil war period.

There is a strong imbalance in literacy outcomes by gender, locality and household wealth (Figure 2-H). Females, the poor, and rural populations are less likely to be able to read and write, than their male, wealthy and urban counterparts. Strikingly, for the three cohorts in the middle age cohorts (namely those aged 25 to 34, 35 to 44 and 45 to 54 years of age), literacy gaps

FIGURE 2-G Literate Population by Age Group, 15–64

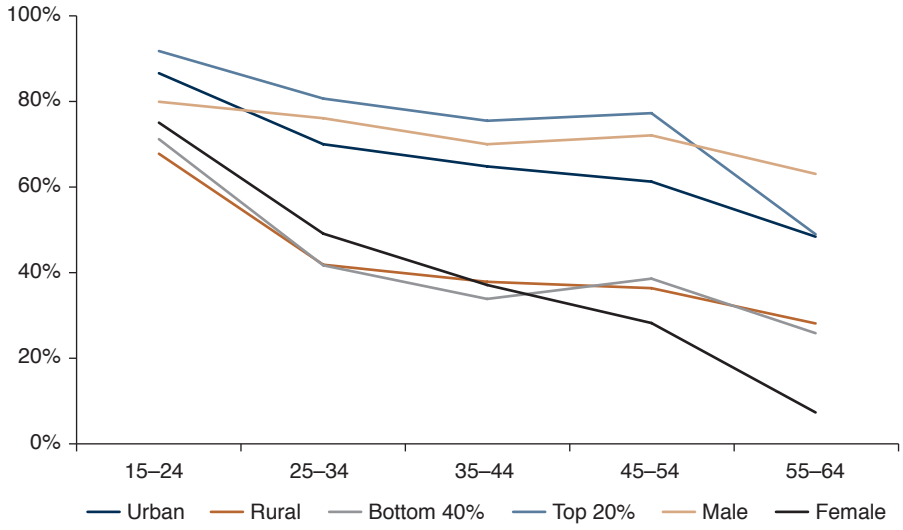


Source: HIES 2014.

remain almost constant over time, implying that there has been little to no progress in reducing imbalances within different groups. Promisingly, the literacy gap between male and female is narrower in the youngest cohort. A similar trend is evident for spatial and income related inequality, however these gaps remain large at approximately 20 percent.

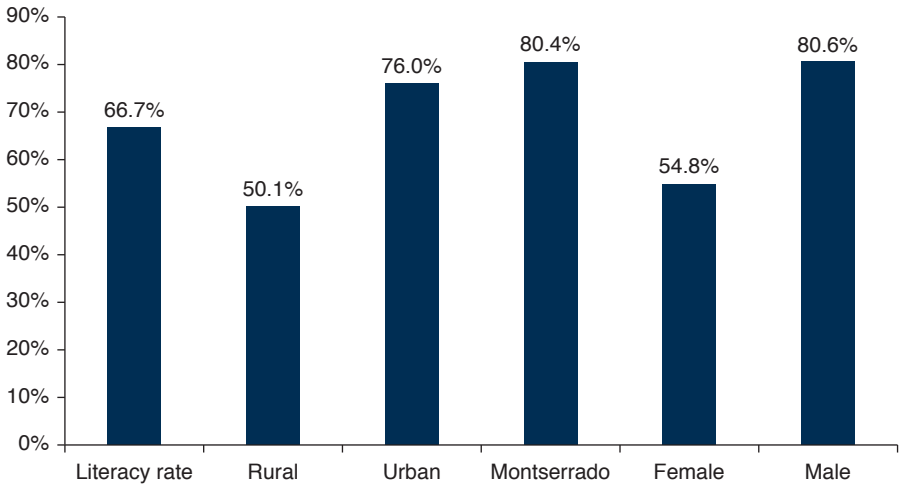
Disaggregated data show specific differences in literacy rates by gender, socio-economic status and area of residence. Figure 2-I illustrates literacy rates for the population aged 15 to 49 years of age, by gender and area of residence. Of this group, 76 percent of urban dwellers are literate, compared to

FIGURE 2-H Literacy by Gender, Locality and Wealth, by Age-Cohort



Source: HIES 2014.

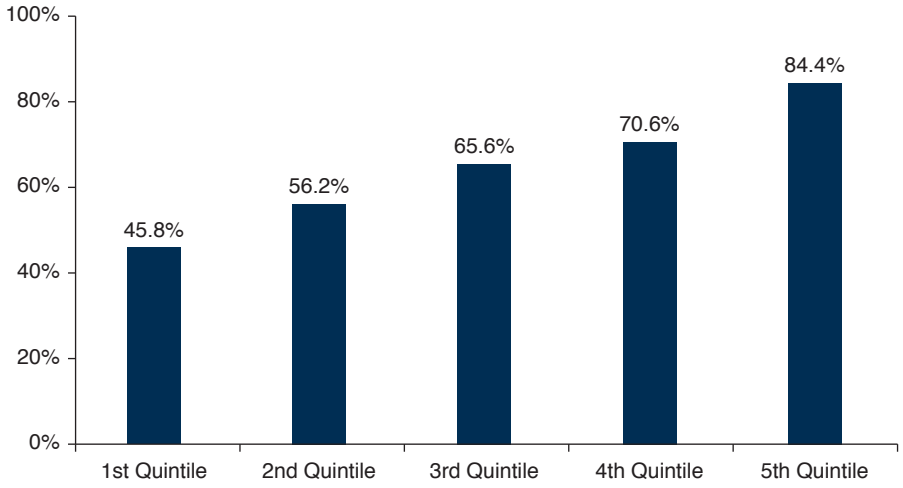
FIGURE 2-I Literacy Rate 15–49 Year Olds, by Gender and Urban Rural Status



Source: HIES 2014.

50.1 percent of rural dwellers. Notably, 80.4 percent of residents in Montserrado country are literate. Of the population aged 15 to 49, 80 percent of males are literate, compared to 54.8 percent of females. Figure 2-J illustrates that for individuals aged 15 to 49 years of age in the poorest households (quintile 1) the literacy rate is 45.8 percent. The literacy rate is almost doubles, to 85.8 percent, for the equivalently aged population located in the wealthiest (quintile 5) households.

FIGURE 2-J Literacy Rate 15–49 Year Olds, by Household Wealth



Source: HIES 2014.

Enrollment, Completion and Exclusion from Basic Education

Key chapter findings include:

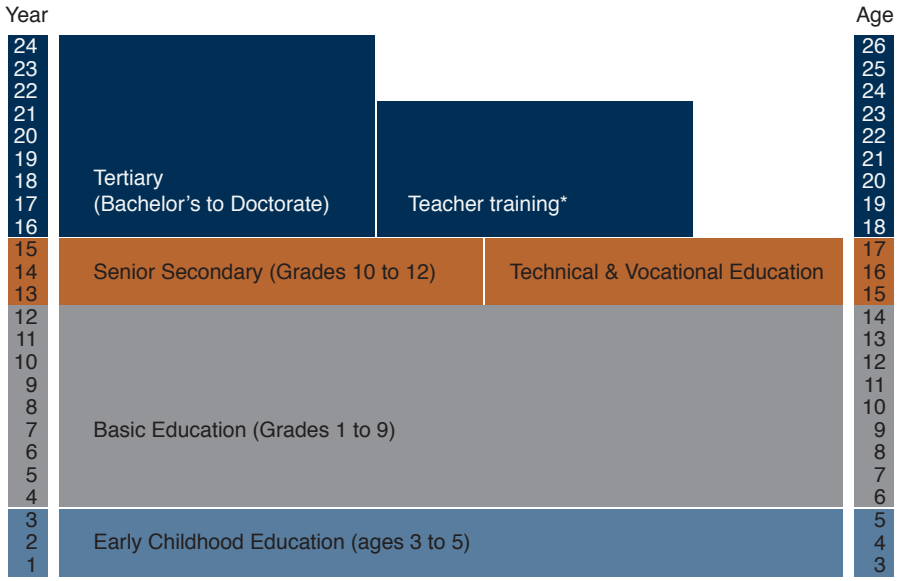
- **Some children are more likely to be excluded from education than others based on issues of vulnerability and exclusion:** Malnutrition, poor health/disability, poor food security, and extreme poverty contribute to child vulnerability. Other variables of disadvantage, such as rural status, being in a household where the head of household is not literate, or has low educational attainment, and, in many counties, being a girl-child, are associated with some children being more likely than others to be excluded from education.
- **Overage enrollment continues to be a significant challenge:** Nearly 40 percent of children enrolled in basic education are more than three years older than the appropriate age for their grade.
- **The basic education completion rate remains low:** Of the population of children who enroll in basic education, 59 percent reach Grade 9. In 2015, an estimated 15-20 percent of 6 to 14-year-old children were not enrolled in basic education; the majority of these children had never enrolled in school.
- **Supply and demand side factors contribute to low access to education and high rates of dropout.** These factors include relative household wealth, county of residence, urban-rural status, school fees and costs.
- **More children are presently enrolled in JH and SH than at any other time in Liberia's history.**
- **Private and mission schools account for nearly 50 percent of enrollment,** with private schools accounting for increasing shares of enrollment between 2008 and 2015.

The Education Ladder in Liberia

In accordance with the Education Reform Act of 2011, the formal education system in Liberia is organized as follows:

- Early Childhood Education (ECE), for children aged 3 to 5 years of age;
- Basic Education, spanning nine grades, comprised of two sub-cycles: six years of lower basic education (Grades 1 to 6) for children aged 6 to 11; and three years of upper basic education (Grades 7 to 9) for children aged 12 to 14 (upper basic education is also referred to as Junior High School or JH);

FIGURE 3-A Formal Education Ladder of Liberia



* As per the Education Reform Act 2011, the Grade C teaching certificate is for teaching primary school (grades 1–6) only and requires 1 year of training (two semesters). The Grade AA teaching certificate (equivalent to an associate's degree) is for teaching both primary and junior high secondary only (grades 6–9) and requires 2 years of training. The Grade B teaching certificate (equivalent to a bachelor's degree) is for teaching secondary school (grades 6–12) only and requires 2 years of training. The teaching certificate to teach in Colleges of Education requires 2 years of training in teaching and a Master's degree.

- Secondary Education, comprised of three years of academic or technical and vocational training for children aged 15 to 17 and designated as Grades 10 to 12; and
- Tertiary Education, which includes certification, diploma, degree and post-graduate programs offered by Teacher Training Institutes, Colleges and Universities.

Figure 3-A shows the structure of educational progression in Liberia in conjunction with age-appropriate enrollment. In 2003, the government pronounced basic education as both free and compulsory. National examinations administered in Grades 9 and 12 determine a student's promotion to the next education level.

In addition to these formal structures, the MoE offers Alternative Learning programs to facilitate the equivalent of basic education, and the sector includes service providers offering different forms of post-secondary and professional education and training services. Alternative learning programs include the ALP, which allows overage youth to complete basic education and transition to Grade 7, and ABE which allows youth and adult learners to complete basic education and transition to Grade 7 or the workplace.

Private, schools and community schools have played a longstanding and important role in Liberia's education sector. The Education Reform Act of 2011 confirmed the presence, and potential benefit of non-public schools in

supporting the achievement of the government's goals for the education sector. The Act also articulated that the MoE was responsible for the accreditation and oversight of non-public schools, and confirmed the responsibility of County Education Officers (CEOs), County School Boards (CSBs), and DEOs to exercise oversight over private schools at decentralized levels of education service delivery (GoL 2011). Each type of school is discussed below.

Government schools are established, operated and financed by the Government of Liberia. With the exception of the Monrovia Consolidated School System (MCSS), all government schools in Liberia operate under the authority of the MoE. In the greater Monrovia area, the MCSS oversees the management and operation of government primary and secondary schools.

Private schools are created and run by secular individuals and/or groups, including private sector organizations and large corporations, without financial support from the government. In some instances, private schools belong to a group of schools operating in the same location, or catering to a specific group, such as the children of a particular mining company's workers. Most private schools in Liberia operate as business enterprises with a goal of creating profit (Johannessen 2006, World Bank 2010).

Mission schools are run by institutions with religious affiliations and have played an integral role in Liberian education since the mid-1800s. Mission schools are generally organized as mini-school systems with common religious affiliations, including those affiliated with the Methodist, Catholic, Baptist, and Lutheran Churches, the Islamic faith, Seventh Day Adventists, the Assembly of God, and the Inland Mission (Siaplay and Werker 2013). Mission schools are generally funded through payments by households in support of tuition and other fees, though many receive support from church organizations or religious NGOs (Siaplay and Werker 2013, World Bank 2010)

Community schools are schools established and run by communities. Community schools are more prevalent in rural and remote areas, and are often established with the expectation that government will eventually take over school financing and management.

Enrollment

The school-age population in all subsectors has grown significantly over the past several years. The last national census was completed in 2008 and is used as a baseline for making projections for out-years. Population projections are important in computing enrollment ratios and estimating the number of out-of-school children. The Annex includes further detail on population projections.

Over the past thirty-five years, enrollment in ECE, basic and secondary education in Liberia has increased nearly five-fold. Tables 3-2 and 3-3

TABLE 3-1 School-Age Population Projections, by Level, Selected Years

	2008	2015
Ages 3–5	—	463,790
Ages 6–11	604,049	741,180
Ages 12–14	254,079	295,514
Ages 15–17	228,713	223,115

TABLE 3-2 Number of Students Enrolled by School Level, Various Years

Level	1981	1984	2005/06	2007/08	2015
ECE	91,394	96,813	358,210	491,564	539,660
Primary	155,166	146,476	488,438	539,887	655,049
Junior High	34,365	40,307	98,448	102,642	166,957
Senior High	22,243	25,359	33,776	55,600	105,875
Total	**303,168**	**308,955**	**978,872**	**1,189,693**	**1,467,541**

Source: EMIS in respective years, World Bank 2010.

provide enrollment data and Gross Enrollment Ratio (GER) calculations for the years spanning 1981 to 2015. The system enrolled 303,168 students in 1981 and over 1.46 million students in 2015. More children are currently enrolled in JH and SH than at any other point in the history of the country.

Over the past decade, the number of physical schools and schools offering education at all levels of education has realized growth. Table 3-4 tabulates the number of 'physical schools' and the number of schools catering to particular levels of education for various years. The distinction between the number of physical schools, and schools at particular levels of education is due to the fact that some physical schools may offer multiple levels of education provision (e.g., some schools offer ECE, Primary and JH, others may only offer ECE and primary). The number of physical schools has increased by almost 1,500 schools between 2007/08 and 2015. Non-public schools account for 50 percent of physical schools. Note that in 2015, the estimated total number of schools was 5,526. Census data was collected on 5,438 schools—with the remaining 88 schools not completing a census form.

TABLE 3-3 GER and NER by School Level, Various Years

	GER					NER	
Level	1981	1984	2005/06	2007/08	2015	2007/08	2015
ECE	38%	37%	82%	98%	116%	36%	29%
Primary	53%	45%	94%	89%	87%	33%	48%
Junior High	28%	29%	45%	40%	53%	5%	13%
Senior High	20%	21%	16%	24%	39%	6%	12%

Source: EMIS in respective years, World Bank 2010.

TABLE 3-4 Number of Physical Schools and Number of School Levels Offered, 2015

Level	2007/08	2015
ECE	3,989	5,080
Primary	3,925	5,178
Junior High	1,176	1,832
Senior High	328	640
Physical Total	—	5,438

Source: EMIS in respective years.

TABLE 3-5 ECE Enrollment, by School Ownership

	2007/08	2015
Public	305,985	281,938
Private		154,979
Religious/Mission	39,474	68,003
Community		34,740
Other	146,105	—
Total	*491,564*	*539,660*

Source: EMIS in respective years.

Early Childhood Education

ECE programs enrolled 539,660 children in 2015. The GER for ECE is above 100 percent, against an ECE Net Enrollment Rate (NER) of only 29 percent. This difference is driven by late enrollment and over-age enrollment. Nearly half (over 250,000) of all children enrolled in ECE are aged six-years-old or above and are appropriately aged for basic education. Public schools account for 52 percent of ECE enrollment, however, the share of ECE enrollment accruing to non-government schools has increased over the course of the past eight years. A large share of ECE enrollment is in the Nursery I level. The highest level of ECE, KG II, enrolls 125,834 learners (Table 3-6). In Table 3-5 private and community schools were counted together in 2007/08.

Rapid expansion of ECE would likely place significant pressure on an already overburdened ECE system. Even though the NER in ECE is quite low (at 27 percent), government schools have high Student-Teacher Ratios

TABLE 3-6 ECE Enrollment by Grade, 2015

Grade	Enrollment	Share of Girls Enrollment
Nursery I	161,862	49.0%
Nursery II	106,525	49.2%
KG I	141,218	49.5%
KG II	130,055	49.5%
TOTAL	539,660	49.3%

TABLE 3-7 Number of Primary Students by Ownership

	2007/08	2015
Public	308,748	337,376
Private	98,816	194,042
Religious/Mission	62,316	86,472
Community	70,007	37,159
Total	539,887	655,049
NER	33%	49%

Source: EMIS in respective years.

(STR) and Student-Classroom Ratios (SCR), of 53.1 and 64.4, respectively. The low NER indicate that there are a large number of children aged 3-5 who are not currently benefitting from ECE. The high STR and SCRs suggests rapid expansion would place significant pressure on an already overburdened system in terms of human, material and infrastructural resources.

Lower Basic

In 2015, 655,049 students were enrolled at the primary level. The primary subsector has realized significant growth over the past decade. Notably, enrollment in private schools has nearly doubled, while enrollment in community schools has declined. Government primary schools account for slightly over 50 percent of student enrollment while private and mission schools account for a 30 and 13 percent of enrollment, respectively. Approximately 55 percent (361,929) of students enrolled in primary school are between 6 and 11 years of age.

Enrollment patterns demonstrate a steady reduction in enrollment between Grade 1 and Grade 6 (Table 3-8). Enrollment in grade 2 is much lower than Grade 1 enrollment, pointing to either high levels of (i) repetition in Grade 1, and/or (ii) high rates of drop-out between Grade 1 and Grade 2. In 2015, the share of girls' share of primary enrollment was 48.9 percent.

Primary school enrollment increased in 10 of Liberia's 15 counties between 2007 and 2015 (Table 3-9). In five counties, (Bong, Gbarpolu, Grand Bassa, Nimba, and River Cess) primary enrollment declined over the

TABLE 3-8 Primary Enrollment by Grade

	2007/08	2015	Girls enrollment share (2015)
Grade 1	130,406	145,979	48.9%
Grade 2	105,910	124,759	49.0%
Grade 3	94,378	113,880	49.1%
Grade 4	82,519	101,310	49.0%
Grade 5	70,471	88,875	48.7%
Grade 6	56,203	80,246	48.8%
TOTAL	**539,887**	**655,049**	**48.9%**

TABLE 3-9 Enrollment, Enrollment Growth and Girls' Enrollment Share, by County

County	2007/08	2015	Enrollment growth (%)	Share of girls enrollment (2015)
Bomi	7,778	16,235	109%	47.5%
Bong	54,994	54,373	(1%)	46.3%
Gbarpolu	12,529	10,362	(17%)	43.6%**
Grand Bassa	34,741	33,785	(3%)	46.3%
Grand Cape Mount	10,074	19,568	94%	47.8%
Grand Gedeh	14,615	20,226	38%	47.4%
Grand Kru	12,569	13,253	5%	44.1%**
Lofa	39,981	49,526	23%	47.4%
Margibi	34,126	47,056	38%	49.4%
Maryland	21,196	24,286	15%	48.4%
Montserrado	175,933	250,267	42%	52.2%
Nimba	88,076	78,390	(11%)	46.7%
River Cess	11,221	10,669	(5%)	42.7%**
River Gee	9,256	11,112	20%	45.9%**
Sinoe	12,797	15,941	24%	45.0%**
Total	539,887	655,049	21%	48.9%

* Marks counties with a girls' share of enrollment of 46% or lower.

same period. Notably, Montserrado County realized an enrollment gain of nearly 75,000 over the past eight years—consistent with increasing urbanization.

The share of female enrollment in primary schools varies by county. In five counties, the share of female primary enrollment is below 46 percent, almost 3 percent below the average for Liberia. In Montserrado county, the share of female primary enrollment is 52.2 percent, more than 3 percent above the average for the country. In Table 3-9, 'enrollment growth' is computed by dividing 2015 primary enrollment by 2007 enrollment.

Junior High

In 2015, 166,957 students were enrolled in junior secondary school. Enrollment in the junior high education subsector has grown by more than 60 percent over the past eight years. Growth has been most robust in private schools, where enrollment has more than doubled. The share of female share of enrollment in JH enrollment is 47.6 percent.

The NER for Junior High education varies greatly by county (Figure 3-B). Importantly, there is a significant 'Montserrado effect' in the JH subsector due to the fact that Montserrado County accounts for 54 percent of all enrollment in this sub-sector (enrolling 90,602 of 166,957 of students enrolled). As a consequence, Montserrado County has a significant influence on country averages. For example, the GER for junior high education in Montserrado County is 80.5 percent, which is 37 percent higher than the

TABLE 3-10 Number of JH Students by Ownership

	2007/08	2015
Public	40,667	68,957
Private	28,216	61,415
Religious/Mission	26,091	31,471
Community	7,668	5,114
Total	102,642	166,957

Source: EMIS in respective years.

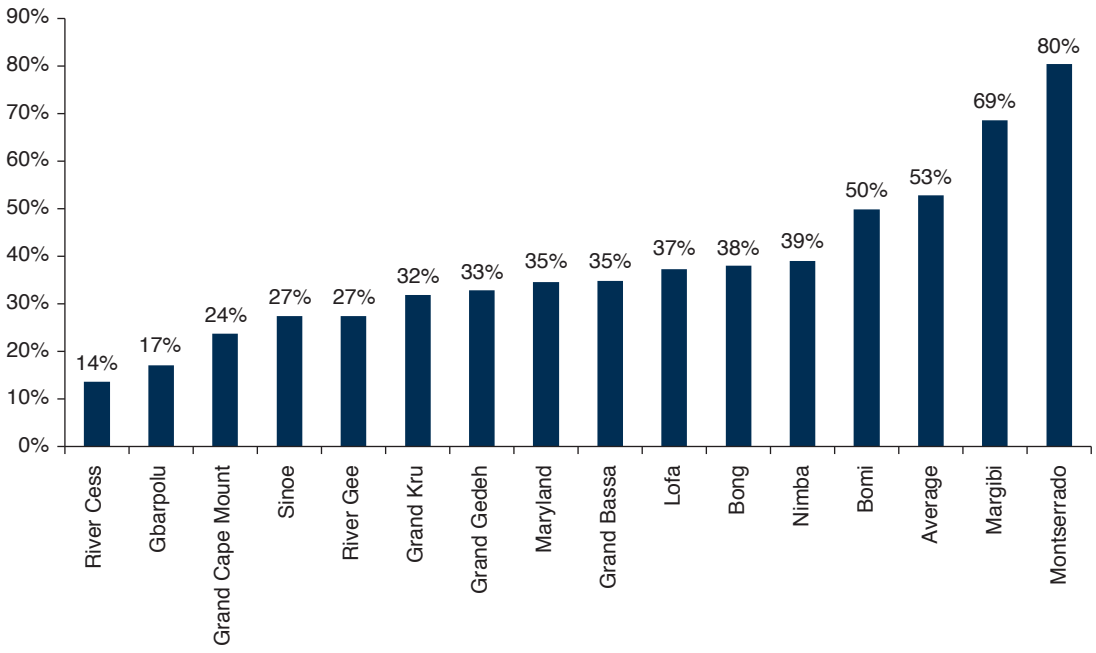
countrywide GER of 52.7 percent. If data from Montserrado County is excluded, then the countrywide GER in junior high basic education falls to just 37.4 per cent.

Senior High

Between 2007 and 2015, enrollment in senior high school nearly doubled, from 55, 600 (2007) to 105,875 (2015). Growth is robust in government, private and mission schools.

A 'Montserrado effect' is also visible at the SH level in terms of enrollment, GER and gender indicators (Table 3-13). At the SH level, Montserrado County accounts for 63 percent of student enrollment. Notably, the girls' share of enrollment in Montserrado County is 49.8 percent which is 4.5

FIGURE 3-B JH Gross Enrollment Ratio by County, 2015



Source: EMIS 2015.

TABLE 3-11 Number of Senior High Students by Ownership

	2007/08	2015
Public	16,212	32,678
Private	16,581	41,125
Religious/Mission	20,335	30,037
Community	2,472	2,035
Total	55,600	105,875

Source: EMIS in respective years.

TABLE 3-12 SH Enrollment by Grade

	2007/08	2015
Grade 10	21,640	37,590
Grade 11	17,981	33,314
Grade 12	15,979	34,971
Total	55,600	105,875

percent higher than in any other county, and 3 percent higher than the average for the country. Excluding Montserrado County from the calculation of girls' share of SH enrollment, results in the share of female enrollment falls to 41.8 percent. In six counties, the female share of SH enrollment is below 40 percent.

TABLE 3-13 SH Enrollment by County

County	2007/08	2015	Share of girls enrollment (2015)	GER (2015)[a]
Bomi	690	1,616	39.9%**	33.5%
Bong	3,196	5,445	44.7%	26.8%
Gbarpolu	105	277	33.2%**	4.3%
Grand Bassa	1,470	2,709	45.3%	21.6%
Grand Cape Mount	121	773	43.2%	8.1%
Grand Gedeh	962	2,245	40.8%	18.4%
Grand Kru	143	528	30.9%**	11.6%
Lofa	2,121	3,936	37.1%**	18.6%
Margibi	3,789	7,976	41.4%	54.7%
Maryland	1,833	3,415	40.4%	26.2%
Montserrado	35,071	66,850	49.8%	70.4%
Nimba	5,497	8,282	44.3%	22.9%
River Cess	47	198	43.4%	4.1%
River Gee	234	449	36.3%**	8.3%
Sinoe	375	1,176	36.3%**	15.1%
Total	55,600	105,875	46.7%	39.4%

** Girls' share of enrollment is below 40%.

[a] In this table, GER was computed using EMIS population projections, not HIES population projections.

Private, Mission and Community Schools

Private and mission schools provide education to 46 percent of Liberian children. At the JH and SH level, non-public schools account for the majority of student enrollment. In 2015, private and mission schools accounted for 41 percent of ECE enrollment, 44 percent of primary school enrollment, 55 percent of JH enrollment and 77 percent of senior high enrollment.

Between 2007 and 2015, the share of primary enrollment in private schools realized strong growth. Table 3-15 presents the primary enrollment share for selected years and shows that the share of primary enrollment in private schools increased from 18.3 percent in 2007/08 to 29.8 percent in 2015. The enrollment share concentrated in mission schools demonstrates a slight increase over the same period while enrollment in government and community primary schools show slight declines. Note that in 1984, private and community schools were counted together.

The majority of private and religious schools are located in four counties. Of the 2,380 private and religious primary schools in Liberia, 1,611 are in Montserrado, 167 are in Margibi, 151 are in Nimba and 125 are in Bong County. The counties with the lowest share of public schools are Montserrado, Margibi, Bong, and Grand Bassa. Notably, Grand Bassa county is home to 43 community schools. In Montserrado County, the bulk of private and mission schools are found in Greater Monrovia.

According to information collected through the 2010 Core Welfare Information Questionnaire (CWIQ), children in urban areas, and children in Q4 and Q5 households are more than twice as likely to attend private or religious primary schools compared to their rural and Q1 and Q2 counterparts. Almost 60 percent of urban children (aged 6 to 14) attend private or religious schools, compared to less than 30 percent of rural

TABLE 3-14 Share of Student Enrollment, by Ownership 2015

	ECE	Primary	Junior High	Senior High
Public	52.2%	51.5%	41.3%	30.9%
Private	28.7%	29.6%	36.8%	38.8%
Mission	12.6%	13.2%	18.8%	28.4%
Community	6.4%	5.7%	3.1%	1.9%

Source: EMIS 2015.

TABLE 3-15 Share of Primary Enrollment, by School Ownership, Over Time

	1984	2007/08	2015
Public	62.5%	57.2%	51.5%
Private	—	*18.3%*	29.6%
Mission	18.4%	11.5%	13.2%
Community	**19.1%**	**13.0%**	**5.7%**

Source: EMIS, selected years.

TABLE 3-16 Primary Enrollment Share by School Type, Urban-Rural Status, Wealth Quintile

	Urban	Rural	Q1	Q2	Q3	Q4	Q5	Total
Government	39.7	66.5	87.5	85.2	71.8	44.9	27.9	**53.5**
Religious	3.2	3.0	0.5	0.4	1.9	3.4	5.2	**3.1**
Private	55.9	25.9	7.6	9.1	21.9	49.9	65.0	**40.5**
Community	0.9	3.5	3.9	5.3	2.7	1.1	1.2	**2.2**
Other	0.3	1.2	0.6	0.0	1.7	0.7	0.6	**0.8**
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	**100.0**

Source: CWIQ 2010.

children. Over 50 percent of enrolled children from Q4 and Q5 households are in private schools, compared to less than 10 percent of children from Q1 and Q2 households (CWIQ 2010). These data point to two issues: (i) nearly 90 percent of children from Q1 and Q2 households are in government schools, and (ii) nearly 30 percent of children in rural areas are in non-government operated schools. The CWIQ 2010 data are several years old so it is possible that the distribution of enrollment has changed further given the recent expansion of private school enrollment.

Supply and Demand Side Issues in Access, Retention, and Completion

This section presents data and analysis on barriers to achieving the goal of universal completion of basic education. Three findings that stand out are:

- the adverse effects of poverty, school costs and fees,
- the influence of household economic and income generating activities, and
- the significant negative influence of late enrollment and overage enrollment.

Children Not Enrolled in School

Recent estimates indicate that, in recent years, approximately 15 to 20 percent of Liberian children aged 6 to 14 years of age are not enrolled in school. The reason for citing a range is that there are slight differences in the EMIS and Household Survey data. In 2015, school census data indicated that approximately 170,000 children between the ages of 6 and 14 were not enrolled in school, equivalent to approximately 17 percent of the population of children in this age group (Table 3-17 and table 3-18). HIES data indicate that a slightly higher share of children do not attend school. Interpretation of estimates of the number of children not enrolled in school should take into account three issues.

1. Population projections based on 2008 census data are used to estimate the number of children not enrolled in school. However, these projections

are estimates; if the population projections are inaccurate, then the estimates of children not enrolled in school will also be off.

2. Overage enrollment figures prominently in these calculations. According to EMIS 2015, 257,653 children between the ages of 6 and 11 were enrolled at the ECE level. Moreover, for the JH age group, 198,539 children between the ages of 12 and 14 were enrolled in the primary schools. High levels of overage enrollment are confirmed by HIES analysis, which indicates that the most commonly cited reason for 6 to 11-year-old children not being enrolled in primary school is because they are enrolled in ECE (HIES 2014).
3. Counting "children not enrolled in school" does not offer sufficient nuance to inform the analysis needed to affectively address differences in exclusion and vulnerability. Some children never enroll in school; others drop-out for a variety of reasons; while still others are 'silently excluded' or are at risk of dropping out without attaining functional literacy or numeracy.

TABLE 3-17 Estimate of Children Aged 6–11 Who are Not in School

School age population (6–11)	741,180
6–11 year-olds enrolled in primary	361,929
6–11 year olds enrolled in ECE	257,653
6–11 year olds who are not enrolled in school (EMIS 2015)	121,598
Share of children who are not enrolled in school	16.4%

Source: EMIS 2015.

TABLE 3-18 Estimate of Children Aged 12–14 Who are Not in School

School age population (12–14)	295,514
12–14 year-olds enrolled in JH	41,723
12–14 year olds enrolled elsewhere (ECE, primary, SH)	198,539 (primary enrollment) + 3,224 (SH enrollment)
12–14 year olds who are not enrolled in school (EMIS 2015)	52,028
Share of children who are not enrolled in school	17.6%

Source: EMIS 2015.

TABLE 3-19 Estimate of Children Aged 15–17 Who are Not in School

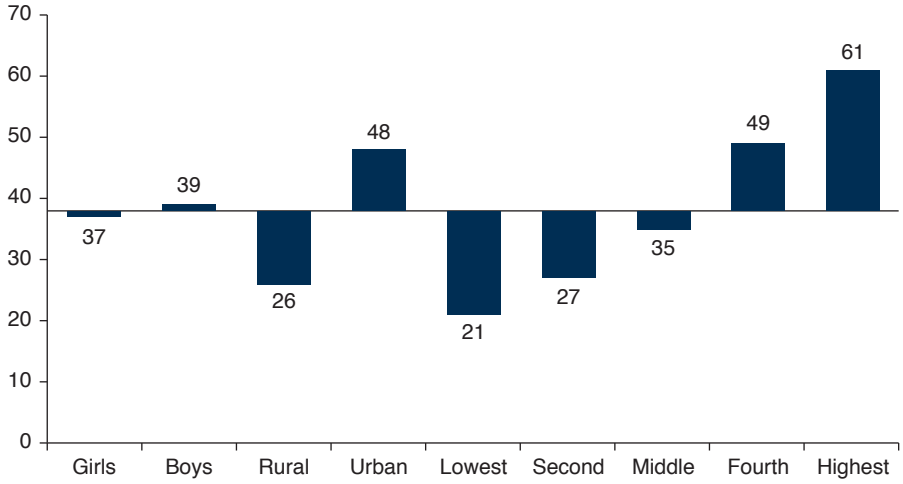
School age population (15–17)	223,115[a]
15–17 year-olds enrolled in JH	32,207
15–17 year olds enrolled elsewhere (ECE, primary, SH)	88,719 (primary) + 75,284 (JH)
15–17 year olds who are not enrolled in school (EMIS 2015)	26,905
Share of children who are not enrolled in school	12.1%

Source: EMIS 2015.

[a] This population estimate is low compared the EMIS estimate of the 15-17 year old population. As such, the estimate of the number of 15-17 year old children who are not enrolled in school may be underestimated.

Note: That the majority of 15 to 17-year-olds (Table 3-19) who are enrolled in school are enrolled at the primary and JH levels.

FIGURE 3-C Primary Net Attendance Ratio by Gender, Rural-Urban Status and Household Wealth, DHS 2013



Source: EMIS 2015.

Access to Education: Demand-Side Barriers

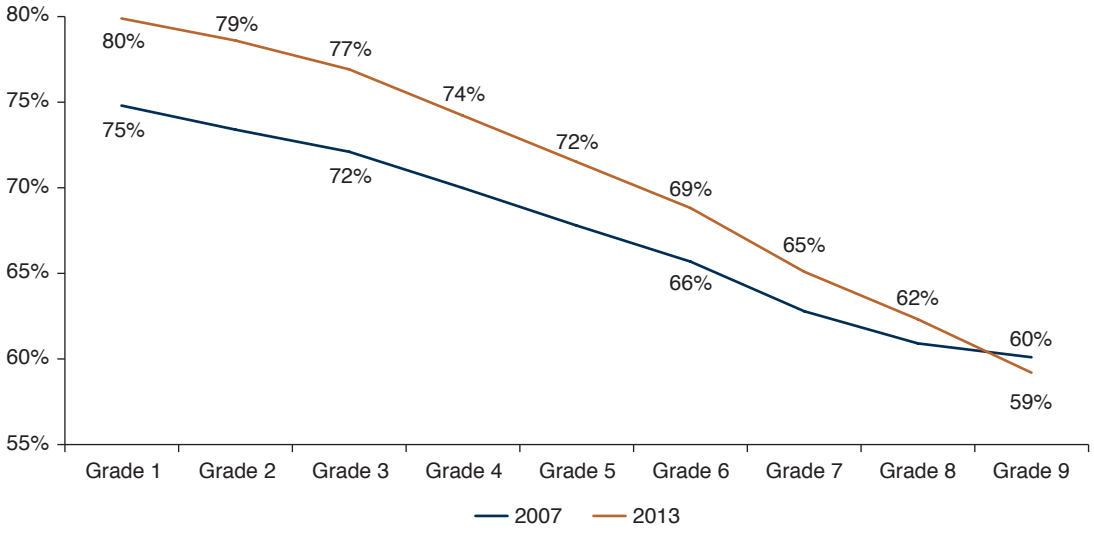
Children aged 6 to 11 from urban and wealthier households are twice as likely to attend primary school compared to their counterparts from rural and poor households (DHS 2013). Figure 3-C presents the net attendance ratio (NAR) disaggregated by different variables. In 2013, the primary NAR in Liberia stood at 38 percent. (This data point is represented by the line that forms the mean in Figure 3-C.) In urban areas, 48 percent of children aged 6 to 11 were enrolled in school compared to 26 percent for children from rural households. Notably, fewer than 28 percent of children aged 6 to 11 living in poor households (Quartiles 1 and 2) attended primary school.

In comparison, approximately 50 to 60 percent of children from wealthier (Q4 and Q5) households were attending primary school. Note that the DHS figures for NAR are low due to the fact that 6 to 11-year-old children enrolled in ECE are not included in the NAR calculation. It is important to note that NAR varies greatly by county of residence. The NAR for primary school is the percentage of the primary-school age (6–11 years) population that is attending primary school. Note: NER figures are usually higher as they measure only whether a child has enrolled in school, and not whether they are in fact "attending" school.

Basic Education Completion, Survival and Demand Side Barriers

The primary education (Grade 6) completion rate of children aged 15–24 increased from 44 percent in 2007 to 55 percent in 2013 (DHS 2007, DHS 2013). The primary completion rate definition used in this ESA is "the percentage of young people aged 15–24 years, who have completed primary school."[2] HIES (2014) offers similar conclusions to those of the DHS. According to HIES

FIGURE 3-D Cohort Grade Survival Profile, Children Aged 10–19, DHS 2007, 2013



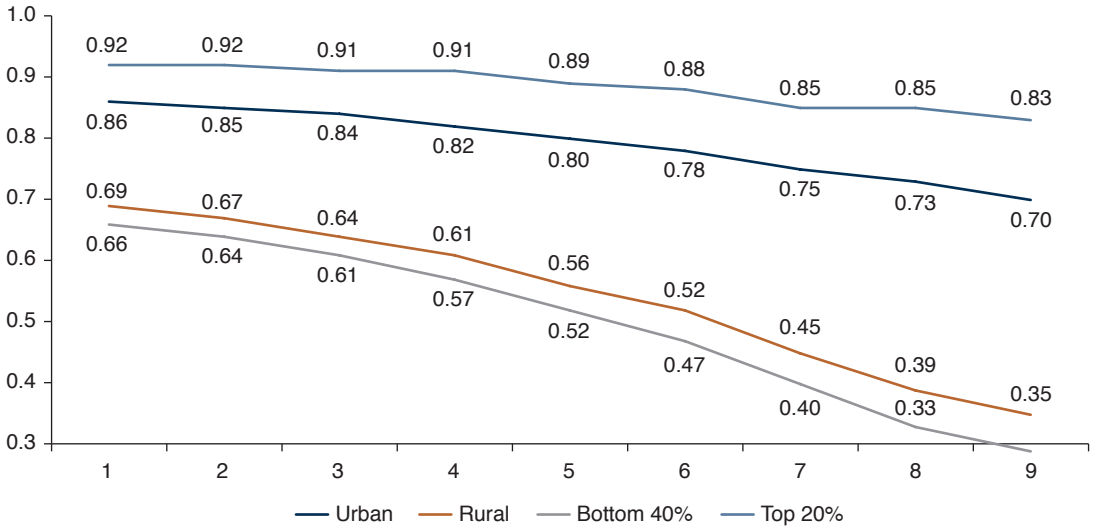
(2014), of the total population of 15 to 24-years-olds in Liberia, 36.2 percent were in Grade 7 or above and 16.4 percent were enrolled in Grades 1 through 6. EMIS trend data indicate that a large share of currently enrolled children will continue to Grade 7. A review of DHS and HIES household survey data, alongside 2008 and 2015 school census data, suggest two tentative conclusions: (i) some improvement in the primary completion rate is evident; and (ii) the primary completion rate for recent years is in the range of 50 percent.

Of children who enroll in school, 69 percent 'survive' to Grade 6 and 59 percent survive to Grade 9. Figure 3-D illustrates a cohort grade survival profile using DHS data from 2007 and 2013. The profile identifies the share of children who complete each grade and estimates grade-to-grade progression for a current cohort. The 2013 data on survival shows a marked improvement in survival rates over the 2007 data. The reason the Grade 6 survival figure (69 percent) is higher than the primary completion figure (55 percent) is that survival calculations do not include children who never enrolled in school (Filmer 2010). According to HIES, 2014, an estimated 16 percent of children aged 6 to 14 years of age have never accessed school. This figure appears reasonable based on the observed difference between the primary completion rate and the cohort survival profile to Grade 6.

Children from poor and rural households are less likely to survive to Grade 9 compared to their peers from wealthy and urban households (Figure 3-E). According to DHS 2013, fewer than 47 percent of youth aged 10 to 19 years of age, from households in the lower two wealth quintiles survive to Grade 6, compared to 88 percent of the same population from households

[2] The World Inequality Database on Education draws on household survey data to highlight issues of inequality in education globally. http://www.education-inequalities.org/.

FIGURE 3-E Cohort Grade Survival Profile of Children Aged 10 to 19 Disaggregated by Urban Rural Status and Wealth Quintile, DHS 2013



Source: Filmer, Deon (2010) based on DHS 2013. http://iresearch.worldbank.org/edattain/[a]

[a] The cohort grade survival profile shows the proportion of children of the cohort of 10 to 19-year olds who have completed each grade (including grade 1), using techniques adapted from "survival analysis." The technique estimates the proportion of the cohort that has completed a grade adjusting for the fact that some students are still in school and we cannot observe their ultimate grade completed (the observation is said to be "right censored"). The figures enable one to see the estimated grade-to-grade progression of a current cohort. http://web.worldbank.org/external/default/main?menuPK=1460753&pagePK=64168176&piPK=64168140&theSitePK=1460718

in the top wealth quintile. Moreover, 70 percent of youth aged 10 to 19 years of age in urban areas survive to Grade 9, compared to 35 percent of the same population in rural areas.

Girls, and children for poor and rural households, are much less likely to complete a primary education than their male, wealthy and urban counterparts. DHS 2013 data indicate that primary completion rates (PCR) of children aged 15–24 in Liberia vary by gender, urban-rural status and at the intersection of these variables. Figure 3-F, in the top line, illustrates the difference between male PCR (63 percent) and female PCR (48 percent). In the next line, the difference between urban-rural status is observed, while in the lowest level, PCR data are presented by wealth quintile. The PCR for girls living in rural areas and coming from poor, quintile 1, households is just 14 percent. The PCR for boys living in urban areas from wealthy, quintile 5 households, is 86 percent. As will be articulated in later sections, poverty also makes girls more vulnerable to exploitation and abuse. Figure 3-F uses the DHS 2013 definition of PCR as "the percentage of young people aged 15–24 years who have completed primary school."

Household survey data, as opposed to EMIS data, are used to show educational attainment and primary completion rates. The Ebola crisis, and the forced closure of schools, compromised the ability of EMIS to accurately assess year-on-year repetition and drop-out figures, which in turn, make it difficult to conduct cohort analyses. Moreover, the computing of a primary completion rate using EMIS data, is compromised due to the reliance of the calculation on repetition rates and the assumption that the majority of students are at the correct

FIGURE 3-F Primary Completion Rate by Gender, SES, Urban-Rural Status, DHS 2013

Source: World Inequality Database on Education (WIDE). http://www.education-inequalities.org/.

age-in grade (GPE Guidelines, p 78).[3] EMIS data can be used to help triangulate analysis from household survey data. For example, Figure 3-G presents basic education enrollment by grade using EMIS 2015 data. While eight years of history (including four ministers of education, post-conflict reconstruction, urbanization, robust population growth, and the Ebola Virus Disease outbreak) separate Grade 9 from Grade 1 enrollment (130,406 learners in 2007/08), the steep downward trend is similar to that seen in educational attainment curves and primary completion rates computed using household survey data.

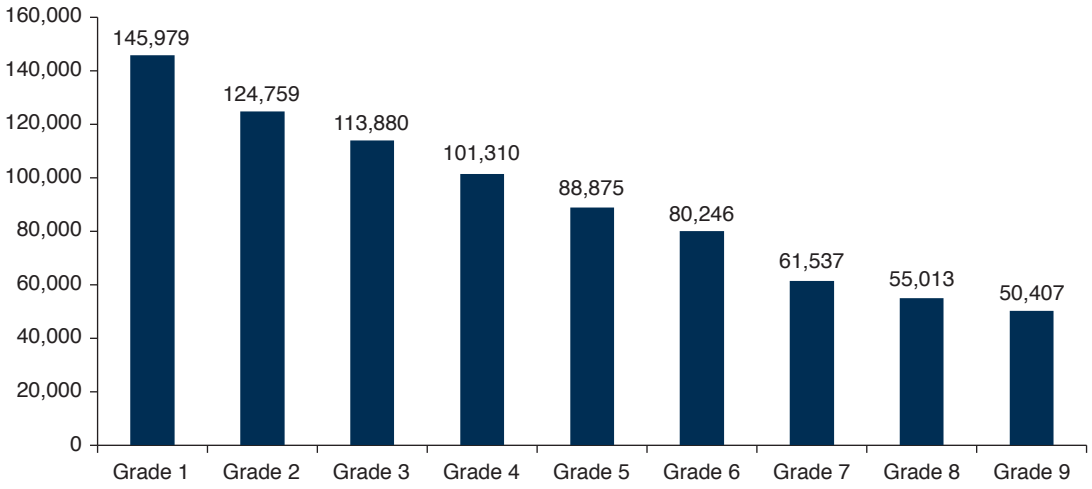
Supply-Side Barriers in Basic Education Access and Retention

Due to the way in which household survey data are presented, this section includes a discussion of both demand-side and supply side barriers.

Variables that appear to most significantly influence an individual's likelihood of 'never enrolling in school' and the likelihood that they will 'drop-out' in basic education include: the levying of school fees and other

[3] As a thought experiment, one could assume that net non-repeaters are 90% of Grade 9 enrollment and, given overage enrollment, use the population projection for 17 years olds to construct a basic education completion rate of approximately 50% using EMIS 2015 data and GPE Guidelines' methodology.

FIGURE 3-G Basic Education Enrollment, by Grade, EMIS 2015



expenses, household poverty and rural status, late enrollment/overage enrollment, and distance from home to school (CWIQ 2007, CWIQ 2010, HIES 2014, DHS 2013, UNICEF 2012). Multiple sources identify school fees and other costs associated with schooling as one of the most significant barriers to accessing basic education and retention (see Table 3-20 and Table 3-21 below). This finding corresponds with demand-side barriers, which show that for children aged 6 to 11 years of age, children from wealthier households are more likely to attend and complete primary school compared to counterparts from poorer households (DHS 2013).[4] HIES (2014) identifies 'no money', the belief that children are 'too young to attend school,' parental resistance and distance of the school from the household as the primary reasons informing a child never having attended school.

Notably, 62 percent of HIES (2014) respondents stated that their child, aged 6 or above, was enrolled in ECE. ESA consultations suggest an intersection

TABLE 3-20 Reasons School-Aged Children Never go to School, HIES, 2014

Why did the child never go to school? (SCHOOL GOING AGE)	Percent
Still in pre-school	61.9
No money	12.19
Too young to attend school	9.25
School too far from home	5.91
Parents did not let me / not interested	7.15
Other	3.6

[4] It is important to note that while urban areas may have higher attendance *rates*, because of high population densities, the *number* of children in urban areas who do not regularly attend school may still be quite high.

TABLE 3-21 Reasons for Dropping out School

All respondents	Q1	Q2	Q3	Q4	Q5	Urban	Rural
Completed school	4.2	10.5	15.8	23.0	34.1	26.6	18.3
Lack of money/too expensive	50.4	45.7	41.8	40.0	31.4	41.0	36.7
Is working (home/job)	28.9	23.9	25.3	24.3	26.4	23.3	28.0
Got married	16.5	19.9	17.1	12.7	8.1	9.1	17.0

between late enrollment and school distance due to the fact that many parents are not willing to let a child enroll in school until her or she is old/strong enough to walk there. A school requiring more than a 5km roundtrip from a student's home may deter on-time enrollment.

CWIQ 2010 found that the primary reasons informing a child dropping out of education were a lack of money, employment/household economic activities, and marriage (Table 3-21). In Q1 to Q3 households, seventy percent of respondents identified lack of money (and school fees) or engagement in economic activities as the reasons for dropping out of school.

Other supply side issues that negatively influence school access and encourage dropout include school quality and violence. Indicators of poor education quality, including poor classroom conditions, and lack of learning materials, as well as a fear of violence (including corporal punishment, bullying, sexual harassment, and sexual violence) are associated with not attending school (LEC 2015, HIES 2014, UNICEF 2012). UNICEF (2012) and HIES (2014) highlight the influence of parental beliefs and attitudes as contributing towards late and non-enrollment in school.

Overage Enrollment

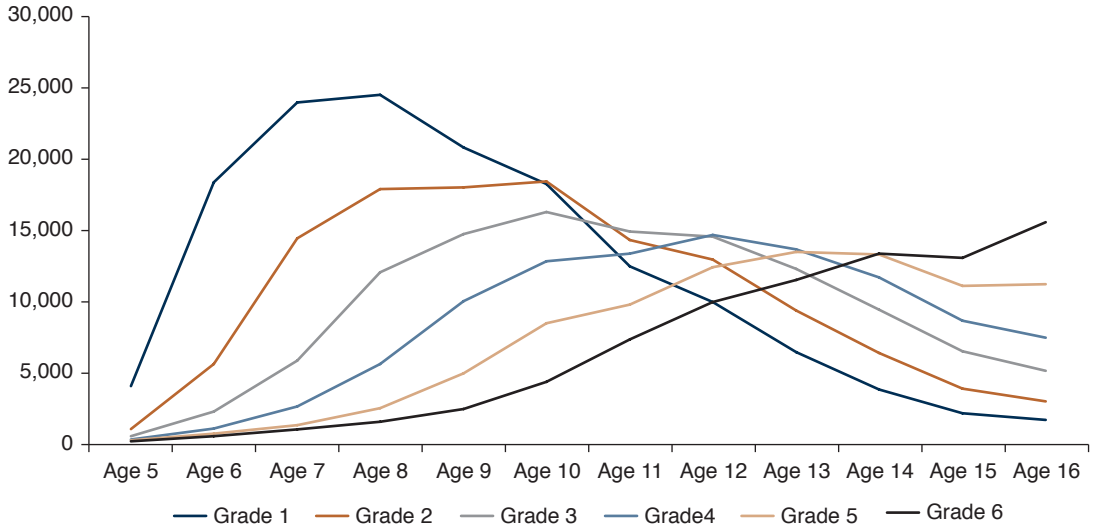
The Liberian education sector demonstrates high rates of overage enrollment at all levels of education.

TABLE 3-22 Factors Influencing Never Enrolling in Basic Education and Dropout

Theme	Issues associated with theme
Economic factors	• Poverty. Inability to pay school fees • Household economic activity / child labor • Food insecurity • Loss of parental support, loss of parents • Child health, disability, and stunting
Socio-cultural factors	• Parents believe child is too young for school • Parents' lack of interest in education • Early marriage and pregnancy
School-related factors	• Distance from home to school • Poor school quality • Violence, corporal punishment, and sexual violence • Practice of entrance exams • Financial exploitation by teachers • Lack of enforcement of 'compulsory' enrollment law

Source: UNICEF 2012 p. 37.

FIGURE 3-H Age Distribution of Enrollment, Primary Grades 1–6



Source: EMIS 2015.

Approximately 40 percent of primary school students are more than three years older than the appropriate age for their grade. Figure 3-H presents the age distribution of enrollment in primary education for Grades 1 to 6. Each line represents a grade; the x-axis is comprised of age groups, while the y-axis shows the number of children enrolled at each age group in each grade. Table 3-23 shows the number and share of students (by age) enrolled in Grade 2. According to policy, a Grade 2 student should be 7 years old; however, according to the table, nearly 40 percent of Grade 2 students 11 years old or older. The graph and the table highlight two critical features of overage enrollment in Liberia:

1. In all primary school grades, the majority of students are 3 to 6 years older than the appropriate age for the grade.
2. There is a wide distribution of age-ranges in each grade. Notably, there is no age group that accounts for more than 20 percent of enrollment in any particular grade.

International research shows that students who are many years overage for their grade are less likely to become literate, more likely to drop out before completing basic education, and that these students are often 'silently

TABLE 3-23 Grade 2 Enrollment in Liberian Schools

	Age 6	Age 7	Age 8	Age 9	Age 10	Age 11	Age 12	Age 13	Age 14	Age 15
Enrollment	5,568	14,411	17,895	17,988	18,401	14,288	12,895	9,300	6,344	3,792
Enrollment Share	4.5%	11.6%	14.3%	14.4%	14.7%	11.5%	10.3%	7.5%	5.1%	3.0%

Source: EMIS 2015.

TABLE 3-24 Age-Distribution of Government Primary School Enrollment by Grade

	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6
Appropriate Age	*Age 6*	*Age 7*	*Age 8*	*Age 9*	*Age 10*	*Age 11*
Age 6	18,349	5,568	2,213	975	617	450
Age 7	23,952	14,411	5,768	2,537	1,266	914
Age 8	24,496	17,895	12,009	5,551	2,424	1,468
Age 9	20,792	17,988	14,668	9,942	4,862	2,370
Age 10	18,233	18,401	16,282	12,801	8,438	4,285
Age 11	12,452	14,288	14,859	13,351	9,753	7,301
Age 12	9,917	12,895	14,512	14,658	12,387	9,939
Age 13	6,373	9,300	12,251	13,648	13,467	11,496
Age 14	3,760	6,344	9,369	11,620	13,276	13,327
Age 15	2,086	3,792	6,463	8,622	11,034	13,047
Age 16	1,608	2,914	5,043	7,376	11,180	15,554
Other	3,961	963	443	229	171	95
Students 3+ years over age	37%	39%	42%	41%	40%	36%
Total	145,979	124,759	113,880	101,301	88,875	80,246

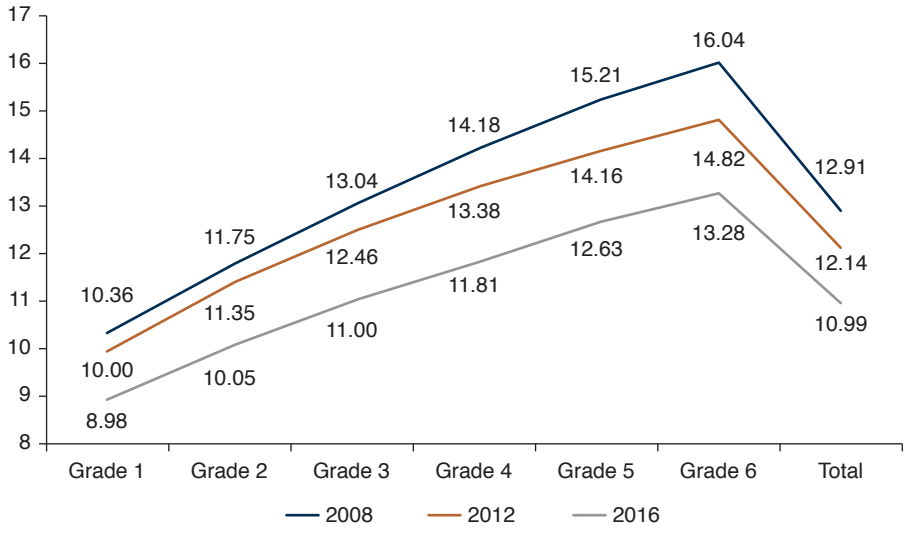
Source: EMIS 2015 (both figures).

excluded' (Lewin et al 2011). The wide range in ages means that there are students with significantly different levels of social, physical and intellectual maturity inhabiting the same classroom contributing to a challenging teaching and learning environment (Ampiah, 2010).

Detailed age-in-grade enrollment data underlines the extent and complexity of the late enrollment and overage enrollment challenge. Table 3-24 details the age distribution of primary school enrollment for Grades 1–6, and shows that the share of students enrolled who are more than three years older than the appropriate age for the grade ranges between 36 and 42 percent (see highlighted numbers). In Grade 6 for which the target age is 11 years of age, 36 percent of enrolled students are 15 or 16 years old.

Between 2007 and 2015, the mean age-in-grade for enrolled students decreased by two years, a significant achievement (Figure 3-I). In 2007/08, the mean age-in-grade for primary school students was 12.91 years old. By 2015/16, the mean age-in-grade for primary school students had dropped by nearly two years, to 10.99 years old. Importantly, this decline is evident across all grades, and the decline appears to follow a consistent trend between 2008, 2012, and 2016. In the early post-conflict era (2006 to 2012), the high level of overage enrollment was considered a legacy of conflict: it was understood that children and youth did not have the opportunity to go to school during the war exercised the opportunity to enroll in school once conditions improved. One hypothesis for the declining trend in the age-in-grade mean is that as Liberia moves further into the post-conflict era, the practice of 'extreme' overage enrollment has declined while the phenomenon of late enrollment persists.

FIGURE 3-I Average Age of Primary School Students, by Grade, 2008, 2012, 2015



Source: EMIS, selected years.

Primary Net Intake Rate (NIR) data underscore how late-enrollment is country-wide phenomenon. The NIR is the number of age 6 children who enroll in Grade 1 in particular school year. There is a wide range in NIR by location, spanning from a low of 3.3 percent to a high of 19.9 percent. All counties, with the exception of Montserrado and Lofa counties, have an NIR below 12 percent (see EMIS 2015).

If children commence school late, they will be overage throughout the school cycle. Overage enrollment trends are similar across the ECE, JH and SH levels. In each sub-sector a significant share of enrolled students are overage for their grade, and there is a wide range of ages enrolled in each grade. In Grade 9, the final year of basic education, approximately 37 percent of students are between the ages of 19 and 21, against a designated age for Grade 9 of 14 years old. At the end of the system, half of all Grade 11 students are 20 or 21 years of age. During consultations informing the ESA, one MoE participant said, 'Overage students don't catch up and [many] don't make it though.'

Factors accounting for overage enrollment overlap significantly with those influencing access and retention. While there is not extensive quantitative evidence explaining the persistence of overage enrollment, ESA consultations, qualitative studies (UNICEF 2012) and international evidence (Ampiah 2010) offer the following reasons for this phenomenon:

TABLE 3-25 Share of Grade 9 and Grade 11 Enrollment, by Age, 2015

	a11	a12	a13	a14	a15	a16	a17	a18	a19	a20	a21
Grade 9	1%	1%	2%	5%	9%	12%	17%	16%	14%	9%	14%
Grade 11	0%	0%	0%	1%	2%	6%	11%	15%	16%	17%	32%

Source: EMIS 2015.

- For various reasons, parents or schools assess some 6-year-old children to be not 'ready' for grade one. This may be linked to malnutrition and stunting (and resulting effects on cognitive development).
- The ongoing use of entrance exams by schools that perceive passing as an indicator of school-readiness also constitute a barrier to at age entry to grade one (resulting in late enrollment);
- School fees and distances between home to school (coupled with household poverty and rural status) constitute supply side inhibitors influencing late enrollment,
- Many children do not have birth certificates;
- Late enrollment has become an accepted practice in a context of lax enforcement of age-appropriate enrollment policies;
- With the growth of the ECE subsector, some schools have a practice that children (regardless of age) have to complete one or two levels of (fee-paying) ECE prior to being allowed entry into Grade 1.

Why is overage enrollment a problem? International research suggests that children who are overage are less likely to attend school regularly, are more likely to face academic, social and disciplinary challenges, and are more likely to drop out, compared to children who are at the appropriate age-in-grade (Ampiah, 2010, Lewin, et al 2011, UNESCO 2016). Children who are significantly overage are frequently considered 'dull or stupid', may not socialize or mix well with others, often face disciplinary issues, and, due to household chore commitments, are more likely to be late to school (Ampiah 2010). A recent Liberia Annual School Census Report (MoE 2011, p. 17) noted that:

Unicef Liberia Country Study on Out of School Children Suggested the Following Causes of Pervasive Overage Enrollment

Interviews with households revealed that 37.9 percent of respondents indicated that children were too young to go to school. On account of this and other factors, such as distance to school, many children do not benefit from early educational development, and that first-time school enrollment, if they ever attend school, comes late.

In some communities, particularly in rural Liberia, many parents believe that children between the ages of two and five years of age are too young to go to school. Parents generally believe that these children are so vulnerable that they should remain at home in the care of parents or trusted relatives. Many of the parents who articulate this line of reasoning are either illiterate, unaware of ECD programs, or live in communities that lack facilities for pre-primary education. The following comments present the views of a mother and a father on why their children should not start school early.

> "The small, small children like two to five years old are too young to learn book and some are scare of teacher beating them".—A father of pre-secondary school drop-out in Warliken, rural town in Tienpo District, River Gee County
>
> "Some of us feel that our children who are between two to four years are still small for school and for this reason they are not in school". - A mother of out of school children in a KII in Grand Kru County
>
> "I can't send my four-year-old child to school because she is too small; what she will understand, she will go to school when she is seven years". - A mother in FGD in Barclayville City, Grand Kru.

UNICEF (2012). Liberia Country Study. Profiles of children out of school. UNICEF.

> "The considerable number of children 12 years and older in primary school is a major challenge for the education sector. Over-aged primary students … contribute to high dropout rates (and therefore lower completion rates) at primary and higher levels."

Internationally, children from relatively poor and rural families are more likely to start school overage than children from urban and wealthy families. Rose and Alcott (2015) state, "in many countries in sub-Saharan Africa, including Congo, Democratic Republic of Congo, Ghana, Madagascar, Namibia, Nigeria and Zambia, at least twice as many children from poor families start primary school overage, as do children from rich families."

Strategies for reducing late enrollment and overage enrollment. Ampiah (2012), and Rose and Alcott (2015) identify the following strategies to mitigate overage enrollment: promoting community awareness of the importance of on-time enrollment and the disadvantages of late enrollment; involving teachers and principals in improving age-in-grade enrollment and enforcement of on-time enrollment policies; improve, and disseminate information in support of, on-time transitions from ECE to primary schools; support the practice of celebrating birthdays; and increase the proportion of children who receive birth certificates at birth. UNICEF (2012) provides Liberia specific evidence regarding the role of parents' perspectives in overage enrollment, including beliefs that consider young children too vulnerable to attend school, and fears that schools may not be child-friendly spaces.

Zones of Exclusion

Zones of Exclusion Framework

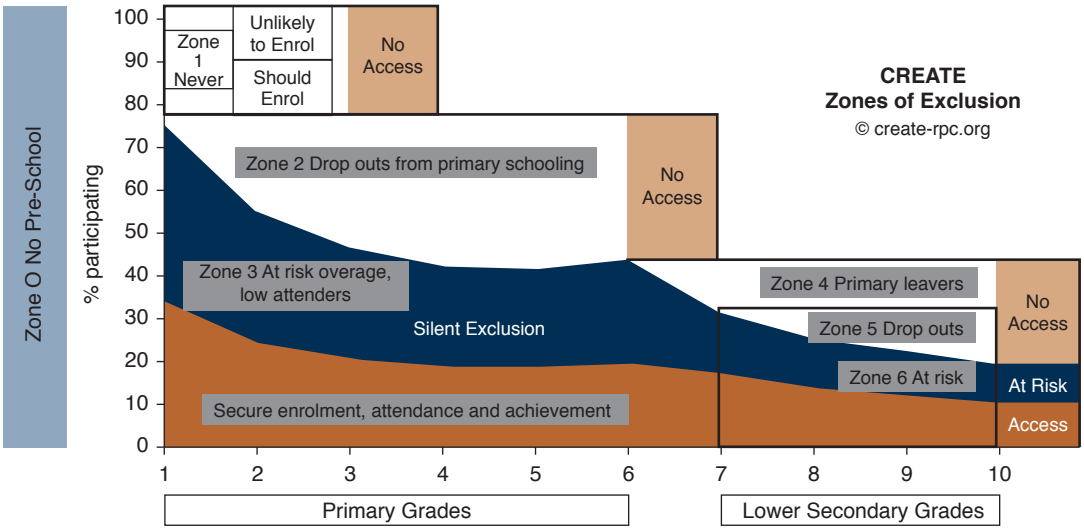
***Zones of Exclusion* is a framework that can be used by policy-makers to identify barriers to access and completion facing different populations of children.** During ESA consultations, one participant talked about Zones of Exclusion in terms of "children who are left behind." The participant stated that 'some children are left behind because:

- They never start primary school, or,
- Because they start late, and then they drop-out, or,
- Because they start late, and then they never catch up.'

The Zones of Exclusion framework recognizes that different populations of children face different barriers in accessing and completing basic education. By recognizing sub-groups, policy-makers are also able to more appropriately target interventions.

Exclusion from education (e.g., never going to school, dropping out of school, or not learning) occurs at various levels in basic education. The

FIGURE Z-A Zones of Exclusion Framework



Source: CREATE 2007.

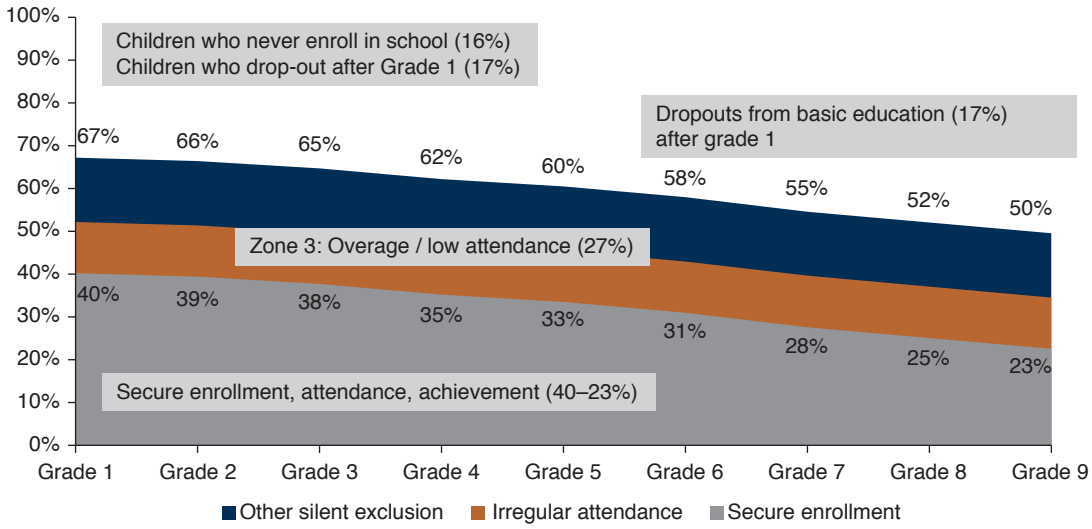
Zones of Exclusion framework highlights seven zones of exclusion (see Figure Z-A) for Grades 1 to 9.

- Zone 0: Children who never attend ECE or KG.
- Zone 1: Children who do not enroll in school.
- Zone 2: Children who drop-out or fail to complete primary school.
- Zone 3: Children in school, but who are at risk of dropping out.
- Zone 4: Children who fail to transition to JH.
- Zone 5: Children who drop-out of JH schools or fail to complete a full cycle.
- Zone 6: Children at risk of dropping out from JH.

A large body of evidence suggests that children who do not attend ECE or KG (Zone 0) are disadvantaged compared to peers who do enroll in ECE, as they are less likely to be ready for primary school. Children in Zone 3 and Zone 6 are considered silently excluded and at-risk of dropping out. Children in these zones include overage learners, learners who do not possess foundational skills in numeracy and literacy, and children who attend school irregularly.

The Zones of Exclusion framework underlines the fact that a large share of children enrolled in basic education are at risk of dropping out. In many countries, as many as half of children enrolled in basic education are silently excluded. These are children who are overage for their grade, who do not attend school regularly, and/or, who, because of poor foundational skills (in math or literacy), may not understand the teacher or school work. International evidence suggests that children who are silently excluded are more likely to drop-out before completing the full basic education cycle than their peers (Ampiah 2010).

FIGURE Z-B Zones of Exclusion in Liberia Basic Education (% Participation by Grade)



Source: Author created.

Zones of Exclusion in Liberia

The ESA team used the Zones of Exclusion framework to conduct an analysis of Liberia (Figure Z-B). The model draws on several data sources that identify (i) the number of children who are not enrolled in basic education, (ii) the 'survival' rate of children in a basic education cycle, and (iii) the share of children who attend school irregularly or who are significantly overage for their grade.

The level of 'secure' enrollment in basic education in Liberia is low (Figure Z-B). According to the Zones of Exclusion model, approximately 40 percent of children are securely enrolled in Grade 1. An additional 12 percent attend school irregularly, and a further 15 percent are silently excluded for other reasons (e.g., they are severely overage for their grade). Moreover, 33 percent had either never enrolled in education, or had dropped out of school prior to completing Grade 1. Figure Z-B can be read as follows:

- The bottom line represents children who are 'securely' enrolled in Grades 1 to 9. This figure ranges from 40 percent (Grade 1) to 23 percent (Grade 9).
- The top line represents children who are (i) securely enrolled AND (ii) children who are silently excluded. This share ranges from 67 to 50 percent in Grades 1 to 9.

The difference between 'enrollment' and 'secure' enrollment is estimated at just under 30 percent, representing the share of children who are at risk of dropping out because they attend irregularly or are severely overage for their grade. Overage children may not be fully engaged in learning activities because of the disciplinary, academic and social issues. Note that Figure Z-B accounts

TABLE Z-1 Secure Enrollment, Irregular Attendance and Silent Exclusion, by Grade

	G1	G2	G3	G4	G5	G6	G7	G8	G9
Participation (secure + irregular attendance + other silent exclusion)	67%	66%	65%	62%	60%	58%	55%	52%	50%
Participation (secure + irregular attendance)	52%	51%	50%	47%	45%	43%	40%	37%	35%
Secure enrollment	40%	39%	38%	35%	33%	31%	28%	25%	23%

Source: Author calculations.

for children who have never enrolled in school (estimated at 16 percent) and the share of students who drop-out after Grade 1 (estimated at 17 percent).

Figure Z-B should be treated as a model, not an exact representation of cohort dropout and survival in Liberia. Rather, it represents trends evident across a broad range of age cohorts. For example, the survival rate is based on DHS 2013 data for 15 to 24-year-olds in Liberia; of whom 50 percent have not attained an education beyond Grade 9.

Table Z-1 presents estimates of secure enrollment and silent exclusion by grade.

- The share of secure enrollment declines from 40 percent in Grade 1 to 23 percent in Grade 9.
- Twelve percent of students attend school irregularly (HIES 2014) and 15 percent are severely overage (i.e., three years+ the appropriate age, EMIS 2015) for their grade.
- The difference between secure enrollment and 'enrollment' is 27 percent.

Policy and Program Implications

Interventions intended to reach different populations of excluded children should be designed around the specific issues and challenges facing different sub-groups as presented below:

Children who have never been to school. Children in low population density areas (where there is no school nearby) and children living in extreme poverty are the most likely to have never been enrolled in school both internationally and in Liberia. Lewin (2007) and others argue that these children are also the least likely to be reached by conventional models of schooling. As a consequence, educators in Liberia and abroad have experimented with alternative models for schooling. Such models may offer a shorter school day which may be more effectively aligned with priorities in rural communities (e.g., agricultural and rainy seasons), may more easily accommodate daily household chores and agricultural tasks (i.e., operate from 10am–2pm), or accommodate the lifestyles of nomadic families and herders. Some of these lessons were integrated into Liberia's ALP and ABE programs. Regional and international examples of complementary basic education programs offer similar guidance and lessons (Casely-Hayford and Gharty 2007, Moore, DeStefano, Hartwell and Balwanz 2006).

Children who drop-out of primary school in early grades. The majority of children who do not complete primary school are excluded *after* initial entry. Lewin (2007:22) notes, "pre-cursors to drop out include repetition, low achievement, previous temporary withdrawals, low attendance, late enrollment, poor teaching, degraded facilities, very large classes, household poverty, child labor and poor health and nutrition." Troublingly, once a child has dropped out of school, there are few easily traversed pathways back to school. In the Liberian context, primary school drop-out is strongly associated with household poverty (CWIQ 2010, DHS 2013). HIES (2014) and Street Child (2016) data suggest that a large number of children attend school irregularly, which is also associated with a higher incidence of dropping out.

Studies on out-of-school children and dropout rates, both internationally and in Liberia, identify key supply side barriers (e.g., school quality, violence at school, and teacher absence) that influence the incidence of primary school drop-out (UNICEF 2012). Improvements in school quality can act as a supply side incentive to attract children to school. Following the Ebola crisis, the Liberia Education Cluster (2015:7) found that "the provision of learning materials is defined as the most helpful intervention to support the return of students. For teachers, school administrators prioritize textbooks and stationary when it comes to materials." Children who are slow learners, or who may suffer from minor physical or learning disabilities, may also drop out due to their falling behind, becoming discouraged, or not receiving adequate support.

Children who enroll late, or are severely overage for their grade. As noted earlier, international research indicates that delayed entry and enrollment, significantly disadvantages children (as discussed earlier in this chapter). An issue that requires further research is the extent to which increased access to ECE plays a role in reducing or increasing late enrollment. While ECE can positively impact school readiness, some schools do not enroll students in Grade 1 if they have not been to KG2. Other schools may be incentivized to enroll primary school age children in ECE, since ECE requires the payment of school fees whereas basic education is, by law, fee free.

Children at risk of dropping out at the junior high level. Older children are more likely to be engaged in household economic or income generating activities. As such, while they may have access to school, they may be working early in the morning or later in the day or evening. While more evidence is needed to identify the extent to which participation in income generating activities acts as a barrier to completing basic education, evidence from a limited number of small scale studies give some insight to these issues (Street Child 2016). Some programs try to minimize the opportunity cost of schooling by providing incentives for attending school, such as cash transfers or take home rations (WFP program on take home rations).

Given the high share of overage enrollment, many girls transition into adolescence and sexual maturity while they are enrolled at the junior high level. Girls who begin menstruation require proper sanitary materials and appropriate WASH facilities at school. Moreover, as girls transition to adolescence, they are also more likely to be targets of sexual harassment, abuse and exploitation (see Gender chapter).

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Methodology for estimating Zones of Exclusion in Liberia. Zones of exclusion can be mapped in Liberia based on the following data.

- *Children not enrolled in school:* EMIS (2015) and HIES (2014) data estimate that approximately 16 percent of children aged 6 to 14 years of age are not enrolled in school. HIES analysis also notes that in 2014, the majority of children classified as 'not enrolled in school' had 'never enrolled in school' (as opposed an alternative reason—they are "not enrolled in school" because they "dropped out." This percentage offers a useful starting point for estimating exclusion.
- *Cohort Survival Profile:* DHS 2013 offers a cohort survival profile that estimates grade by grade survival rates. For children who enroll in Grade 1, 80 percent complete Grade 1. Of those who enroll in grade 1, 59 percent survive to Grade 9. This survival profile roughly tallies with estimates for primary completion. DHS estimated the primary completion rate to be 54 percent in 2013. HIES data point to a Grade 6 education attainment rate (among 15 to 24-years-olds) of approximately 50 percent.
- *Irregular school attendance:* HIES data tracks whether or not a child attends school, and whether or not the child attends school regularly. According to HIES 2014, approximately 12 percent of children enrolled in basic education do not attend school regularly. The primary reasons for irregular school attendance are illness, the school being closed (been during a school day), and 'no money.'
- *Other forms of silent exclusion, including overage enrollment.* Silent exclusion is related to poverty, marginalization and/or overage status. While approximately 40 percent of children enrolled in each grade are 'extremely overage' (three or more years above the age-in-grade target), in this model, we estimate that 15 percent of children in each grade are silently excluded because of their overage status, or other forms of silent exclusion.

The Zones of Exclusion model is not able to compute the precise share of children who are excluded at each grade level in a given year. This is a consequence of the high share of overage enrollment, the broad distribution of age-groups in each grade in Liberian schools and, for nine years, the lack of age-specific grade-by-grade enrollment data. The last issue prevents the completion over a detailed cohort analysis of dropout and progression rates in the primary education cycle.

Other Issues of Interest

Differentiating between "enrollment" and "regular attendance." Limitations in the Liberian data set disallows an analysis that distinguishes "school enrollment" from "school attendance". However, international research suggests

that this distinction is important. For example, while a child may be 'enrolled' in school, circumstances may dictate that he or she commences the school day late, attends school sporadically (two to three days a week), or may not attend school at all at particular times of the year (for example during the rainy or harvest seasons). DHS (2007 and 2013) and HIES (2014) provide data with regard to school attendance that allow for a more nuanced analysis of access and attendance barriers.

Transition from Grade 6 to Grade 7. The model used to inform the analysis in this ESA, which is based, in part, on the basic education survival profile created using DHS data, does not show a particularly large drop in access between Grade 6 and Grade 7. However, other sources of data (EMIS 2015), as well as mean age-in-grade analysis, suggest the presence of barriers inhibiting a smooth transition between Grades 6 and Grade 7. For example, EMIS 2015 data indicate that 80,246 children were enrolled in Grade 6, but that only 61,537 children were enrolled in Grade 7.

Equity

Gender Equity

Since 2008 Liberia has realized significant improvements in the Gender Parity Index at the Primary and JH levels (Table 4-1).

However, at both the primary and the JH level, the gender parity index varies greatly by county (Figure 4-A). While the mean primary GPI at the national level is 0.96, eight counties have a primary level GPI below 0.90 and two counties have a primary GPI below 0.80. Similarly, at the JH level, the mean JH GPI is 0.98, yet five counties have a JH GPI below 0.80 and three counties have a JH GPI between 0.80 and 0.90. In most instances, counties with below average primary GPI also demonstrate below average JH GPIs. We note that the primary GPI figure calculation for Grand Gedeh look incorrect. This issue could be revisited during the 2016 school census.

TABLE 4-1 Gender Parity Index in Primary and JH, 2008 and 2015

	2008	2015
Primary GPI	0.88	0.96
JH GPI	0.79	0.98

FIGURE 4-A Primary and JH Gender Parity Index, by County, 2015

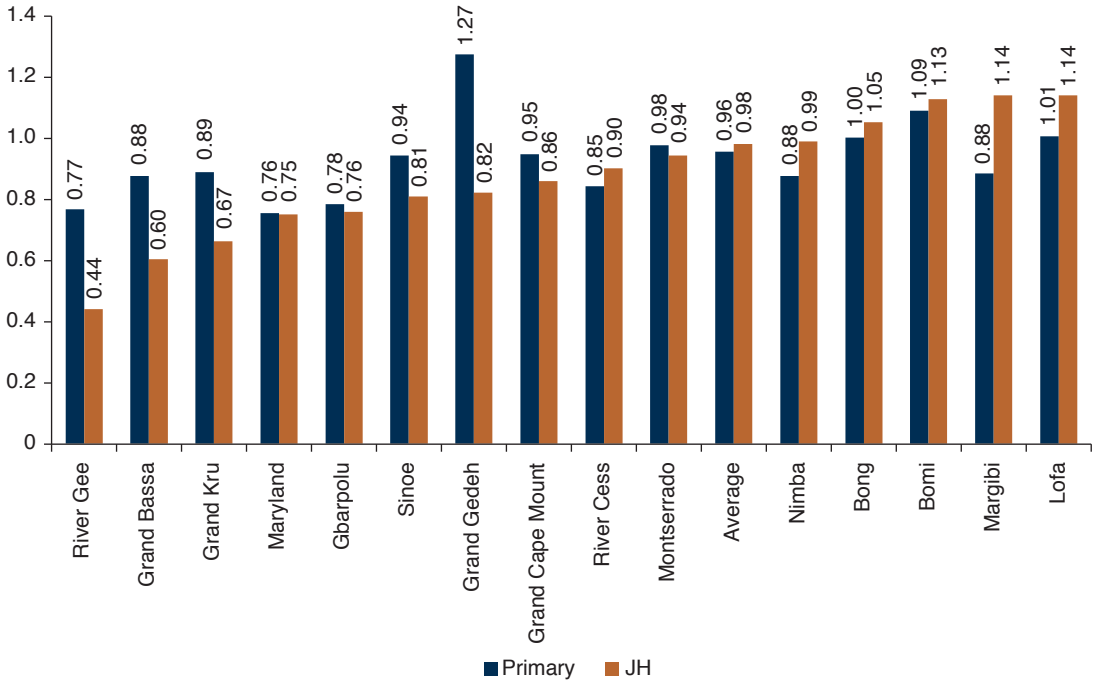
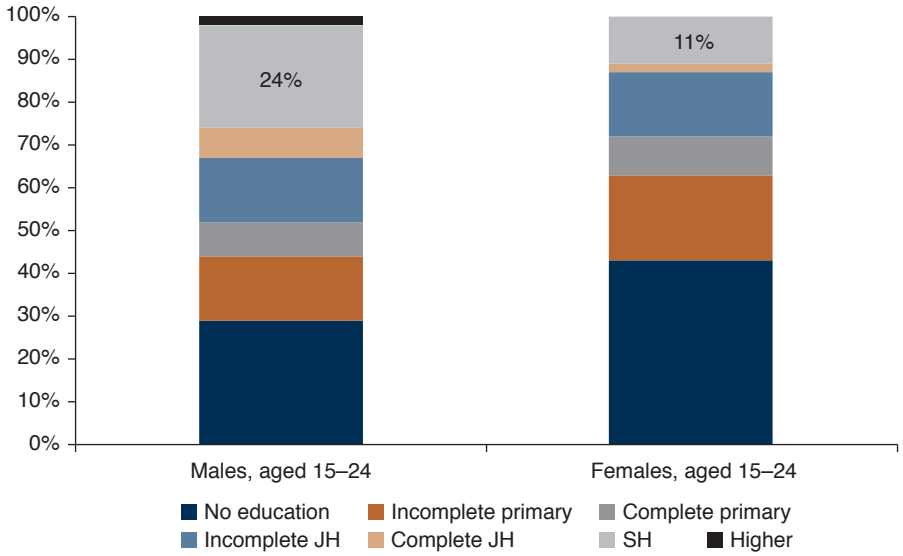


FIGURE 4-B Education Attainment by Gender



Source: HIES 2014.

In the years spanning 2008 to 2015, rates of female literacy and educational attainment improved; however, female educational attainment continues to lag behind that of males. Figure 4-B presents HIES 2014 educational attainment data for the cohort aged 15 to 24 years by gender, showing that more than 30 percent of males in the sample have completed JH and/or attained a higher level of education, while fewer than 15 percent of females had achieved a similar level of attainment. Notably, only 29 percent of males reported 'no education' compared to 43 percent of females.

Over the same period, female students accounted for an increasing share of students sitting Grade 9 and 12 examinations. The LJHSCE and the LSHSCE, Grade 9 and 12 school-leaving exams, play a critical role in determining access to higher levels of education. The share of female students sitting these exams has demonstrated regular increases. However, the pass rate for girls lags that of boys by approximately two to five percent. Learning outcomes, disaggregated by gender, are discussed in the chapter on Quality.

TABLE 4-2 Share of Females Sitting for LJHSCE, 2012–2014

Year	LJHSCE (Female share)	LSHSCE (Female share)
2007	No data	36%
2012	44.0%	42.7%
2013	45.3%	43.8%
2014	46.0%	45.8%

Source: WAEC.

Equity in the Distribution of Education Resources

Teacher Distribution

Montserrado County has a disproportionate share of teachers. While Montserrado County accounts for 39 percent of total student enrollment, it is the locus of almost half of Liberia's teachers (25,578 of 52,661 teachers). Table 4-3 compares the county share of student enrollment with the county share of the teaching force (for all education levels and all school ownership types).

Differences between a county's share of teachers and share of students points to disparities in the distribution of teachers. For example, Nimba County accounts for 12.2 percent of student enrollment, but is home to only 10.1 percent of the teaching force. Bong County accounts for 8.2 percent of student enrollment, but is home to only 6.6 percent of the teaching force. A number of factors inform this disparity, including the large number of non-government schools in Montserrado County (which generally have lower STRs), and, according to consultations informing the ESA, preference on the part of many teachers to live in urban areas (where there are more social and economic opportunities, and fewer hardships).

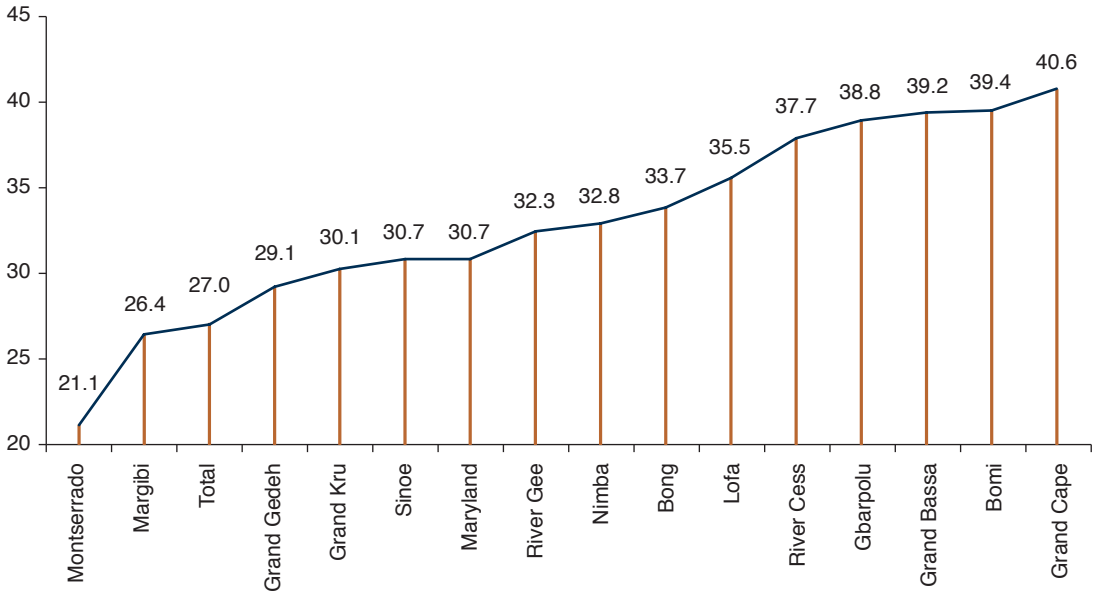
An analysis of the distribution of key educational inputs demonstrates high levels of disparity. There is significant variance in the distribution of teachers, trained teachers, classrooms, and textbooks among primary schools. EMIS 2015 reported Student-Teacher Ratio (across all schools and all levels of education) as ranging from 21.1 to 40.6, with a mean of 27.0. In six counties, the STR is above 35 (Figure 4-C).

TABLE 4-3 County Share of Student Enrollment and Teachers, 2015

County	Share of student enrollment	Share of teaching force	Difference
Bomi	2.65%	1.82%	0.83%
Bong	8.21%	6.58%	1.64%
Gbarpolu	1.72%	1.20%	0.52%
Grand Bassa	5.12%	3.52%	1.59%
Grand Cape Mount	2.93%	1.95%	0.98%
Grand Gedeh	2.92%	2.71%	0.21%
Grand Kru	1.76%	1.58%	0.18%
Lofa	6.92%	5.27%	1.65%
Margibi	7.34%	7.52%	–0.18%
Maryland	3.40%	2.99%	0.41%
Montserrado	39.32%	50.29%	–10.97%
Nimba	12.24%	10.09%	2.15%
River Cess	1.59%	1.14%	0.45%
River Gee	1.50%	1.25%	0.25%
Sinoe	2.37%	2.08%	0.28%

Note: the "difference" calculation is made by subtracting the share of the teaching force from the share of student enrollment for each county.

FIGURE 4-C Student Teacher Ratio (all Levels), by County, EMIS 2015



Across all schools and all levels of education the Student-Qualified Teacher Ratio (SQTR) ranges from 33.8 to 90.0, with a mean of 43.5. In eight counties, the SQTR is above 60 (Figure 4-D). These disparities are important because: (i) teachers account for approximately 85 percent of MoE expenditure, and (ii) access to a trained teacher is generally associated with

FIGURE 4-D Student Qualified Teacher Ratio (all Levels), by County, EMIS 2015

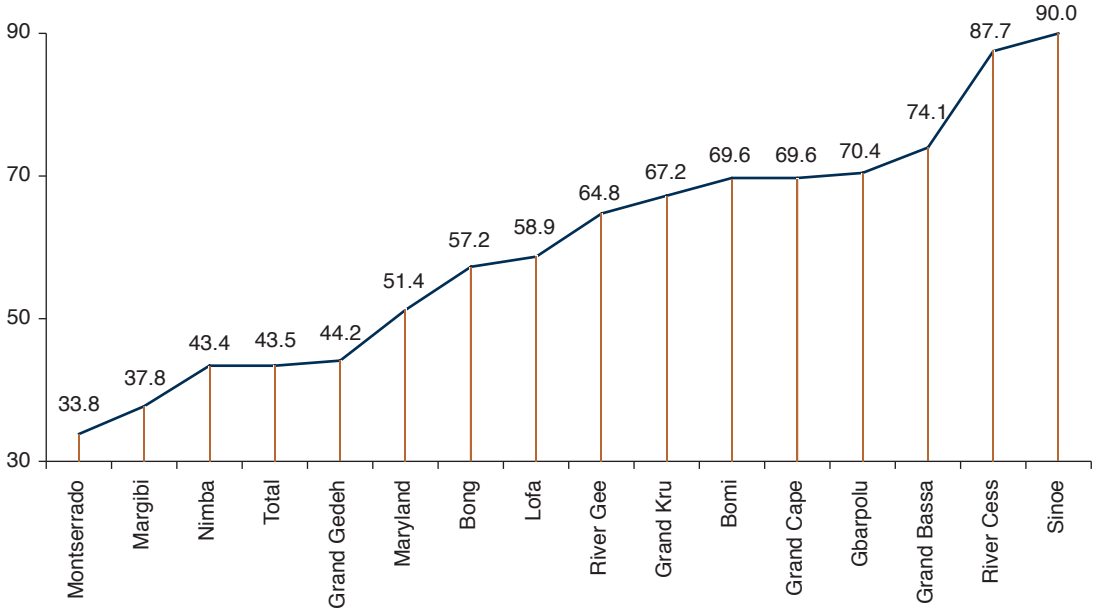
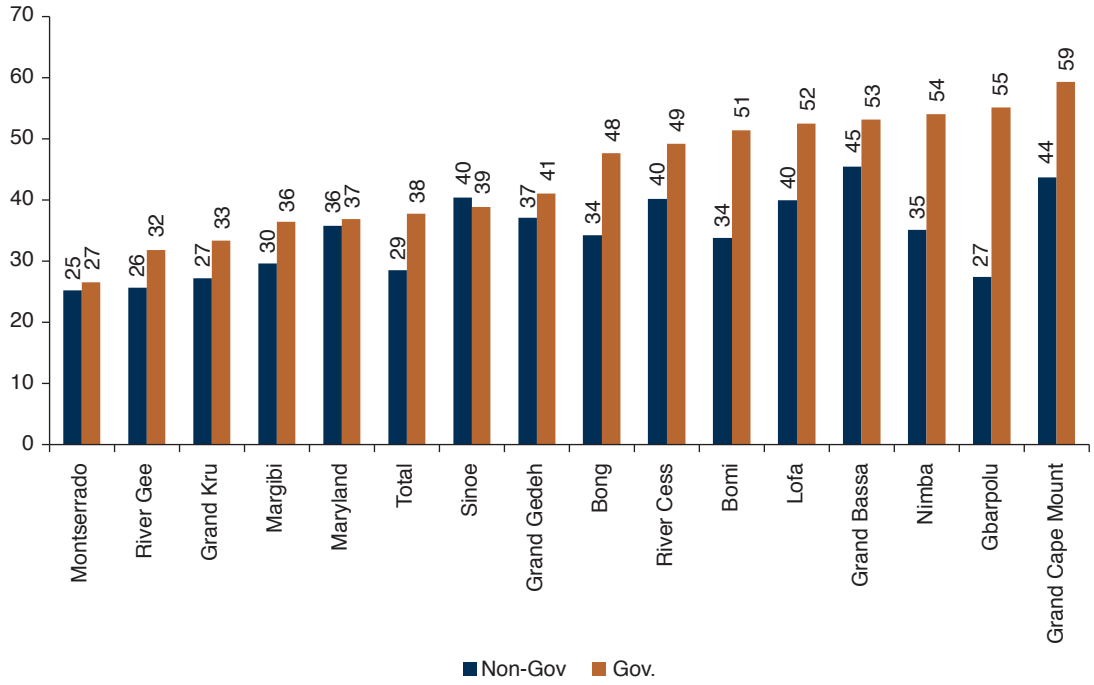


FIGURE 4-E ECE STR by County, 2015



Source: EMIS 2015.

higher quality education. Due to the fact that payroll accounts for such a large share of MoE expenditure, disparity in the allocation of teachers and qualified teachers can be used a proxy for disparity in the allocation of MoE expenditure on education.

The range in ECE student teacher ratio varies greatly by school ownership and by county (Figure 4-E). Note that the "Total" figure is the mean value.

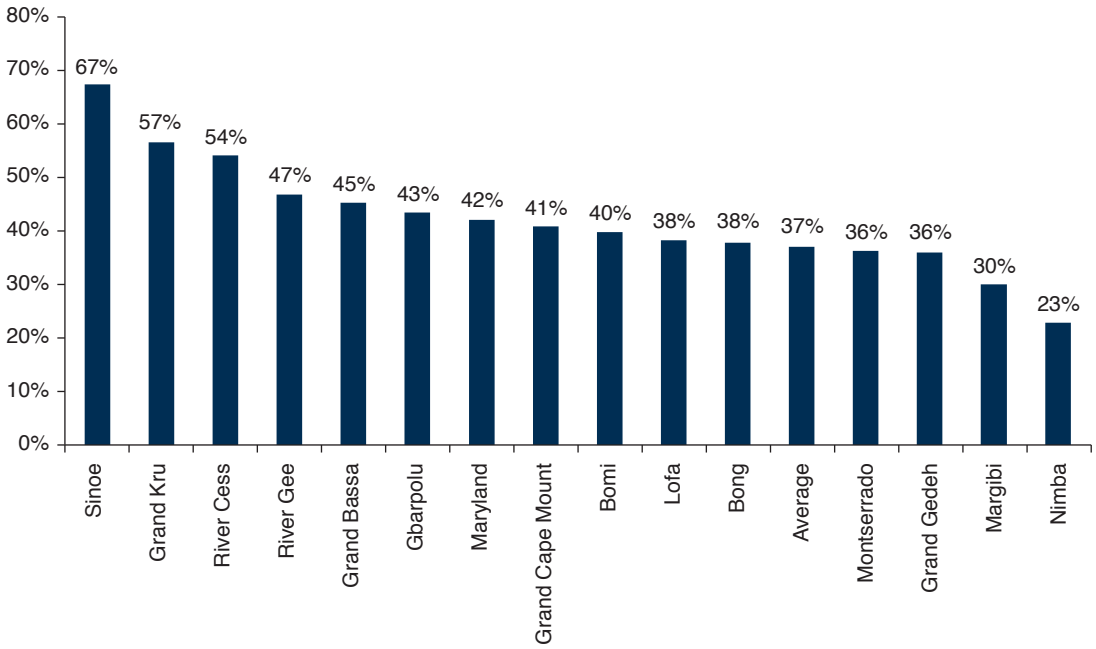
In three counties, more than half of the primary school teaching force is unqualified (Figure 4-F). Qualified teachers are less likely to work in disadvantaged districts, compounding existing education related challenges faced by children in remote or poor areas.

Many disparities are driven by factors which may be beyond the control of the MoE. Many teachers demonstrate a preference for living and working in urban areas because, *inter alia*, urban areas offer an better quality of life (e.g., access to mobile networks, basic services, etc.), more opportunities for professional development, increased opportunities for income generation, and more opportunities for female-headed and dual-career households. Challenges confronting rural teachers are discussed further in the chapter on Teachers.

Infrastructure Distribution

Student Classroom Ratios for ECE varies widely by county, ranging from 34 to 90, with a mean of 47. At the primary level, SCRs by county vary range from 30 and 49, with a mean of 33.

FIGURE 4-F Unqualified Primary Teachers by County, 2015



Source: EMIS 2015.

FIGURE 4-G ECE Student Classroom Ratio, EMIS 2015

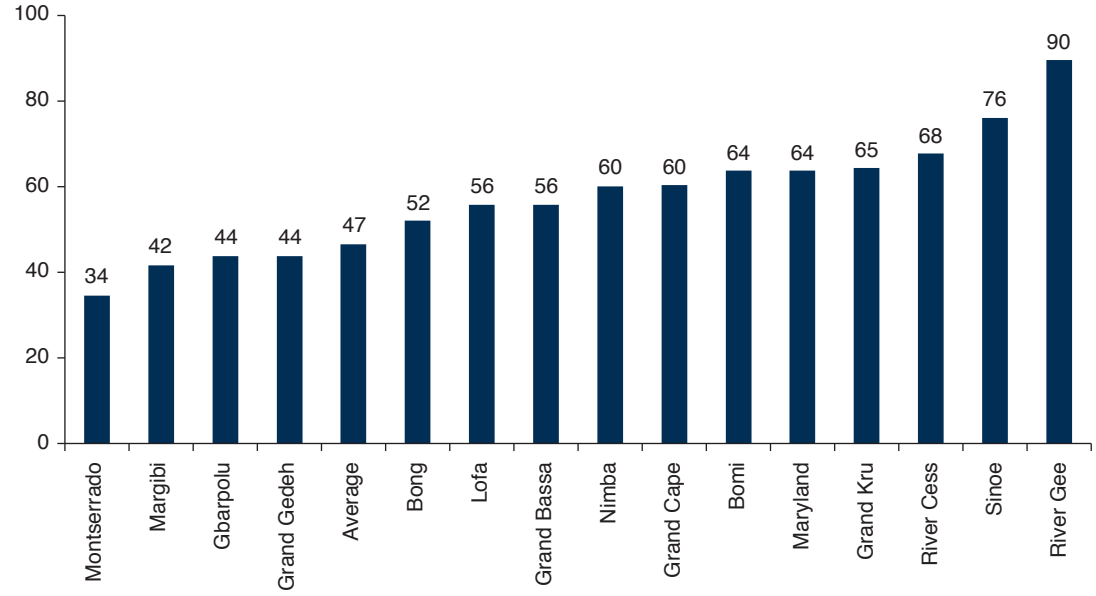
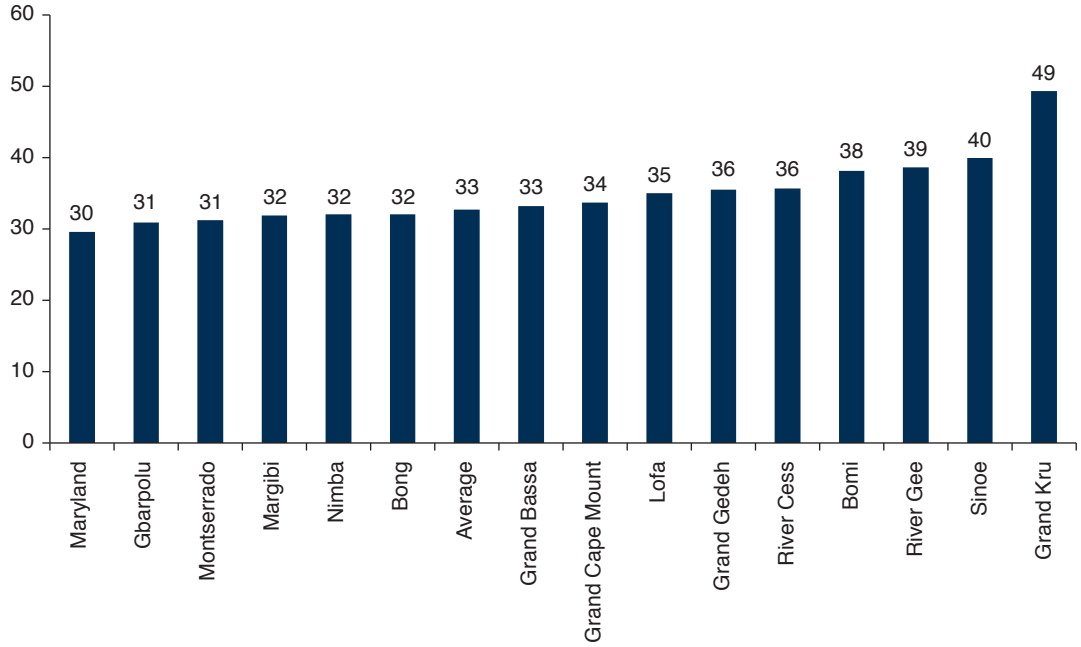


FIGURE 4-H Primary Student Classroom Ratio, EMIS 2015



At present, education policy and policy implementation do not effectively address disparities in the allocation of inputs and resources in the education sector. There is no policy or system in place to incentivize more qualified or female teachers to serve in rural or remote areas, and there is no dedicated support offered to teachers working in these areas. Moreover, there does not appear to be clear policy, or guidance, informing decisions on where to build new education related infrastructure (i.e., classrooms and WASH facilities), or for prioritizing the repair of existing infrastructure. NOTE: Chapters on Quality, Teachers, and Finance also address equity issues, including the issues of female learning outcomes, infrastructure and textbooks, women teachers, rural teachers, school grants, and the share of resources directed to basic education.

Educational Quality and Learning Outcomes

This chapter presents data and analysis on four dimensions of educational quality: (i) learning outcomes, (ii) inputs such as curricula, school infrastructure/classrooms, textbooks, school grants, and WASH facilities, (iii) processes for improving school quality (including processes that support community participation), and (iv) school quality standards. The last item, school quality standards, provides a Liberia-specific framework for, and understanding of, educational quality. Other important dimensions of educational quality, including issues related to teacher quality, school safety and decentralized monitoring and quality assurance systems are addressed in other chapters of the ESA.

Literacy in Early Grades

There is general agreement among stakeholders to Liberia's education sector that the level of student literacy in early grades is low. International experience demonstrates that the development of literacy skills in early grades constitutes a critical component of foundational skills that inform future learning and the development of higher level cognitive skills. This section presents findings from several small scale learning assessments in Liberia—all of which find that early grade skills in reading and literacy are low and unevenly distributed. Children who do not develop literacy in early grades often fall behind their peers. In later grades these children are more likely to be 'silently excluded' and are more likely to drop out of education than their peers (CREATE 2011).

These phenomena contribute to a reinforcing cycle of inequality: children from poor households, and/or with illiterate parents, are less likely to develop literacy skills than their peers, and more likely to drop out of school before acquiring literacy. The marginalization of poor and rural children contributes to a pervasive structural challenge in Liberia: as evidenced in the chapters on human capital and equity, children in rural and remote areas face multiple disadvantages (i.e., low levels of parental literacy, low levels of school attendance, poverty); troublingly, these children are also less likely to access qualified teachers and quality learning environments.

Findings from Three Baseline Studies in Reading

Over the past eight years, three baseline studies of early grade literacy have been undertaken in Liberian schools. Table 5-1 offers a description of each study. The Early Grade Reading Assessment (EGRA) Plus (RTI 2009, Piper and Korda 2010) was a pilot program designed to test the impact of interventions designed to improve Early Grade Reading. The second study, the Liberia Teacher Training Project (LTTP II) sought to scale-up interventions initiated through the EGRA Plus pilot (King, Korda, Nordstrum and

TABLE 5-1 Description of Three Baseline Studies of Early Grade Reading

Project	Study Description
EGRA Plus	Baseline data were collected using the EGRA tool in November 2008. The study constructed a nationally representative sample of 176 schools, with just under 3,000 Grade 2 and Grade 3 students. The baseline data was organized into three cohorts—two treatments and one control group—to support endline analysis of EGRA Plus reading interventions.
LTTP II	Baseline data were collected using the EGRA tool in May 2011. The study constructed a representative sample of 150 schools, and just under 3,000 Grade 1 to 3 students in four counties: Bong, Lofa, Montserrado and Nimba.
EQUAL	Baseline data were collected using the EGLA tool in May 2014. The study collected data from 85 schools reaching 940 Grade 2 and 3 students in Grand Bassa county.

Edwards 2015). The Education Quality and Access in Liberia (EQUAL) used a variation of the EGRA tool (Hobbes and Davidson, 2015).

The EGRA sub-test for "connected text oral reading fluency" is frequently used as a proxy for 'literacy.' The "connected text oral reading fluency" sub-test assesses a child's ability to read a passage that tells a story of approximately 60 words. Internationally, oral reading fluency of between 45 and 65 correct words per minute is strongly associated with comprehension and 'literacy' (RTI 2010). However, the assertion that this level of oral reading fluency is an adequate proxy for reading comprehension has also been challenged (Bartlett, Dowd and Jonason 2015, Wagner 2010). Of particular concern is the assertion that, across languages, reading a certain number of 'Correct Words per Minute' is strongly associated with oral fluency and comprehension.

In each of the three baseline studies, the mean scores of Grade 3 students in connected text oral reading fluency were below 25 correct words per minute (Table 5-2). In the EQUAL study, the mean score for Grade 3 oral reading fluency was 19.9 correct words per minute, compared to a mean of 25 correct words per minute in EGRA Plus, and 18.9 correct words per minute in the Grade 3, Cohort 2 group of the LTTP II study. As indicated earlier, the international benchmark for oral reading fluency between 45 and 65 correct words per minute is considered strongly associated with comprehension and

TABLE 5-2 EGRA and EGLA Baseline Results of Grade 2 and 3 Students

Sub-test	EGRAPLUS		LTTPII		EQUAL	
	Grade 2	Grade 3	Grade 3 Cohort 1	Grade 3 Cohort 2	Grade 2	Grade 3
Letter naming	55	67	72.0	65.2	69.6	84.2
Phonemic Awareness (out of 10)	3.1	3.8	44%	47%	43%	51%
Unfamiliar word (invented word) fluency (per minute)	1.6	3.0	0.3	1.4	—	—
Oral reading fluency (per minute)	14.5	25.1	7.6	18.9	10.4	19.9
Reading Comprehension (out of 5 questions)	22%	26%	10%	20%	—	—

Source: RTI 2009; King et al 2015, Hobbs and Davidson 201.
RTI (2009:6) provides definitions for each sub-test.

'literacy' (RTI 2010). In all studies, Grade 3 students performed better than Grade 2 students on all sub-tests.

Low levels of phonemic awareness and unfamiliar word fluency were also identified as critical issues. Sub-tests within the reading assessments measure pre-literacy skills (i.e., recognizing sounds and decoding words). In the EQUAL assessment, 94 percent of Grade 2 students and 77 percent of Grade 3 students received 'zero scores' in the unfamiliar word fluency sub-test.

Student performance on EGRA assessments are unevenly distributed, with a large share of students earning 'zero scores' on several sub-tests. A 'zero score' is assessed when a student fails to correctly answer a single question on a sub-test. In the oral reading fluency sub-section of the EGRA assessment, nearly 35 percent of Grade 2 students and 17 percent of Grade 3 students were unable read a single word. Put another way, approximately 750 of the 3,000 learners assessed, failed to read a single word. Of Grade 3 students assessed, 17 percent received zero scores in oral reading fluency and 40 percent received zero scores in reading comprehension (RTI 2009). Compared to the EGRA assessment, the prevalence of zero scores in the EQUAL sample were lower with 20.9 percent of Grade 2 students and 7.5 percent of Grade 3 students receiving zero scores for the oral reading fluency sub-test.

The uneven distribution of reading outcomes indicates that some children are likely to require more support than others to develop literacy. In Liberia, high poverty households, and households in rural or remote areas, are more likely to be headed by an individual with lower levels of literacy and lower levels of educational attainment than the general population (DHS 2013). Children from these households are also more likely to score poorly on reading assessments. Due to these structural disadvantages, children from comparatively poor and rural households are likely to require more support (e.g., access to qualified teachers and reading materials; more instructional time) than children from households in which one or both parents can read and write in English.

Impact of Reading Interventions

Impact data are available for early grade reading interventions under EGRA Plus and LTTP II. Both programs collected baseline, midline and endline data across two treatment cohorts and a control cohort. Intervention components included: (i) the provision of teaching and learning materials, (ii) initial and refresher training for teachers, (iii) the provision of regular external coaching to teachers, and (iv) the regular assessment of students (Table 5.3). The LTTP II intervention (2011–2015) drew on the EGRA Plus pilot (2008–2010) and introduced reading and math programs for Grades 1, 2, and 3 to approximately 1,020 schools in four counties (i.e., Bong, Lofa, Montserrado, and Nimba) in a phased approach.

The EGRA Plus pilot demonstrated that a targeted intervention could yield significant gains in reading outcomes. The pilot was completed over eighteen months (between 2008 and 2010) and included a full treatment group, a light treatment group and a control group. The full treatment group

TABLE 5-3 Intervention Components: EGRA Plus and LTTP II

Component	Description
Teaching and Learning Materials (TLM)	• Teacher guides with scripted lesson plans for Grades 1–3 • TLMs including letter cards and pocket charts • Pupil reading activity book linked to teacher scripted lessons. • Levelled, decodable reading materials (provision of ~50 per grade)
Teacher Training	• Teacher training work shop: initial & refresher training (same year)
Coaching	• Teacher coaching on core components of early reading acquisition
Assessment	• Teacher training on use of EGRA–like instruments to assess pupil performance on letter knowledge, reading, and comprehension • Regular assessment of students (several times per year)

benefitted from the provision of learning materials, teacher training, coaching and regular assessment of children. At the conclusion of the study, Piper and Korda (2010) note, "compared against baseline, full treatment children increased the number of words read correctly by 138.2 percent…and [in] control schools by 39.0 percent. [This difference is equal to an effect size of 0.8 SD] Substantively, this means that full treatment schools increased their number of words read from 20.8 to 49.6 words per minute" (p.4). In EGRA Plus, the full treatment group also realized a 0.55 standard deviation (SD) improvement in phonemic awareness and a 1.23 SD improvement in unfamiliar word fluency, as well as large gains in reading and listening comprehension in comparison to control schools. The 'light treatment' group demonstrated a lower impact across all measured outcomes in comparison with the full treatment group.

Integration of the EGRA interventions into the LTTP II project and MoE systems suggested that gains in reading outcomes could be realized system-wide, but also demonstrated challenges associated with operating at a systems level. The final evaluation notes,

> The Ebola emergency and the subsequent closing of all primary schools in Liberia for seven months during the 2014/2015 academic year had a significant impact on the performance of Cohort 2 schools (Save the Children, 2015). Most of the activities that were planned for implementation [e.g., learning materials distribution and teacher training] just before and/or at the beginning of the new academic year had to be canceled (King et al. 2015, p. 64)

Other implementation challenges included delays in the procurement and delivery of textbooks at the start of the project, and a doubling of the recommend EGRA coach to teacher ratio to reduce program costs.

Variables associated with increased oral reading fluency include:

- Pupil-level variables: gender, grade, home language, eating breakfast on the day of the assessment, and pupil age.
- School characteristic variables: head teachers' academic backgrounds; daily classroom observations; and availability of books that pupils could borrow from schools.

- Household variables: availability of reading books at home; being read to by others, and practice reading aloud to others in their homes (King, et al. 2015).

Grade 9 and Grade 12 Assessments

In Liberia, examinations administered at the end of Grade 9 and Grade 12 determine whether or not students are eligible to continue to the next cycle of education. To enter Grade 10, a student must pass the LJHSCE which most students take at the end of Grade 9. To be eligible for admittance to most Universities and Colleges in Liberia, a student must have passed the LSHSCE, which most students take at the end of Grade 12.

While an increasing number of students sit the LJHSCE and the LSHSCE, pass rates have dropped in recent years, raising concerns about the quality of basic and secondary education. Further evidencing this concern, in 2015, none of the over 25,000 students sitting for the University of Liberia entrance exam received a passing grade. During ESA consultations, some university representatives argued that the majority of contemporary high school graduates are not 'college ready.' At the time of writing the ESA, results for May 2016 LJHSCE and LSHSCE exams had been announced. However, because of concerns about exam results, the Minister established a WAEC review committee to review "the conduct and results of the WAEC examinations."

The LJHSCE is comprised of four subject assessments: Mathematics, General Science, Language Arts, and Social Studies. A LJHSCE certificate is awarded based on the following criteria: a candidate's score on the assessment and a Continuous Assessment Score (CASS) provided by the school. A score of 60 or more on the CAS is considered a pass. To qualify for a certificate, a candidate must pass in at least three of the four subjects offered for the examination. West African Examinations Council (WAEC) data used in the ESA were provided by WAEC, including the Presentation on the West African Examinations Council, July 2014 (WAEC 2014).

LJHSCE pass rates have declined in recent years (Table 5-5) even as the number of students taking the LJHSCE has seen a steady increase over the past seven years (Table 5-4). In 2007, 20,480 students sat for the exam, while in 2014, 31,927 sat the LJHSCE, representing an increase of over 50 percent. In 2007, over 95 percent of examinees passed the exam compared to 84 percent in 2012 and 59 percent in 2014. The tables below present LJHSCE data for the years spanning 2012 to 2014, and include the number and share of students sitting and passing the LJHSCE by gender. The tables show a steady increase in the number of students sitting the LJHSCE as well as a decline in pass rates. The below table shows that the pass rate for females students sitting the exam was 4 to 6 percent lower than that of males.

There is wide variation in LJHSCE performance across counties (see Figure 5-A). While the mean pass rate in 2014 was 60 percent, four counties demonstrated pass rates below 40 percent and two counties had pass rates above 70 percent. It is important to note the significant influence of including

TABLE 5-4 Number Students Sitting for and Passing the LJHSCE, by Gender, 2012–2014

	Sat				Passed		
Year	Male	Female	Total	Female Share	Male	Female	Total
2012	16,340	12,851	29,191	44.0%	13,994	10,474	24,468
2013	16,582	13,705	30,287	45.3%	13,971	1,0869	24,840
2014	17,235	14,692	31,927	46.0%	10,643	8,200	18,843

TABLE 5-5 LJHSCE Pass Rates, by Gender, 2012–2014

Year	Pass Rate (male)	Pass Rate (female)	Pass Rate (total)
2012	85.6%	81.5%	83.8%
2013	84.3%	79.3%	82.0%
2014	61.8%	55.8%	59.0%

Montserrado County in the dataset: Of the 31,927 students who sat the LJHSCE in 2014, 17,327 were from Montserrado County, while in six counties, fewer than 400 students sat the LJHSCE.

The LSHSCE focusses on identifying students who are prepared for university. The LSHSCE is comprised of assessments grouped into three categories: Core, General and Science Subjects. Core (compulsory) subjects include English Language and Mathematics; general subjects include Economics, Geography, History, and English Literature; and Science Subjects include Biology, Chemistry and Physics.

FIGURE 5-A LJHSCE Pass Rates by County

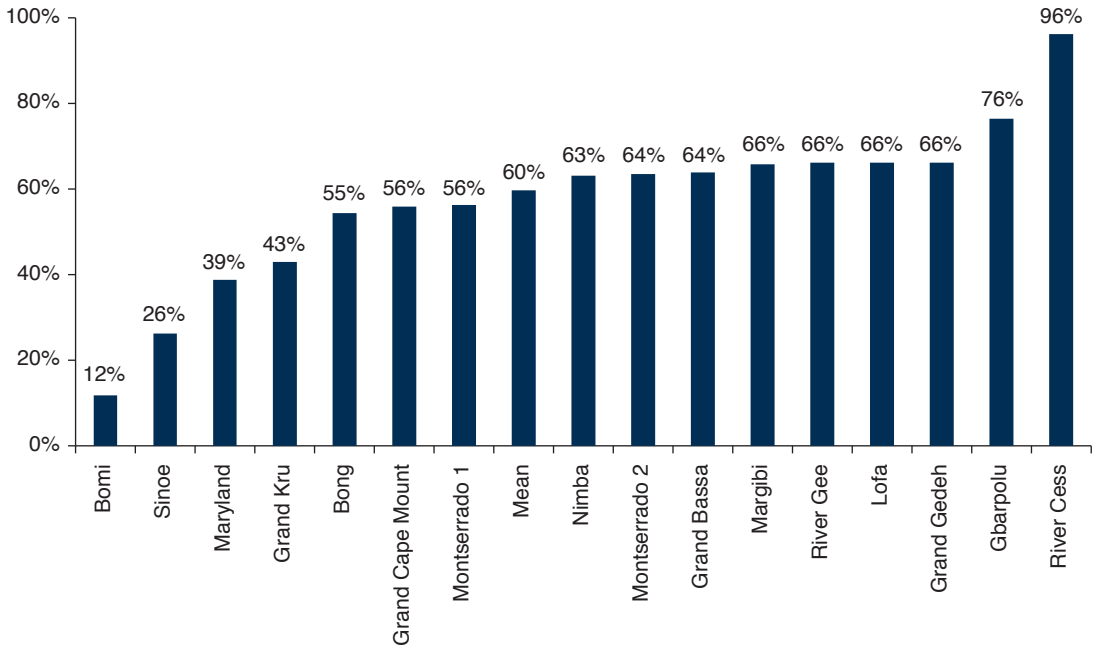


TABLE 5-6 Number Students Sitting for and Passing the LJHCE, by Gender, 2012–2014

	Sat				Passed		
Year	Male	Female	Total	Female Share	Male	Female	Total
2012	14,394	10,738	25,132	42.7%	10,770	7,461	18,231
2013	15,035	11,741	26,776	43.8%	10,448	8,186	18,634
2014	14,986	12,665	27,651	45.8%	7,273	5,671	12,944

TABLE 5-7 LJHCE Pass Rates, by Gender, 2012–2014

Year	Pass Rate (male)	Pass Rate (female)	Pass Rate (total)
2007	81.3%	79.8%	81%%
2012	74.8%	69.5%	72.5%
2013	69.5%	69.7%	69.6%
2014	48.5%	44.8%	46.8%

LSHSCE participation has realized steady increases, driven by increased female participation. Table 5-6 demonstrates a steady increase in the number of students taking the LSHSCE. Female participation increased by nearly 2,000 students between 2012 and 2014. Notably, in 2007, females accounted for 36 percent of the students taking the LSHSCE. By 2014, the share of female students taking the LSHSCE exam had grown to nearly 46 percent. During this same time, the pass rate for females was 4 to 6 percent lower than that for males who sat the exam (Table 5-7).

LSHSCE pass rates have declined in recent years. In 2007, 81 percent of examinees passed the exam compared to 72 percent in 2012 and 47 percent in 2014. Table 5-7 presents LSHSCE pass rates for 2007 and the period 2012 to 2014. In three of four years, female pass rates were below the male pass rate.

As evidenced by the data for 2014, LSHSCE pass rates vary greatly by county, ranging from 10 percent to over 60 percent (Figure 5-B). In all but one county, the pass rate of male students (blue bar) exceeded that of female students (red bar).

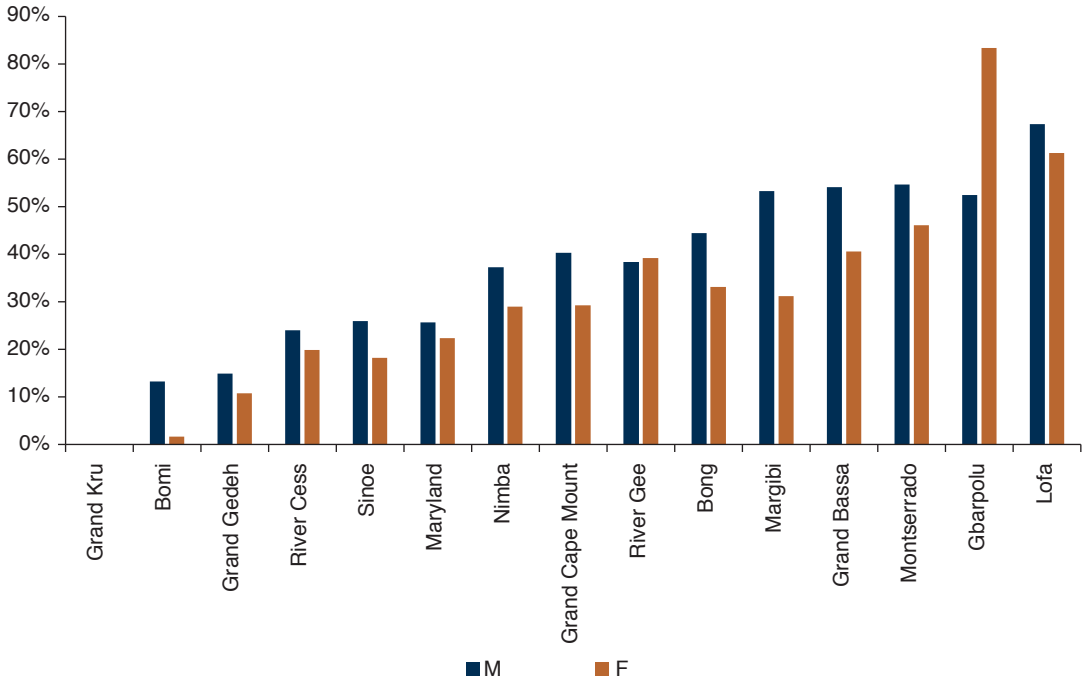
Curriculum and Textbooks

Curriculum

The current national curriculum was approved in 2011. The MoE has produced a curriculum statement for each subject taught in Grades 1 through 12.[5] Table 5-11 identifies the subjects offered. In addition to the national curriculum, WAEC publishes annual syllabi for LJHSCE and LSHSCE examinations.

[5] Curriculum for all core subjects for Grades 1–12 in Liberian Schools, current to 2011, can be accessed at: [http://liberiaunitedmethodistchurch.org/ministries/generaleducationandministry/liberia-national-curriculum/].

FIGURE 5-B LSHCE Pass Rates by Country, 2014



Source: WAEC, 2014.

The national curriculum is compulsory for all government and community schools, and is widely used by mission and private schools. Over 90 percent of primary schools use the national curriculum. In the secondary school system, 87.3 percent of schools use the national curriculum. At higher grades, schools also use the WAEC syllabi in preparation for the WAEC administered examinations.

The curriculum is organized around the school day and the school calendar. At the basic and secondary levels, the school day is divided into six instructional blocks of 45 minutes each, for a total of 4.5 hours of instructional time per school day. The school year is comprised of over 200 instructional days (per the Education Reform Act), commencing in September and concluding in July. The year is organized into two semesters, and each

TABLE 5-8 National Curriculum, Grades 1–12, by Subject

Grade 1–6	Grade 7–9	Grade 10–12
1. Language Arts English	1. Language Arts	1. English Language
2. Mathematics	2. Mathematics	2. Literature in English
3. Science	3. General Science	3. Mathematics
4. Social Studies	4. French	4. Biology
5. Physical Education	5. Social Studies	5. Chemistry
6. Music & Culture	6. Physical Education	6. Physics
Moral and religious education (no syllabus)	7. Music & Culture	7. History
	Moral and religious education (no syllabus)	8. Geography
		9. Economics

semester is divided into three 'marking' periods. The school calendar indicates that period tests are to be given at the end of each marking period, and that final exams are to be administered at the end of each school year.

There is general consensus within the MoE that the national curriculum needs to be updated. The current curriculum statement is organized by grade and marking period, and identifies general objectives, expected learning outcomes and the primary topics to be covered during each grade and for each marking period. A revised curriculum is envisioned that will provide greater specificity with regard to learning standards, formative and summative assessment, and evaluation methods. The Education Reform Act of 2011 calls for the establishment of a Center for Curriculum Development and Research, which would be responsible for developing national curricula for all schools, including the potential development of local language curricula. However, the Center has not yet been established.

Literacy Instruction

Several MoE planning documents and sector reviews identify the improvement of early grade reading and literacy as a priority. The Language Arts English curriculum for Grades 1 through 6 includes content in English language spelling, grammar and composition, and reading. However, the curriculum statement does not explicitly identify an approach (i.e., phonics, whole word, a combination thereof) or emphasize issues (i.e., sequencing instruction, practice using familiar and unfamiliar phenomes, etc.) for the teaching, learning, and evaluation of literacy in early grades (MoE 2015).

Recent MoE policy documents and statements argue that there is a need to strengthen literacy instruction in early grades. The recent Joint Sector Review (MoE 2016:15) identifies the need to "establish and implement a national reading strategy" as a key priority, and the MoE 2015 Annual Report identifies as its number one priority, the need to "invest further in early grade Reading and Math, including teacher training, learning materials and national assessments" (MoE 2016:29). In 2013, the MoE considered draft benchmarks for reading, including oral reading fluency and reading comprehension for students in Grades 1 to 3.

The 2015/16 education calendar states that schools should prioritize reading and literacy practice. However, minimum per week contact hours for numeracy and literacy are only three hours and 45 minutes per week, which is low by international standards.

The Education Reform Act 2011 identifies English as the primary language of instruction in primary schools. However, the Act also states that CSBs have authority to select a local language which may also be taught in primary schools. The MoE has not yet developed curricula for teaching local languages, and the current thrust of policy development appears to be focused on strengthening teaching and learning in the English language. Mother-tongue literacy instruction is practiced, and advocated for, by a small number of organizations. The Liberia Translation and Literacy Organization

(LIBTRALO) and the IBIS program have implemented mother tongue literacy programs that support L1 to L2 transition (mother-tongue to English) in several languages.

Textbooks and Learning Materials

In 2015/16 there was a major procurement of school textbooks for primary and JH schools, including the procurement of one million supplementary readers (for Grades 1 to 4), 340,000 levelled readers, one million textbooks for mathematics, science, social studies and language for Grades 5 to 9, and 200,000 teachers' guides to support learning in these subjects. Moreover, 1.4 million pieces of supplementary material related to language, social studies, and the sciences were procured. The distribution of materials reached 2,489 schools and benefited 373,845 students. These new textbooks are not included in the 2015 EMIS calculation of the student-textbook ratio.

Several sources note that in Liberia parents, teachers and school principals place a high value on textbooks, and interpret their presence as encouraging school attendance. Several external evaluations suggest that school leaders and teachers place significant value in textbooks, teachers' guides and other learning materials. An evaluation of early grade reading and math program undertaken during implementation of the LTTP II found "that the program lessons and materials were appreciated by teachers and that they regularly used them in the classroom" (USAID 2013: 47). Following the Ebola crisis, a report by the Liberia Education Cluster (LEC) determined that "the provision of learning materials is defined as the most helpful intervention to support the return of students. For teachers, school administrators prioritize textbooks and stationary when it comes to materials "(LEC 2015:7). The development and distribution of textbooks were also identified as critical features of the EGRAPlus program.

Over the course of the past decade, textbook procurement and replenishment has been irregular. Moreover, deficiencies in the storage of textbooks has been identified as an issue. For several years, MoE requests for funding to support the provision of textbooks has not been included in Ministry of Finance budget ceilings. As a result, the MoE generally relies on external funding and donor funded projects to cover costs associated with the purchase of textbooks and learning materials. Since 2008, external support for EGRAPlus, LTTP II and GPE related interventions have played an important role in supporting MoE textbook provision for basic and secondary education.

School Infrastructure

Following the cessation of hostilities in 2003, the vast majority of school infrastructure in Liberia had either been destroyed or had experienced war-related damage. In 2007, nearly 75 percent of schools were reported as

TABLE 5-9 Selected Public Primary School Infrastructure Data, 2007/08, 2015/16

	2007/08	2015/16
Number of primary schools	2,122	2,494
Share of primary schools with solid or semi-solid classrooms	68%	70.8%
Share of primary schools without solid or semi-solid classrooms	32%	29.2%

Source: MoE EMIS 2007/08; 2015/16.

having been damaged or destroyed , with 40 percent of schools demonstrating the impact of minor damage, 10 percent (413) described as demonstrating major damage, and 15 percent (543) of schools, destroyed (MOE, 2008). A UNICEF evaluation further notes that the legacy of the war included the looting of furniture, roofing, and educational materials from many schools, and the destruction of two RTTIs. In 2006, the Ministry's School Census found that only 24 percent of children enrolled in public primary schools had access to desks and chairs, and many classrooms did not have chalkboards or furniture for teachers.

Since 2008, school infrastructure has been significantly improved. In 2015, there were 2,611 government schools in Liberia. Table 5-9 compares the state of public primary school infrastructure in 2007/08 with evidence from the 2015/16 school year. The overall stock of government primary schools increased by 372, equivalent to a 15 percent increase, from 2,122 public primary schools in 2007/08 to 2,494 public primary schools in 2015/16. The table below also shows that the share of public primary schools with solid and semi-solid structures increased over the same period.

Liberia has increased the number of solid and semi-solid classrooms. However, increasing student enrollment means the demand for more classrooms remains high at all levels. The two tables below highlight the need for further classroom construction, repair and maintenance in Liberia. In 2015, 36 percent of ECE classrooms and nearly 30 percent of primary school classrooms were located in "make-shift" and "partitioned" structures. The presence of makeshift and damaged infrastructure (and furniture) contributes to an unsafe and unwelcome environment for students and teachers. Potential dangers include personal harm from falling bricks and metal from damaged ceilings, roofing and walls; exposed nails, broken glass and wood splinters; and collapsing pit latrines. Other challenges relate to classrooms that do not protect students from heavy sun or rain, do not effectively circulate air, and/or are too dark to facilitate effective learning.

There is a significant shortfall in available classroom infrastructure. At the ECE level, the SCR in public schools is 64.4. In eight counties, the ECE SCR is above 60. In primary schools the SCR in public schools is 38.8.

The primary school SCR demonstrates significant variance by county and type of school ownership. Nationwide, the SCR for primary schools is 32.7, which suggests that there is sufficient classroom space for currently enrolled primary school students. However, this figure disguises significant variance in SCR by school ownership and by county. SCR by county range

TABLE 5-10 ECE Student-Classroom Ratio, by School Ownership, EMIS 2015

Owership	Total	With solid and semi-solid classrooms		Without solid and semi-solid classrooms		SCR
		Count	% total	Count	% total	
Public	7,332	4,375	59.7%	2,957	40.3%	64.4
Private	6,720	4,513	67.2%	2,207	32.8%	34.3
Religious/Mission	2,985	1,920	64.3%	1,065	35.7%	35.4
Community	1,097	775	70.6%	322	29.4%	44.8
Total	**18,134**	**11,583**	**63.9%**	**6,551**	**36.1%**	**46.6**

TABLE 5-11 Primary Student-Classroom Ratio, by School Ownership, EMIS 2015

Owership	Total	With solid and semi-solid classrooms		Without solid and semi-solid classrooms		SCR
		Count	% total	Count	% total	
Public	12,625	8,702	68.9%	3,923	31.1%	38.8
Private	9,364	6,815	72.8%	2,549	27.2%	28.5
Religious/Mission	4,693	3,285	70.0%	1,408	30.0%	26.3
Community	1,637	1,236	75.5%	401	24.5%	30.1
Total	**28,319**	**20,038**	**70.8%**	**8,281**	**29.2%**	**32.7**

from 29.9 to 49.3, and six counties have SCRs above 35. As noted in the tables above, the SCR for ECE is much higher than those evident in primary education, and SCRs in non-government schools are much lower than those in government schools. Public ECE SCRs (at 64.5) are much higher than those evident in private, mission and community schools.

The majority of secondary school classrooms are made with solid or semi-solid materials. In government secondary schools, the SCR is 73.0, while in private and mission schools, the SCR is 58.0 and 63.5, respectively.

The majority of finance for education infrastructure development is derived from external sources. This includes resources accessed through the Global Partnership for Education Basic Education Project (GPE-BEP) to build nearly 200 classrooms (as of December 2015) and funding from the

TABLE 5-12 Secondary Student-Classroom Ratio, by School Ownership, EMIS 2015

Owership	Total	With solid and semi-solid classrooms		Without solid and semi-solid classrooms		SCR
		Count	% total	Count	% total	
Public	1,567	1,392	88.8%	175	11.2%	73.0
Private	2,139	1,768	82.7%	371	17.3%	58.0
Religious/Mission	1,143	969	84.8%	174	15.2%	63.5
Community	173	154	89.0%	19	11.0%	46.4
Total	**5,022**	**4,283**	**3.0%**	**739**	**1.0%**	**241.0**

European Union to build 56 classrooms (EU 2014, GPE-BPE December 2015). A recent public expenditure review highlighted low levels of public capital investment, noting that "in 2011/12, only 1.87 percent of education spending was on fixed capital consumption, much below the 40 percent recommended benchmark by Global Partnership for Education. In 2012/13, the government dedicated zero amount on Consumption of Fixed Capital, leaving this area fully in the hands of donors" (Adebayo et al. 2-14). Recent MoE budgets follow this trend: In the 2015/16 MoE budget, 1.65 percent of the total budget request, equivalent to $736,600, is allocated to capital projects (MoE 2016/17 budget submission, 2016).

There are several other potential sources of infrastructure financing, including, *inter alia*, county social development funds, international corporations (through concession agreements with government) and non-profit institutions, such as the Liberia Education Trust and the Liberia Agency for Community Empowerment. However more work is needed to identify the extent of these sources of financing, and the number of capital projects completed. Local social development funds, concession agreements and community-led projects offer a potentially valuable and cost-effective alternative to the current reliance on externally funded capital improvement projects.

Water, Sanitation and Hygiene Facilities

In 2015, the MoE in collaboration with UNICEF conducted a census focused on the collection of WASH data in primary and secondary schools. The survey provided data on access to water, toilet facilities and handwashing facilities. The content included in this section draws on the subsequent report entitled 'A Nationwide Assessment of WASH facilities in schools in Liberia' (MoE and UNICEF 2016).

More than half (58 percent) of schools participating in the WASH survey had access to some kind of water source. However, this meant that approximately four in ten schools lacked access to any source of water. For public schools, approximately half (50.3 percent), had access to water compared to two-thirds (66 percent) of private schools. Urban schools reported better access to water than rural area schools. As listed in Table 5-20, 68.3 percent of urban public schools and 69.2 percent of urban area private schools had access to water, compared to 44.6 percent rural public schools and 50 percent of rural private schools.

Almost 70 percent of all schools had latrine facilities, with 54.7 percent of public schools reporting the presence of latrines. The WASH report found a higher incidence of latrine facilities in urban (75.5 percent) than rural public schools (50.4 percent). Non-public schools, on the other hand, reported a much higher incidence of access to latrine facilities, at 83.8 percent. However, access to latrine facilities was lower in rural areas (64 percent) than in urban areas (87.8 percent). The majority of public schools (85 percent) used only three types of latrines: the pit latrine with slab (50 percent), flush or pour flush

TABLE 5-13 Selected Findings from WASH in Schools Survey

Variable	Public			Non-Public			Total
	Rural	Urban	All	Rural	Urban	All	Y
Schools with access to water	44.6	68.3	50.3	50.0	69.2	66.0	58.0
Schools with access to latrines	50.4	75.5	54.7	64.0	87.8	83.8	69.1
Share of functional Toilet Cubicles in all Schools	—	—	57.5	—	—	55.1	56.2
Access to hand-washing facilities	44.3	67.6	48.2	55.3	80.7	74.6	62.2

Source: MoE and UNICEF 2016.

to piped sewer system (20 percent), and pit latrine without slab (15 percent). The remaining schools (15 percent) used other kinds of latrines.

Of the total of 23,687 toilet cubicles counted in all schools, only 56.2 percent were considered functional (Table 5-13), including 57.5 percent of cubicles in public schools and 55.1 percent in non-public schools. By location, 59.3 percent of toilets in rural area schools and 54.2 percent of toilets in urban area schools were functional. All student cubicles were disaggregated by gender to determine the level of access for males and females. This was achieved by identifying the number of female cubicles and subtracting these numbers from the total number of cubicles to determine the number of cubicles available to males.

Insufficient or suboptimal WASH facilities significantly impacts adolescent girls who need appropriate facilities for menstrual hygiene. During a 2015 MoE listening tour of the South-East Region, it was noted that insufficient WASH facilities disproportionately affect female students. If appropriate facilities are not present in schools, girls travel home to use facilities there. Of the total number of toilet cubicles in schools, 24.5 percent (5,793 toilets) were allocated for the use of female students with the remaining 75.5 percent (17,894 toilets) reserved for the use of males. Only slightly more than one third (36.8 percent) of schools with functioning toilet facilities reported the incorporation of facilities for menstrual hygiene.

Just over 62 percent of all schools reported access to hand washing stations (table 5-1), with much lower access reported in public schools (48.2 percent) than in non-public schools (76.4 percent). Moreover, urban public schools had better access to hand washing stations (at 67.6 percent) than rural public schools (44.3 percent). Similarly, more urban non-public schools (80.7 percent) had access to hand washing stations than rural non-public schools (55.3 percent).

School Quality Standards

The MoE has drafted two documents articulating a vision and overarching framework for defining, measuring and monitoring school quality in Liberia. These documents are: the Liberia Education Administrative Regulations (LEAR) and General Accreditation in Liberia.

TABLE 5-14 Current Frameworks for Defining and Measuring School Quality in Liberia

Liberia Education Administration Regulations	General Accreditation in Liberia
The LEAR classifies schools along a scale (Class A-Class F) using the following criteria	General accreditation rates schools according to criteria for each theme
• Material inputs, • Safe and healthy school environment, • Quality of school administrators, and • WAEC pass rates	• School mission, • School culture, • Quality of teaching and learning, and • Support for teaching and learning

LEAR presents a framework for the classification of schools along a scale from Class A to Class F. Class A schools demonstrate sufficient material inputs (e.g., science labs, libraries, textbooks), a safe and healthy school environment, qualified school administrators, and a WAEC pass rate of over 90 percent. Schools are assigned to lower classes (Class B to Class F) on the basis of lower scores across the same criteria (LEAR 2011 p.25-29).

General Education Accreditation in Liberia provides an alternative framework for the development of school quality standards. The document identifies four accreditation standards against which schools are assessed, namely (i) school mission, (ii) school culture, (iii) the quality of teaching and learning, and (iv) support for teaching and learning. The General Education Accreditation in Liberia (Snyder and Coleman 2013) framework was drafted as a document to support the establishment of the Center for Educational Accreditation. Table 5-14 compares the two frameworks.

The MoE has not translated either framework into a set of monitoring tools for school quality. Standards for school quality offer potential benefits beyond their use in guiding school quality monitoring and improvement activities. The existence of standards may increase pressure on DEOs to conduct monitoring visits and on schools to engage in quality improvement activities. Quality standards can play a mutually reinforcing role in strengthening MoE teacher support initiatives and in the design, management and implementation of school grants. Finally, quality standards need not only focus on 'minimum standards', they can also play an important role in promoting enrichment activities. For example, some schools may offer night study sessions, activities in sports, the arts and culture, or PTA-led fund-raising events for student field trips.

School Improvement and School Grants

Over the past decade, the MoE developed a nationwide program to support the provision of school grants. The MoE began experimenting with school grants in 2006. In 2013, as a part of the GPE-BPE program, a school grants program was piloted in four counties and the Monrovia Consolidated School System. Grants were made to 422 schools, benefitting 120,359 students. Unfortunately, full implementation of the program was undermined by the

impact of the Ebola crisis. In 2015, the MoE led a nationwide rollout of school grants. The program dispensed grants at a cumulative value of $2.58 million to 2,558 schools, with an average grant size of slightly over $1,000 per school. The total number of grant beneficiaries in 2015 was 483,565 students enrolled in basic education (Grades 1–9) in government schools. Forty-seven percent of beneficiaries were females. In 2015, the GPE-BPE project provided 80 percent of funding to support school grants while the MoE provided the remaining 20 percent, equivalent to $800,000 (World Bank 2014, World Bank 2015).

The school grants program has three objectives: (i) to support school-based management, (ii) to enhance community participation, and (iii) to support progress toward key education sector objectives with regard to improving access, completion, quality and learning outcomes. In 2014, the MoE finalized three sets of school grants guidelines (administrative, financial, and procurement) based on feedback from its 2013 pilot. The grants program requires each school, in agreement with key stakeholders in the school-community, to create a "School Grant Utilization Plan". The grant process is led by a management team comprised of the school principal, the PTA chair, two students, and a leader in the community, often the town chief.

The most common uses for funds derived from school grants were to purchase instructional and teaching materials, complete minor repair works, purchase or repair furniture, or otherwise improve the school environment (e.g., buy sports equipment). In one MoE Monitoring and Evaluation (M&E) report, the authors note that "grants help schools procured urgent items like chairs, instructional materials, sporting materials for the students, buckets, plates, spoons, etc." (MoE M & E Unit 2015). Grants appear to have stimulated community participation and helped schools address several small-scale locally identified issues. The overall impact of the grant on improving educational quality is unclear. However, several key stakeholders have argued that school grants have played a role in strengthening school-based management and in improving community participation at the school level; two of the key goals of the grants program. During the 2015 grant cycle, three independent NGOs played a role in monitoring school grant implementation and subsequently reported on their findings to the MoE.

Gender, Violence, Inclusion and Health

Girls' Education

Policy and Legal

Liberian laws and policies strongly promote equality, including the rights of all Liberians to education. The Liberian Constitution states that "all persons are born equally free and independent and have certain natural, inherent and inalienable rights" including the "right to equality and non-discrimination" (Article 11). Article 6 of the Constitution sets out a specific commitment to "provide equal access to educational opportunities and facilities for all citizens" with an emphasis on "the elimination of illiteracy". These commitments to equality are affirmed by the Education Reform Act of 2011, which in Objective 1.5.g, enjoins government to "Promote gender equity and equality throughout the educational system and opportunities for education".

The Liberia National Gender Policy (2009), which is overseen by the Ministry of Gender, Children and Social Protection, provides a strong framework for addressing gender inequality. The mission of the National Gender Policy is the achievement of:

> A just society where girls and boys, women and men enjoy their human rights equally on the basis of non-discrimination; where the full potentials of all, irrespective of sex, are harnessed towards achieving equitable rapid economic growth and equal access to social, financial and technological resources.

This framework is complemented by strong legislation and policies to combat sexual and gender-based violence, and commitments to including women and girls in achieving sustainable, and equitable growth. Liberia is a signatory to several international conventions and commitments, including the Universal Declaration of Human Rights, the Convention on the Rights of the Child, Education for All (EFA) Goals, the Convention on the Elimination of all Forms of Discrimination Against Women (CEDAW), and the Beijing Platform for Action and subsequent declarations.

The MoE's primary policy articulating the Ministry's aims and commitments with regard to gender and education is the National Policy on Girls' Education (MoE 2013). The policy articulates an agenda to mitigate the impact of economic, social and cultural barriers to girls' education. The policy builds on the prescriptions of the Education Sector Plan (ESP) 2010-2020 and the Education Reform Act 2011 and defines roles for the Ministry, County School Boards and District School Boards, schools and PTAs in implementing policy measures. In different parts of the country, however, these institutions are weak or inactive.

Education policy also covers sexual and gender-based violence (SGBV). The Education Reform Act (2011) identifies sexual offences as criminal matters under the penal law, to be referred immediately to the appropriate authorities (7.3.1-2). In 2014, the MoE published a Code of Conduct for Teachers and School Administrators in Liberia (CoC), which provides guidance on referral pathways and administrative hearings for students and staff who experience violence.

Data on Gender Equity

Women in Liberia face a structural disadvantage compared to men, evidenced by lower levels of educational attainment and lower literacy rates relative to men. The DHS (2013) data show median educational attainment for youth (aged 20–24) from the poorest households is 3.1 years, compared to 9.9 years for youth from the wealthiest households. The same data demonstrate median years of education attainment of 1.8 years for young females from poor and rural households. This is five times less than the median educational attainment for male youth from wealthy, urban households—which is 10.6 years.

Women and girls are under-represented in nearly all levels of education, including junior high, senior high, TVET, tertiary education, RTTIs and the teaching force. Girls account for 47 percent of secondary school students and women account for less than 10 percent of the teaching force (if teaching forces for primary, JH and SH are combined). Reasons informing the underrepresentation of girls in secondary education include household financial constraints and pregnancy. Women account for 37 percent of students enrolled in higher education in Liberia and just over 25 percent of students enrolled in the University of Liberia (NCHE 2012). Women are especially underrepresented in the Science, Technology, Engineering and Mathematics (STEM) related fields: in 2012, for instance, just 4.8 percent of women graduating from tertiary education had completed science programs. ActionAid (2011) Liberia reports that sexual harassment and sexual violence are pervasive in Liberian universities.

Local differences in social roles associated with, and the economic opportunities afforded to, young women influence gender disparities. Nationwide stakeholder consultations to revise the National Policy on Girls' Education held in 2012 and 2013, reported that early marriage and traditional roles prevented girls from completing education. Sande schools—traditional schools that initiate girls into the female-only Sande secret society—operate in many areas. Though the Ministry of Internal Affairs and Government of Liberia policy stipulates that Sande schools should not operate during the school term, there are reports of girls leaving school to attend Sande schools. Once initiated into the sect, girls are often considered ready to marry, bringing additional domestic responsibilities to bear that inhibit school attendance (Internal MoE reports on national consultations, 2012 and 2013).

Pregnancy Discrimination

Pregnancy interrupts the education of a large number of Liberian girls and young women. In a nation-wide study, 67 percent of households answering questions regarding the reasons for a female child not enrolling in school, reported that pregnancy was the primary reason that a girl in the household had dropped out of school (UNICEF 2012). For many girls and young women, dropping out is precipitated by their being directed to attend night school whilst they are pregnant. Further evidencing this challenge, UNFPA (2008) found that 38 percent of women aged 20 to 24 years of age had given birth by the age of 18, representative of a very significant proportion of the school-age population, particularly when one considers that the majority of Liberian students are over-age for the grade in which they are enrolled.

Despite the fact that Liberian education policy does not require that girls or women leave school or attend night school when they are pregnant, in practice pregnant students are often directed or encouraged to do. ESA consultations revealed that in many instances school leadership is unaware of the MoE policy on student pregnancy. Many teachers and Education Officers wrongly believe that attending night school whilst pregnant is formal government policy. Consultations with CEOs in 2015 found that a majority of school administrative staff would personally intervene and direct pregnant students to night school until after they had given birth. Often a pregnant girl is not allowed to return to the school they had previously been enrolled in, and are forced to look for an alternative provider to continue with her education. In many instances, students exclude themselves from further education due to feelings of shame.

Young, unmarried mothers are subject to stigma and marginalized with many reporting feelings of worthlessness or hopelessness. Pregnant students report being mocked and harassed by staff and other students, and that parents discourage other students from associating with them (FORWARD and Planned Parenthood 2012). Nonetheless, many pregnant students wish to continue attending school.

Successful Programs

Well-designed programs can assist in reducing gender disparities. Several initiatives and programs have been developed to support girls' education, gender equality, school safety and the reduction of SGBV. The MoE has led the development and roll-out of a Teachers' Code of Conduct, and through the Assistant Minister for Student Personnel Services, the MoE is chairing a Safe School Committee.

The Gender-Equitable Education and Achievement Program (GEEAP), an intervention targeting students in Grades 7 to 9 (60 percent girls, 40 percent boys), aimed to increase learners' participation and learning outcomes. GEEAP is a three-year initiative supported by UNICEF incorporating grants, after-school tutorial classes, Girls' Clubs, the teaching of life skills, capacity-building programs for Parent-Teacher Associations and School

Management Committees, and training for core subject teachers in child-centered coaching.

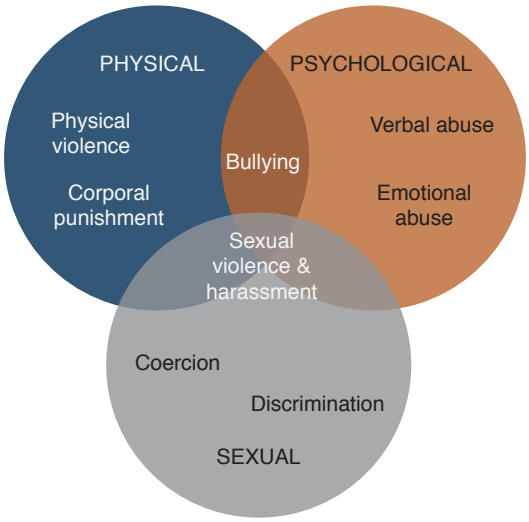
Girls' Opportunities to Access Learning (GOAL) Plus is a scholarship-based program to promote age-appropriate enrollment. Presently, GOAL Plus reaches a total of 8,000 female students in Grades 1 to 6. The program includes grants, girls' clubs, life skills, tutorial classes, scholarship packages, learning materials, bags, uniforms, toilets, teaching materials for teachers, and the payment of other fees required by PTAs.

The Alternative Basic Education program enrolls many young mothers who want to complete a basic education. Importantly, female students account for the majority of the students enrolled in ABE classes. However, ABE is not offered at a large number of schools.

Violence and Gender-Based Violence

Abuse, violence, sexual harassment and severe forms of gender-based violence are reportedly present in many Liberian schools. Leach, Dunne, and Salvi (2014) define school-related gender-based violence (SRGBV) as "acts of *sexual, physical* or *psychological* violence inflicted on children in and around schools because of stereotypes and roles or norms attributed to or expected of them because of their sex or gendered identity. It also refers to the differences between girls' and boys' experience of and vulnerabilities to violence." These three typologies of SRGBV (and specific examples) are identified in the accompanying figure.

While there are no large-scale representative studies that accurately assess the prevalence of SRGBV in Liberia, several small-scale studies suggest that it is a pervasive problem. A recent small-scale study, *Passing the Test*, (NORAD 2014) made the following findings:



- One-third of students report experiencing SRGBV (perpetrated by teachers, school staff, or a classmate). The incidence of SRGBV is more prevalent for boys (35 percent) than girls (29 percent),
- Nearly a third of school girls had been asked for sex in return for money,
- A quarter of students reported being forced to have sex against their will (30 percent of girls and 22 percent of boys).

The practice of 'sex for grades' has been raised in several reports (Passing the Test 2014, MoE 2015, Street Child 2016). This form of sexual exploitation occurs when teachers engage in transactional sex or threaten students with failure. 'Sex for grades' is often represented as a form of bribery, and public debate often focusses on discouraging girls from engaging in transactional sex (as opposed to addressing the role of teachers in perpetuating SRGBV). Nonetheless, the relationship of power that a teacher has over a student means that students, even if they are above the age of consent, cannot freely give or withhold consent. In two small scale MoE surveys and focus groups, students report teachers explicitly or implicitly threatening that they will fail if they do not 'offer' sex.[6] Street Child consultations (2016) identified compromised school safety as a major underlying cause of adolescent girls' dropout (see text box below).

Consultations held to inform the ESA, together with available analysis, indicate that addressing gaps in district level accountability (SRGBV reporting, referral and persecution) will be critical to reducing the

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The lack of feeling safe and supported in school was also an issue that was discussed at length in the FGDs and came up even more strongly in the individual interviews. This primarily related to teachers' conduct inside and outside the classroom but also challenges faced among peers. **23% of the girls currently in school claimed that they had felt unsafe in their school environment** and 32% of girls who had dropped out had felt unsafe in school. Girls talked about **sexual harassment by teachers, teacher bribes** and **corporal punishment** as things that made them feel unsafe in school**. Peer pressure** came up in 69% of the girls' focus group discussions as a barrier to their education. This was particularly the case for girls in school who often talked about the pressure to skip class, to engage in **early sex** and the **pressure to drop out and find a boyfriend**.. They claimed that it led them to lose focus in class and not learn as well as they could.

Excerpt from: Street Child Liberian Consultation on Adolescent Girls' Education (2016. p. 3).

[6] Ministry of Education focus group (with girls from four schools), July 2015; Ministry of Education survey of university students (survey included questions on whether students had been asked for sex in exchange for grades during their schooling), February 2016. Note that these were small-scale, qualitative surveys and not designed to collect representative samples.

incidence of SRGBV. During ESA consultations, several stakeholders identified a 'lack' of 'referral structures and poor 'monitoring and accountability at the district level' as the primary barriers to reducing SRGBV in schools. Some stakeholders spoke of the need to more vigorously prosecute offenders to demonstrate that it can be done, and to send a message that the MoE will not tolerate SRGBV (Passing the Test 2014, ESA consultations 2016).

Generalized violence, including corporal punishment, beating, and bullying appears to be a common occurrence in many schools. In a study designed to prepare households for the reopening of schools after the Ebola-crisis, corporal punishment was identified as the primary reason forwarded by students and parents, for not feeling safe at school. For parents, bullying and harassment on the part of other students was cited as equally important (Liberia Education Cluster 2015). The Liberia Education Administration Regulations note that developing school codes of conduct and disciplinary measures is the responsibility of CSBs and the MCSS, but appears to emphasize the use of positive disciplinary measures (LEAR Vol. 4, 2011). The National Education Policy (MoE 2011) provides additional guidance on student conduct, discipline, and suspension. However, education policy does not appear to explicitly reject corporal punishment.

Disability and Inclusive Education

Several stakeholders expressed the need to raise awareness of inclusive education and to provide more aggressive policy and implementation support to inclusive education and children with special needs. The MoE has a Division of Special and Inclusive Education which has a mission to promote the inclusion of children and young people with disabilities and/or special needs in the general Liberian School System. At present there is no policy on, or budget for, inclusive education. According to MoE, *"Inclusive Education is a process that seeks to increase the participation of children with disabilities and reduce exclusion by providing an effective response to the various needs of all the learners."* Some of the main issues identified during ESA consultations include (i) that EMIS severely undercounts the number of children with special needs in Liberian schools and (ii) that TTIs offer no training for teachers on addressing inclusive education needs. The table below identifies different types of children with special needs.

Categories of children who are differently-abled	
• Autism	• Deafness
• Emotional Disturbance	• Blindness
• Learning Disability	• Orthopedic Impairment
• Mental Retardation	• Multiple Disabilities
• Speech or Language impairment	• Other Impairment
• Visual or hearing impairment	• Traumatic Brain Injury

Source: MoE Inclusive Education Department.

The school census appears to severely undercount the number of children with special needs in Liberian schools. In 2015, EMIS reported that 0.4 percent of enrolled students had a disability or another form of special need. This figure is extremely low, and confirms observations on the part of educators that children with disabilities and special needs face significant barriers in accessing education. A 1997 UNICEF study found that 16 percent of children in Liberia have a disability. This conclusion was in line with the results of a multi-country study of sub-Saharan African countries which found that between 16 and 30 percent of children aged between the ages of two and nine had some form of disability (SIDA 2014, ACPF 2014).

This low incidence of disability and special needs reported by EMIS also reflects poor understanding of these concepts. At present schools and teachers are ill-equipped to identify learners with special needs, and EMIS records only three categories of disability (visual, hearing and physical disabilities). Inclusive education argues that EMIS should also track, and raise awareness of, children who are emotionally disturbed, children with learning disabilities, children who are visually impaired, and children with other challenges identified in the table above.

The MoE works with two NGOs that support education for students with disabilities, and the Government of Liberia extends subsidies to a small number of schools for students with hearing and vision impairments.

Emotional disturbance, mental health and psychosocial support. The Inclusive Education Division, the Liberia Education Cluster (2015), and the draft Educator Management Policy (MoE 2015) emphasize the importance of raising awareness of, and addressing issues relating to emotional disturbance, mental health and psychosocial support for children and youth.

At present TTIs offer no training for teachers with regard to addressing inclusive educational needs; however some religious schools (e.g., some Methodist schools) offer programs to support children with particular special needs. In the medium term, the IE department intends to develop and design training for teachers to learn signs of emotional disturbance and learning disability. Encouragingly, by the conclusion of the ESA process, the IE department had developed a draft IE teacher training manual and was in the process of validating it.

School Health and Nutrition

Student learning outcomes are dependent on their health and nutritional status. The School Health Division, under the Department of Instruction and Bureau of Student Personnel Services, are responsible for school health related issues in the Liberian school system. These include WASH, Human Immunodeficiency Virus (HIV) and reproductive health education, deworming, nutrition and physical education. Within the same Bureau, the Division of School Feeding is responsible for school feeding, while the Division of Guidance and Counselling is responsible for counselling and mentoring.

A School Health Policy is in the process of being drafted, but is yet to be validated and disseminated. The policy includes a protocol for WASH in schools, guidelines for deworming, and a School Feeding Policy.

The Division of School Health developed a draft Comprehensive Sexuality Education (CSE) curriculum for Grades 3 to 9 in partnership with UNFPA, in 2015. Gender roles, decision-making skills, and communication skills are part of the core content of CSE. The curriculum is intended to assist students in avoiding unintended pregnancy. International evidence on best practice demonstrates that the education sector can play an important role in disseminating information to prevent early pregnancy. CSE is built around the teaching of life skills, including decision-making and negotiation skills and discussions about gender roles and relationships.

In 2015/16, over 500 school health clubs and a nationwide school health hotline were established. At present, many schools have health clubs and school counselling services. School-based counselors are expected to receive training on sexuality and health education and psychosocial training for deployment to schools.

Liberia has been providing school feeding since the 1960s and a national school feeding program covers fourteen counties through two providers, namely the World Food Program (WFP - nine counties) and Mary's Meals (five counties). Approximately 359,000 students in ECE and primary schools (Grades 1 to 6) are fed daily. The MoE plays a monitoring and supervisory role, and leads a monthly school feeding coordination meeting. Levels of child stunting remain high (42 percent of five-year-old children according to recent UNICEF estimates) and many communities remain food insecure. Current efforts are introducing home-grown school feeding, utilizing locally procured foodstuffs. Nine counties have designated School Feeding County Coordinators, with corresponding District Focal Points to provide coordination and supervision for school feeding related activities.

School deworming targets 6 to 15-year-old children in schools and in the surrounding community, in all counties. The MoE, in collaboration with the Ministry of Health (MoH), aims to distribute deworming medicines at the start of each academic year. Deworming medicines are usually donated by international development partners, and then warehoused by the MoH. Funds are then required for the transportation and distribution of medication. The medicines are distributed in both public and private schools based on the *National Worm Control in School-Age Children: Guide for County and District Managers and Teacher Training Kit*. At the beginning of the 2016/2017 school year, deworming medicines were distributed to approximately 1.2 million children of basic school-going age.

Teachers, Teacher Management and Teacher Education

The Teaching Force

Teacher Supply

Table 7-1 presents 2015 data for the Liberian teacher workforce by level of education and type of school ownership. The majority of teachers work at the primary level. At the JH and SH levels, the majority of teachers work in private and mission schools. Nearly 10,000 teachers work in more than one level of the education system, and are counted twice in the data. For example, a teacher teaching at the primary and JH level is counted as both a primary and JH teacher. Due to the fact that over 10,000 teachers teach at multiple levels, and in light of the school census counting each teacher only once, the totals column adds up to 65,359 (or 10,000 more than the current teaching force of 55,243). In 2015, volunteer teachers (i.e., unpaid volunteers) comprised 8 percent of the teaching force.

Over the past eight years, the size of the teaching force has almost doubled from 26,359 to 55,243 teachers. The number of teachers working at all levels of the system has realized growth. The size of the teaching force at the JH and SH levels demonstrates the highest growth, with the JH teacher force growing by more than 50 percent, and the SH teacher force growing by approximately 80 percent. Table 7-2 presents figures for the total number of teaching staff, by level, including double counting and the total number of teaching staff not including double counting.

Teacher Qualification

Just over 50 half of the teacher workforce has the minimum qualification required to teach at the grade they are teaching. Table 7-3 shows the number and share of qualified teachers by subsector. At the primary level, 62.3

TABLE 7-1 Teachers by Sector and Type of School, All Schools, Unadjusted for Multi-Grade

Ownership	ECE	Primary	Junior High	Senior High	TVET & AE	Total
Public	5,308	12,215	3,880	1,608	676	23,687
Private	5,668	10,808	5,537	2,890	356	25,259
Mission	2,479	5,676	3,072	1,916	69	13,212
Community	836	1,739	494	135	67	3,271
Total	**14,311**	**30,438**	**12,983**	**6,549**	**1,168**	**65,359**

Source: EMIS 2015.

TABLE 7-2 Number of Teachers by School Level, 2007/08 and 2015

Level	2007/08	2015
ECE	11,778	14,311
Primary	22,253	30,438
Junior High	8,228	12,983
Senior High	3,652	6,549
Total (double count)	*45,911*	**65,359**
Total teaching staff	26,359	**55,243**

Source: EMIS in respective years.

TABLE 7-3 Number and Share of Qualified Teachers by Level, 2015

Sector	ECE	Primary	Junior High	Senior High
Qualified	7,048	18,975	4,295	2,219
Unqualified	7,261	11,463	8,188	4,330
Total	14,311	30,438	12,983	6,549
% qualified	49.2%	62.3%	33.1%	33.9%

Source: EMIS 2015.

percent of teachers are qualified, compared to 33.1 and 33.9 percent of teachers at the JH and SH levels, respectively. In ECE, 49.2 percent of teachers are considered qualified, however, the minimum qualification held by most ECE teachers, a 'C' Certificate, focuses on preparing primary school teachers and does not offer any ECE specific training. See section 7.4 for information on qualification standards.

Over the past decade, the number and share of qualified ECE and primary teachers has significantly increased (see table 7-4). The share of qualified JH and SH teachers, on the other hand, has declined.

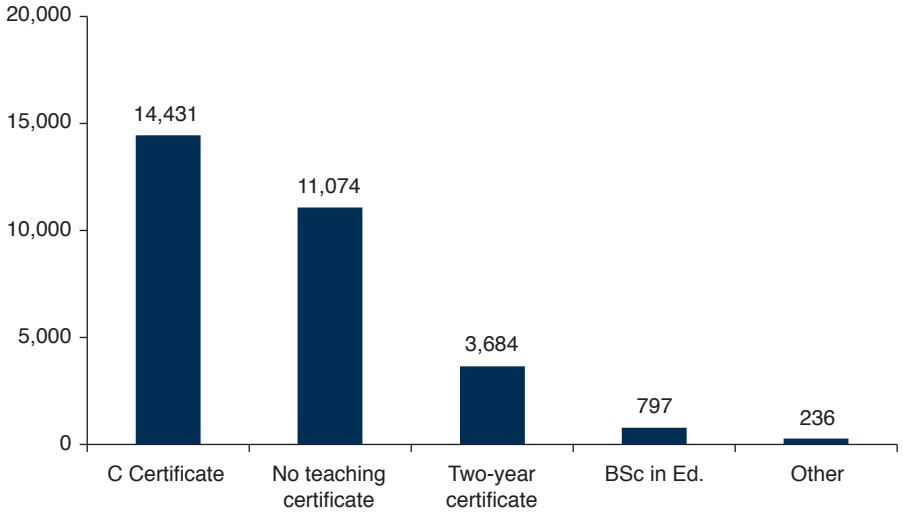
The majority of the qualified primary school teachers have a 'C' Certificate, the minimum required qualification for teaching at the primary level (Figure 7-A). The figure below shows the number of primary school teachers by level of qualification. The 'C' Certificate program is a one-year post-secondary teaching qualification. In addition, 3,684 primary teachers have a two-year certificate (or diploma), and 797 hold a Bachelor's of

TABLE 7-4 Number and Share of Trained Teachers by School Level, Various Years

Level	2007/08		2015	
	#	%	#	%
ECE	3,392	29%	7,048	49.2%
Primary	8,952	40.0%	18,975	62.3%
Junior High	4,755	57.8%	4,295	33.1%
Senior High	1,918	53%	2,219	33.9%

Source: EMIS in respective years.

FIGURE 7-A Primary School Teachers by Professional Qualification, 2015

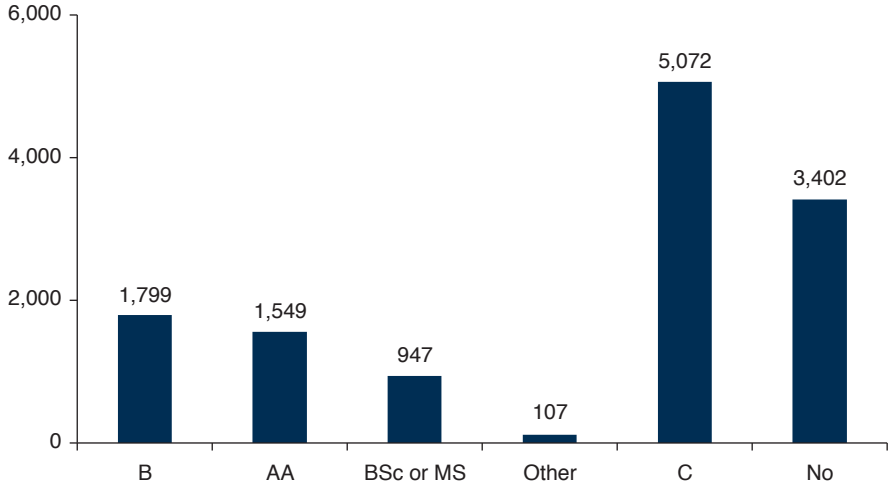


Source: EMIS 2015.

Science in Education. Over 11,000 primary school teachers do not hold the minimum qualification.

Only 33.1 percent of Junior High teachers are considered qualified. Figure 7-B presents the number of JH teachers by level of qualification. To be considered qualified a JH teacher, one must have a two-year certificate or diploma, such as a 'B' Certificate or a Certificate AA. The majority of qualified JH teachers (1,799) hold a 'B' Certificate. More than 5,000 teachers with a 'C' Certificate teach at the JH level, but are not considered "qualified" to teach JH.

FIGURE 7-B Number of JH Teachers by Professional Qualification, 2015



Source: EMIS 2015.

Teacher Student Ratios and Distribution

Liberia has been successful in increasing the size of the ECE and primary teacher workforce, and in increasing the number of qualified ECE and primary teachers in public primary schools. Even so, the Student-Teacher Ratio in public ECE schools, at 53.1, remains high. Table 7-5 presents STR for all levels of schooling in Liberia. The ECE STR is 20 units lower in non-government schools than in government schools. At the primary level the STR is 10 units lower in non-government schools than in government schools. Over the last two years, public schools have been barred from hiring new teachers and as a result, newly trained teachers have gone to work in non-public schools.

Student teacher ratios at the JH and SH levels are low compared to STRs at the primary and ECE levels of education. More analysis is needed to evaluate efficient STRs at the JH and SH levels, and relative need in particular subjects.

There is a wide variation in STR by county, and by type of school, at the ECE and primary levels of education (Figures 7-C and 7-D). At the ECE level, the mean STR for government schools is 53, with a range of 34 to 66. Five counties report STR above 60. In non-government ECE schools, the mean STR is 29, ranging from 26 (in River Gee) to 45 (in Grand Bassa). At the Primary level (figure 7-D), the mean STR is 28, ranging from 21 to 35. Four counties report an STR above 30. In non-government schools, the mean STR is 17, ranging from 15 (in Grade Kru) to 24 (Grand Bassa).

Similarly, there is a wide variation in SQTR by county, as presented in Figure 7-E. SQTR is computed by dividing the total number of students enrolled in school (regardless of level or type of school ownership) in a particular county by the total number of qualified teachers in the county. SQTR identifies the extent to which the supply of qualified teachers meets (or does not meet) the demand for education. While the mean nationwide SQTR is 43.7, SQTR ranges by county from 33.8 to 90.0. Eight counties have a SQTR above 60. Relatively disadvantaged counties demonstrate higher SQTRs, which may, in part, be explained by qualified teachers preferring to live in major urban areas. Only three counties, Montserrado, Margibi, and Nimba, have SQTRs below the national mean.

In 2015, the STR for primary education was significantly below the target set in the ESP 2010-2020. In 2007/08, the STR for government primary

TABLE 7-5 STR, All Levels, by Government and Non-Government Status, 2015

	Government	Non-Government	Total
ECE	53.1	28.6	37.7
Primary	27.6	17.4	21.5
JH	n.a.	n.a.	12.9
Secondary	n.a.	n.a.	16.2

FIGURE 7-C ECE Student Teacher Ratio, by County, 2015

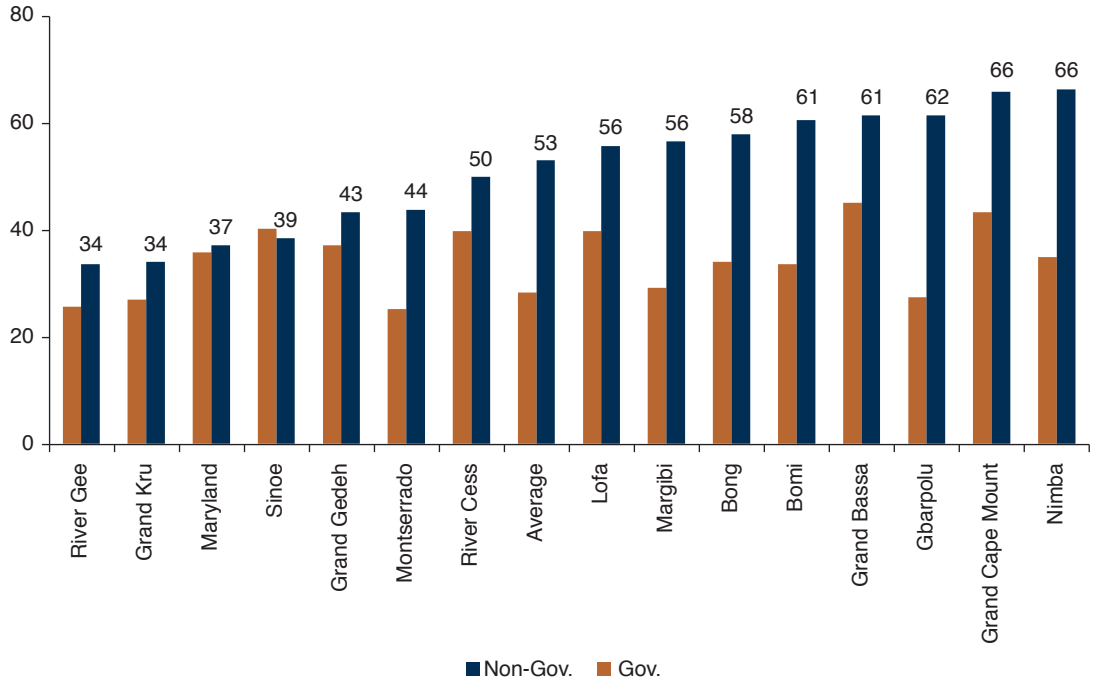


FIGURE 7-D Primary School Student Teacher Ratio, by County, 2015

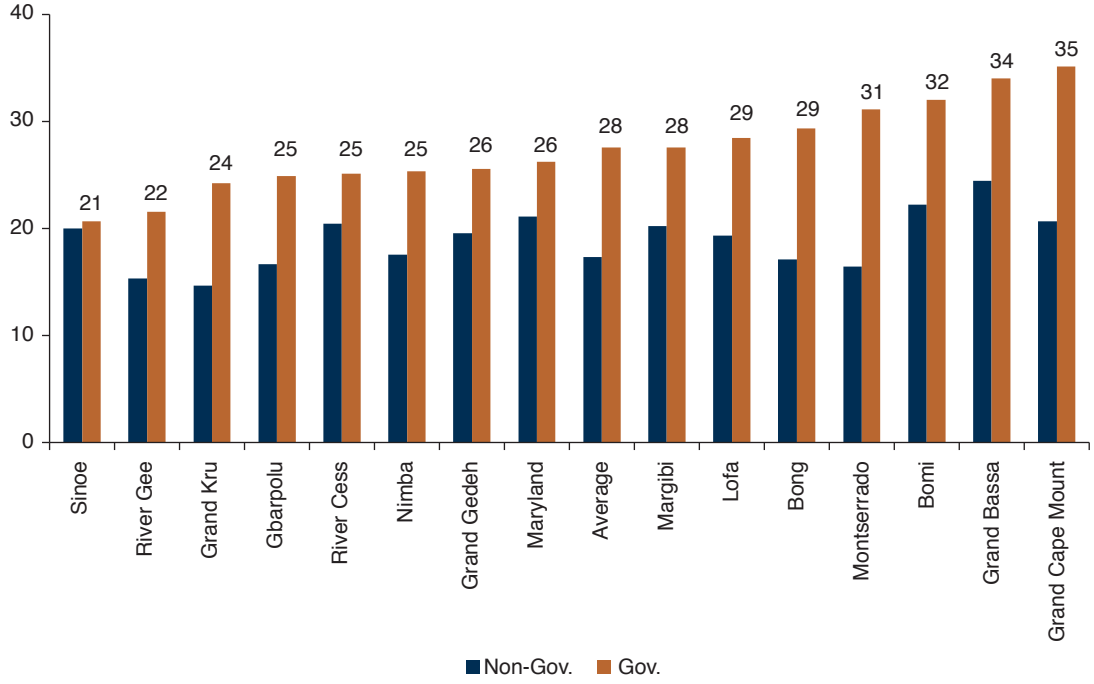
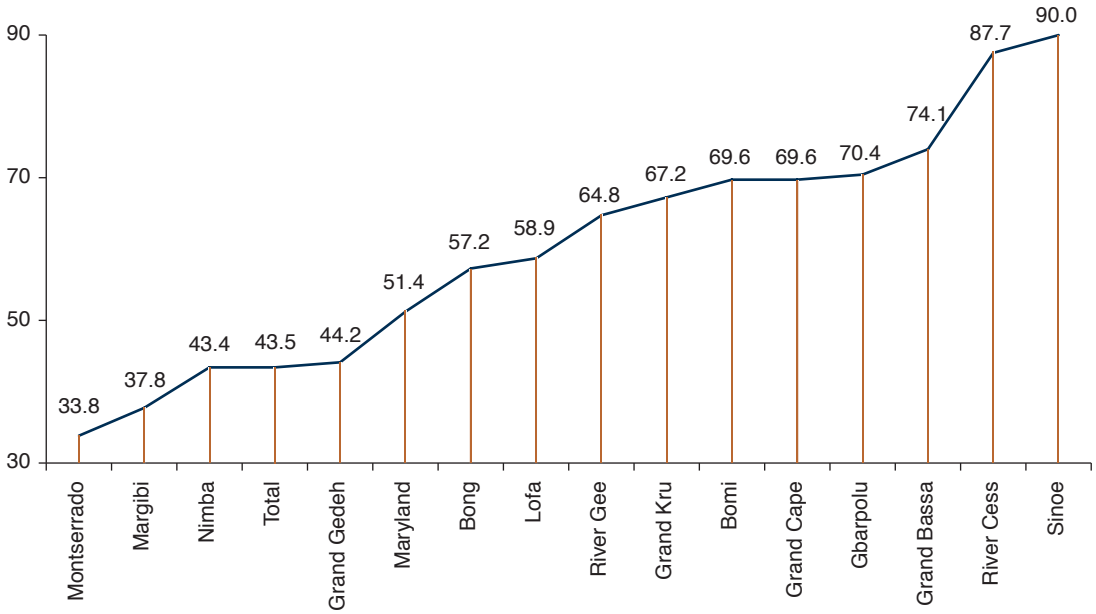


FIGURE 7-E Student Qualified Teacher Ratio by County, 2015



Source: EMIS 2015.

schools was 49. Based on this figure, the ESP 2010–20 set a target STR of 44 for public schools to be achieved by 2015. By 2015, the STR in public primary schools was 27.6—a figure nearly 20 units lower than the target. The relatively modest STR in public primary schools, combined with the negative effect of the wage bill in crowding out other spending, suggests that slight increases in STR, if implemented in such a way that quality is not compromised, could free resources to spend on non-salary related quality inputs. However, such action should be taken with caution given the high rate of teacher absence and emerging data which suggest that a large number of teachers on MoE payroll may not be functionally literate.

Women Teachers and Rural Teachers

Female teachers are significantly under-represented in the teaching force at all levels of the education system. Table 7-6 presents the number of female teachers and the female share of the teaching force by level. At the primary level, 21 percent of the teaching force is female, while in JH and SH sub-cycles of education, female teachers account for 11 and 7 percent of the teacher workforce respectively. In ECE level, 57 percent of teachers are female.

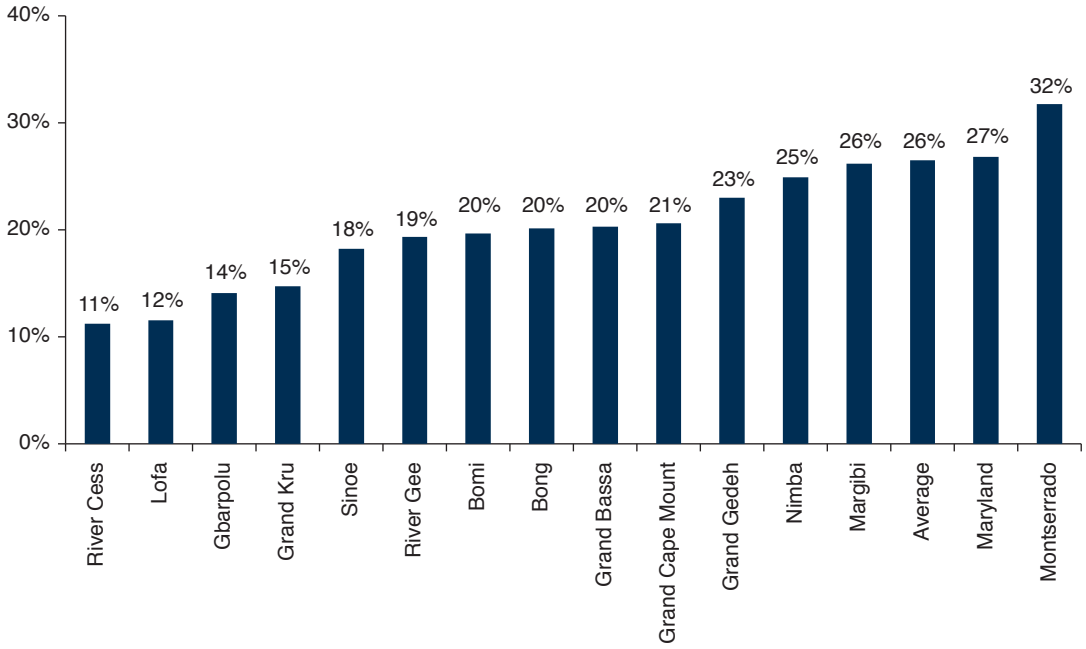
There is a wide variation in the female share of the teaching force, by county (Figure 7-F). While 26.6 percent of the national teaching force is female across all levels of education, the share of female teachers in the total teaching workforce by county ranges from 11.5 to 31.8 percent. In six counties, female teachers account for less than 20 percent of the teaching force.

TABLE 7-6 Female Share of the Teaching Force by Level, 2015

	ECE	Primary	Junior High	Senior High
No. of Female Teachers	8,145	6,262	1,368	435
Female share of the teaching force	57%	21%	11%	7%

Source: EMIS 2015.

FIGURE 7-F Share of Female Teaching Staff by County, 2015



Analysis demonstrates that again, a 'Montserrado effect' is evident: More than half of all female teachers (8,138) live in Montserrado County; as a result, data and analysis that includes Montserrado County, significantly influences nationwide figures. In terms of female teachers, outside of Montserrado County, 21% of the teaching force is female. However, in Montserrado County, 32% of the teaching force is female—a figure that is 50% higher than the average posted by other counties.

Many factors contribute to the low share of female teachers in the general teaching workforce. Stromquist, et al. (2013, p. 521) identified the following factors as contributing to underrepresentation of women in Liberia's teaching force:

> Women face several cultural barriers to receiving an education: patrilineal assumptions that daughters are destined to become resources for their husbands' families (and thus a poor investment), early onset of

> sexual activity and teenage pregnancy, and social expectations about early family formation. Women who enter teacher training programs receive no recognition for their children and family responsibilities and are given insufficient financial support. When women do become teachers, they face difficult working conditions such as distant schools, poor housing facilities, late payments, and large classes filled with overage students. The probability of rural assignment brings additional dissuading factors: poor quality roads and few transportation options, a dearth of safe housing, and lack of childcare services.

Snyder et al. (2011) note that "in many rural settings there is no housing. Some schools have shut down because of inadequate housing to attract qualified teachers. This is particularly acute for female teachers, who need safe and secure dwellings near their schools" (p. 21).

The need to increase the share of female teachers in the teaching force is highlighted in several recent MoE planning statements, however progress has been limited. The Education Sector Plan, 2010–2020 argues for "increasing the number of females in the teaching profession" (MoE, 2010, p. xv). Moreover, the National Gender Policy, calls on Liberia to "create and strengthen structures, processes and mechanisms in which women participate equally and that ensure that women and men can equally access, control, and benefit from the country's resources" (MoGD, 2009, Chapter 1.4). The Education Sector Plan, 2010–2020 articulates the following steps "to increase the number of females in the teaching profession: [a] set a minimum quota for females at rural teacher training institutes and [b] targeted programs for female students in high schools to prepare and encourage them to enter the teaching profession" (MoE, 2010, p. 139).

A tracer study on female scholarship recipients shows that the majority of those who graduated found employment in the education sector, with many being retained in administrative positions in private schools. Morris, et al. (2015) conducted a study of female scholarship recipients who graduated from the Teachers College at the University of Liberia in 2012 and 2013. Of the 31 graduates interviewed, 21 had found jobs in the education sector, and nine were unemployed. Reasons provided by unemployed graduates for their status were: that they were on stand-by with the MoE for employment; that they could not find positions because the MoE had suspended hiring; or that they could only find open positions in places in where they did not want to work.

Nearly half of Liberia's teachers work in rural areas. Of this group, a significant share of teachers, live in remote and difficult to reach areas. Teachers serving in rural areas often face challenges less likely to be present in urban areas, such as: poor access to basic services and amenities (i.e., health care, food, clean water, sanitation, electricity, cell phone coverage, banking); the need to travel long distances to address problems; limited access to professional development and support; fewer opportunities for career advancement; and, relative to urban areas, fewer opportunities for generating additional income and economic advancement.

Moreover, many teachers posted to rural areas are not familiar with local languages, communities and customs, and may face additional stress in transitioning into their role as teachers (Educator Management Policy, MoE 2015, Policies for Reform MoE 2011). The distance of rural schools from basic services likely contributes to chronic problems relating to teacher's absences from classrooms. Teachers serving in rural schools often have to travel long distances to access basic health care, collect monthly salaries, purchase food and other household goods, and/or to participate in education-related training or administrative activities at the district or county level.

Rural schools report great difficulty in attracting newly qualified teachers. Rural areas' limited access to basic services and amenities, and limited opportunities for economic and career advancement, disincentive new teachers from accepting positions at rural and remote schools.

At present, there is no policy in place to incentivize teachers to work in rural areas, or to reduce the burden of working in rural and remote areas. Strategies suggested in the ESP 2010–20 include "a Rural Incentive Scheme will be developed to attract teachers to schools in rural areas (higher salary); applicants to teacher training programs will be recruited from rural areas, with an agreement that they will return to their counties of origin upon completion of their training; and teachers' housing will be built near schools in rural areas as an incentive" (MoE, 2010, p. 139). The MoE is working on a Mobile Money Pilot to pay teachers. The intervention is expected to reduce absenteeism of teachers serving in rural areas as they will no longer need to travel long distances to collect their salaries.

Teacher Payroll

Teacher Payroll Verification

In 2015 the MoE initiated a program for payroll verification and teacher testing. The goal of the intervention was to identify "ghost" teachers, identify teachers on payroll who are unqualified and lacked the basic skills necessary to benefit from in-service professional development, and to identify other payroll irregularities. The MoE has nearly 20,000 staff on payroll, with salaries and allowances accounting for up to 90 percent of the MoE's annual recurrent expenditure. A 'ghost' teacher is someone who receives an MOE salary but has either (i) abandoned their post, or (ii) doesn't exist. The most prominent cause of the 'ghost' teacher phenomenon occurs when teachers with secured employment, abandon their post. Because of inefficiencies in payroll administration, these teachers continue receiving payment, costing the fiscus millions of dollars on an annual basis.

Many payroll related challenges are a legacy of the early post-war reconstruction period (2003–2008). During the post-war reconstruction period, the government certified teachers on an emergency basis. Many of these teachers were not qualified, but had stayed behind to teach during the war. While emergency certification allowed the government to fill classrooms with teachers, it also meant that large numbers of Liberians were included on the

teaching payroll despite a lack of qualifications, knowledge and skills. As a consequence, the current payroll includes a large number of poorly skilled teachers, as well as a large number of teachers who were hired without proper documentation. Payroll verification and teacher testing is an ongoing and funded MoE priority and has continued into 2017. To date, over 1,023 ghost teachers have been removed from payroll—resulting in a savings estimated to be greater than $1.6 million (Bush Chicken 2015).

Concurrent to payroll verification, the MoE is evaluating the skills and qualifications of all teachers on the payroll. The goal of the assessment is to differentiate underqualified teachers with the potential to benefit from further training, from those teachers who do not have the foundational skills required to benefit from in-service certification courses.

Supplementary Payroll and Volunteer Teachers

As of November 2015, the MoE operated a supplementary payroll that included over 6,000 teachers. Staff on supplementary payroll are generally not extended the salary and benefits associated with the MoE pay scale. The MoE aims to eliminate the supplementary payroll system, and transition all supplementary staff to the main payroll.

Approximately 26 percent of teachers working in government and community schools (ECE to senior high) are volunteer or "household" teachers. These teachers are not formally remunerated for their work, and may be paid by households.

Teacher Management and Accountability

Policy and Legal Context

The MoE Bureau for Teacher Education oversees all pre- and in-service teacher education in Liberia, including the activities of three RTTIs, as well as several semi-autonomous colleges and universities that offer teacher education and education administration programs. The minimum qualifications for teachers are articulated in the Education Reform Act (2011) for each level of education, with the exception of ECE. The Act also prescribes role of the MoE in teacher recruitment, certification (licensing), registration and teacher policy. DEOs are responsible for recruiting teachers to vacant positions and for ensuring quality education is delivered in schools in their district. CEOs are

TABLE 7-7 Supplementary, Household and Volunteer Teachers

Staff	Number
MoE staff on main payroll	13,403
MoE staff on supplementary payroll	6,024
Volunteer and household teachers	7,299

responsible for ensuring adequate payroll positions for their schools, although these are not currently assigned to a particular institution. The school principal is directly responsible for oversight of, and support to, teachers in their school. This support includes providing annual performance reviews, supporting professional development and helping teachers address issues in the classroom.

In accordance with the Civil Service Act and Penal Law, the Education Reform Act (2011) outlines procedures for conducting administrative hearings and taking disciplinary action regarding MoE staff misconduct. In 2014, the MoE published a *Code of Conduct for Teachers and School Administrators in Liberia* (CoC). The CoC is grounded in the Education Reform Act 2011 which enshrines the duty of the education system to "promote and protect the concept of human rights of all Liberians" (GoL 2011:4). The CoC prescribes standards of professional practice, specifies prohibited administrative and sexual offences for teaching and administrative staff, and outlines measures for monitoring, reporting, hearing and instituting punitive measures to deal with allegations against teachers and school administrators. The CoC's chapter on gender frames the extent to which sexual offences, including sexual violence, are a problem in Liberian schools. Administrative offenses include intoxication while on duty, dishonesty in the conduct of official business, absenteeism, and fraud/theft.

Teacher Conditions of Service and Support Systems

Teachers confront challenging working conditions on a daily basis and receive limited institutional support. Many teachers work in unsafe and worn infrastructure with few resources (e.g., chalk, textbooks, curriculum guides), are accommodated in challenging housing or living situations (e.g., safe house, clean water, access to cell phone network), and face multiple challenges in the classroom (i.e., classroom discipline, unfavorable STRs, multi-age / multi-level learners, etc.). See the draft Educator Management Policy (MoE 2015) for details. New teachers, many of whom are young Liberians at the start of their working life, require regular support and guidance to address the varied challenges and opportunities they face. Specific challenges identified in recent sector reviews include: learning materials (i.e., textbooks, chalk) that are not distributed; a lack of support for improving pedagogy and subject knowledge; disrespect and indiscipline on the part of students; and teachers who violate the code of conduct (e.g., excessive absenteeism) who are not undisciplined (JESR 2015, USAID 2013).

At present, teacher support systems do not have the capacity to respond to the many and varied needs of teachers: the capacity of principals is limited due to their limited professional training in school leadership and management, and limited access to resources; and CEO and DEO staff do not have the tools, training, or resources required to ensure timely support to teachers. Several evaluations have identified 'payroll management' as a key concern for teachers and decentralized staff. Snyder et al. (2011: 21) note,

> "Most of the teachers interviewed expressed frustration over the delay in the recruitment of teachers who have graduated from the RTTIs and then the inclusion of those recruited teachers on the Ministry payroll. Most of them complained of having worked for six to seven months without pay because they had not been placed on the payroll. This was confirmed by the CEOs and DEOs interviewed."

During field consultations conducted in 2015, CEO and DEO staff cited several examples of teacher who received pay for several months after absconding from their posts. These observations are corroborated in the draft JESR 2015 report (MoE 2016).

Teacher Management and Absenteeism

In Liberia, teacher performance is constrained in three primary ways: there is no regular monitoring of teacher performance; there is no clear path for promotion or career advancement; and there are high rates of teacher absence.

Systems for annual teacher appraisal and more strategic use of the probationary period following the hiring of teachers represent two avenues for improving teacher performance. All new civil servants are subject to a three month to one year probationary period, following which a supervisor decides whether the individual has met the standards required to be retained in service. If the individual is assessed to have not met these standards, their employment may be terminated. At present, there do not appear to be any MoE approved systems to (i) evaluate teachers at the end of their probationary period, or (ii) conduct annual performance appraisals. The potential influence of performance reviews is further weakened as teacher pay and promotion does not appear to be linked to a performance appraisal process.

Teacher absenteeism is seen as a critical challenge. Table 7-8 identifies the main types of excused and unexcused absence from the classroom. In rural areas, teachers are often absent for many days due to the need to travel to banks to collect salaries. The LTTP II (2016) noted that "travel to collect paycheck' and 'money problems' account for 30% of teacher absenteeism." Teachers are also called upon to attend workshops and trainings, which result in their absence from school. However, unexcused absence and lateness also appear to contribute to significant losses of instructional time: teachers miss school to work second jobs or to work on their farms, among other unexcused absences, while other teachers come to work late or dismiss class early to go home. In an effort to address this issue, the MoE has approved the installation of biometric scanners to more vigorously monitor staff attendance.

The current payroll system contributes to teacher absenteeism. At present, teachers are paid electronically into accounts held at commercial banks. However, a large share of teachers, many of whom live in rural and remote areas, cannot easily access a bank. As a consequence, once every month, many teachers miss several days of school and pay transport, lodging, and food

TABLE 7-8 Examples of Excused and Unexcused Teacher Absence

Excused Absence	Unexcused absence
• Attendance at GoL or MoE activities / trainings • Collecting salary • Illness / family • Participation in DP funded activities • Rainy season weather conditions	• Abandoned post • Engage in second job • Working at home • Market day (rural) • Cultural / religious activities (Fridays) • Late start / early dismissal

Sources: MoE 2015; MoE Consultations 2015–16; LTTP II 2016; USAID 2013.

costs (related to travel), in order to access their monthly salary. Mobile Money has been identified as an intervention that could improve teacher support, raise teacher morale, and reduce teacher absence.

Teacher Education

Teacher Qualification

The Education Reform Act 2011 prescribes the minimum qualifications for teaching at each level of education. Table 7-9 provides a description for each qualification. At present, primary teachers are qualified through a pre-service or in-service 'C' certificate programs at three RTTIs. In 2016, the MoE re-initiated a 'B' Certificate qualification intended for training junior high teachers. Senior high teachers are qualified though university degree programs. The Education Reform Act does not identify a minimum standard for teaching at the ECE level. The MoE ECE Bureau is in the process of developing an ECE-specific certification. Local universities (e.g., Tubman University and Stella Maris) offer diploma and degree programs in ECE.

Teacher Production and Education

From 2008 to 2012/13, RTTIs graduated between 700 and 1,000 'C' certified teachers on an annual basis (Morris et al 2014), with a total of 2,554 teachers graduating from the pre-service program, and 1,607 graduating through the in-service program in the period under review. Liberia's three

Qualification	Description
'C' Certificate	A grade 'C' certificate is the minimum requirement for teaching in primary school (grades 1–6) and requires one year of post-secondary training.
'B' Certificate	A grade 'B' teaching certificate is the minimum requirement for teaching Junior High school and requires two years of post-secondary training and the acquisition of expertise in a specific subject.
AA Certificate	A grade AA teaching certificate allows one to teach in either primary and junior high school and requires two years of training.
Degree	A Bachelor's Degree and an A-Certificate is the minimum requirement for teaching at the Senior High level (Grades 10–12).

RTTIs have the capacity to provide pre-service training to approximately 900 trainees annually (the C certificate is a nine-month course). In recent years, RTTI annual pre-service training output has ranged between 433 to 637 graduates, and RTTI in-service training output has ranged from 262 to 470. Troublingly, the profile of new cohorts of teachers mirror existing gender disparities in the teaching force with only 15 percent of the more than 4,000 new graduates being female (Morris, et al 2014).

In recent years, the majority of new 'C' Certificate graduates transitioned to work in basic schools. However, nearly half of graduates from pre-service cohorts in 2011–12 and 2012–13 reported being unemployed, in part a consequence of the Civil Service Association (CSA) hiring freeze which has prevented the MoE from hiring new teachers. Due to the hiring freeze, more than 1,158 recent 'C' Certificate graduates have not been able to transition to work in public schools (Tuowol 2014).

The majority primary school teachers working in government basic schools qualified through pre-service or in-service 'C' Certificate programs. 'C' certificate programs are delivered in three RTTIs located at Kakata, Webbo and Zorzor. The 'C' certificate program takes two forms: (i) a residential pre-service training program requiring nine months of on-site study at an RTTI or (ii) a nine month in-service training program for teachers already working in schools that follows the same curriculum. The existing in-service training model is comprised of a six-week site based training (during the school holiday) followed by eight months of field-based training where teachers meet once a month for classes and mentoring (MoE and UNESCO 2014).

The existing 'C' Certificate program curriculum was developed in 2007, based on the *Teacher Education Professional Standards* drafted by the National Task Force on Teacher Education Program Standards. The curriculum covers five core content areas: foundations of education, teaching content, pedagogy, child development and teaching practices. In addition, the program requires that trainees have student teaching experience (MoE 2015). In-service training follows the same curriculum as the pre-service 'C' certificate program (MoE and UNESCO 2014).

In addition to the RTTIs, several colleges and universities offer diploma and degree programs to support the pre-service preparation of basic education teachers. These institutions include the University of Liberia, Cuttington University, and Tubman University. According to the 2015 school census, fewer than 1,000 teachers working in primary schools hold a bachelor's or advanced degree.

Following a twenty-year hiatus, the MoE re-activated implementation of an updated 'B' Certificate program in 2016. The 'B' Certificate is the minimum qualification required to serve as a teacher in junior high education (Grades 7–9). The 'B' Certificate requires that trainees select a subject area specialization. One-hundred trainees (25 percent of whom are female) will commence two years of 'B' Certificate programming at the Kakata RTTI during in the 2016/17 school year.

Qualified Senior High teachers require a Bachelors' degree, or higher, to teach. Degrees may include a Bachelor of Education, or Bachelor of Science in Education. Alternatively, a teacher with a bachelor's degree in a subject discipline (e.g., Biology) will need a Senior Secondary School Teaching Diploma or 'A' Certificate to be considered qualified to teach in senior high school. Universities offering these qualifications include the University of Liberia, Cuttington University, William V.S. Tubman University, Grand Bassa Community College, as well as faith based institutions around the country (Tuowol et al 2014:12).[7]

Several recent evaluations have articulated concern as to whether the current 'C' certificate program produces 'effective' teachers. Prior to the civil war, 'C' Certificate programs were 18-months in duration, equivalent to two academic calendar years of study. During the post-war reconstruction era efforts were made to qualify a large number of teachers in a short period of time. An abbreviated, nine-month 'C' certificate program was developed to fill an important gap (i.e., the need for more qualified teachers). However, improving the quality of teacher education is now identified as an important priority by stakeholders to the system. Snyder et al., (2011), note that "the problem is that lowering standards for entry to the profession and overcoming shortages results in ill-equipped teachers and a lower respect for public education and educators" (p. 19).

Several recent studies argue in favor of lengthening the duration of 'C' Certificate training. Candidates often arrive at RTTIs with weak literacy and numeracy skills, and the existing program is not structured to address these deficiencies. One evaluation argues for a greater emphasis on basic skills development and subject content knowledge (Goyee et al., 2014; Goyee et al., 2015); another evaluation notes that the "mix of pedagogy and subject matter content" offered by the program needs to be revisited (USAID 2013). A report by MoE and UNESCO (2014) summarize these concerns, arguing that the short-duration (nine-months) of the 'C' Certificate program is "inadequate for in-depth content area coverage and knowledge" (p.8).

[7] The Educator Management Policy identifies the required components for bachelors programs as follows: a] Educational Psychology, [b] Testing and Evaluation, [c] Curriculum Innovation and Methodology, [d] School Administration, [e] Instructional Materials, and [f] Practice Teaching as well as courses in their teaching fields (e.g., agricultural education, business education, languages, sciences, or social studies).

Early Childhood Education

Overview

The Liberian education sector had provided early childhood educational services for years prior to being interrupted by the civil war. Recently, the government has placed a greater emphasis on the role of early childhood development (ECD) services, not only to improve children's cognitive and social readiness for school, but also in the hope of realizing long-term economic benefits for society, such as higher earnings and a reduction in healthcare and remedial education costs.[8]

The Government of Liberia is working to establish an early childhood education (ECE) system and governance structure. The Bureau of Early Childhood Education was established under the MoE Department of Instruction by the Education Reform Act of 2011 as an institutional anchor to coordinate ECE. In the same year, the Liberia National Inter-Sectoral Policy on Early Childhood Development (NIPECD) was launched as the first national ECD policy to provide strategic guidance to the development of the sector. The NIPECD aims to increase access to, and improve quality of, ECD services, support greater community and family involvement in ECD, and promote greater collaboration and coordination among ministries.

Currently, the MoE offers three levels of ECE programming targeting children between the ages of three to five. The official categorization is: 1) Beginner (Nursery II) for three-year-olds; 2) Kindergarten (Kindergarten I, KG I) for four-year-olds; and 3) Pre-first (Kindergarten II, KGII) for five-year-olds. Although not in the official categorization, daycare services (Nursery I), which are designed to serve two-year-olds, can also be commonly found in Liberia. ECD programs are neither compulsory nor free.

TABLE 8-1 Ownership Type and Number of ECE Service Providers and Number of Students Enrolled

Type	Number of Schools	% Out of All Schools	Total Number of Students Enrolled	% Out of All Students Enrolled
Public	2,425	48%	281,938	54%
Community	307	6%	34,740	6%
Private	1,555	31%	154,979	27%
Faith-Based	793	16%	68,003	12%
Total	4,855	100%	539,660	100%

[8] Based on the Liberia National Inter-Sectoral Policy on Early Childhood Development, Early Childhood Education commonly refers to the education and learning activities for children who are two- to five-year-old. Early Childhood Development is a broader term that refers to all programs and services for children from conception to eight/nine years old, although it is increasingly being used for the zero to five/six age range depending on the school enrolment age.

Four types of service providers operate in the ECE sector: public, community (community-based schools with ECE programs), private, and faith-based providers. As illustrated in Table 8-1, out of the 539,660 children attending ECE, public and private ECE schools together enroll 79 percent of students, while community and faith-based providers each account for a smaller share of student enrollment. The enrollment of male compared to female students is generally equal.

While the GER in ECE exceeds 100 percent, a low NER highlights the issue of limited age-appropriate access. In 2015, the GER was 116 percent. However, the NER stands at a much lower 29 percent. The significant difference between NER and GER is explained by the fact that a large number of children aged 6–11 are enrolled in ECE.

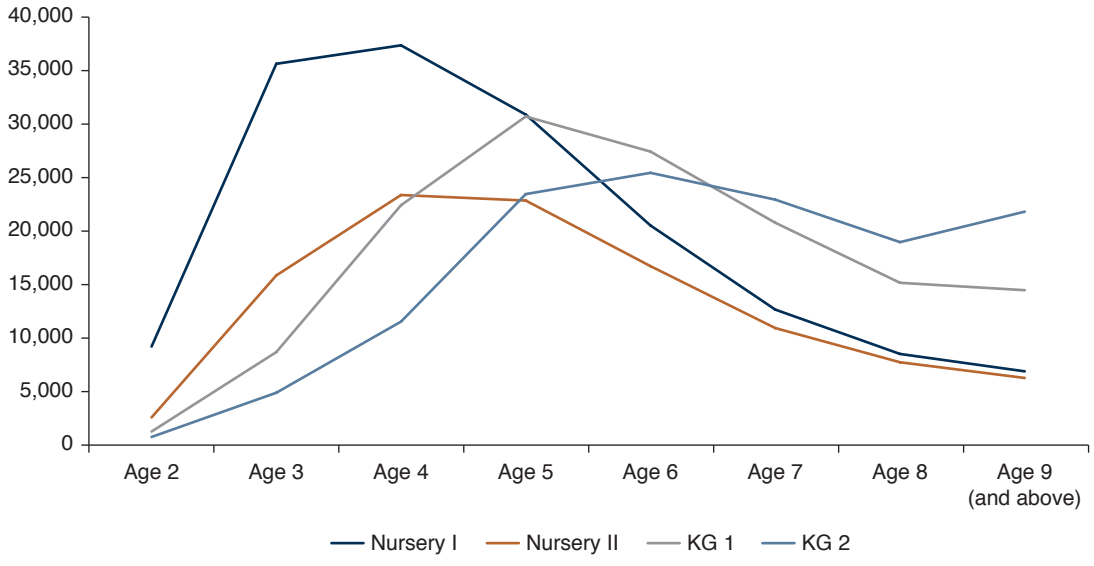
Main Issues

While the MoE, particularly the Bureau of Early Childhood Education, has made strides in improving ECE access, by serving over 280,000 children in its public ECE classrooms, the sector faces a number of challenges with regard to improving access to, and the quality of, Early Childhood Education.

Overage Enrollment

Overage enrollment starts at the ECE level of schooling—where almost 50% of students are over the age of six years old. Although the Education Reform Act of 2011 mandates that "the age range for attendance in early childhood programs shall be from three to five years", the practice of enrolling overage

FIGURE 8-A Age Distribution of ECE Students, 2015



children is widespread. Based on the 2015/16 School Census, 75 percent of ECE students are overage for the level in which they are enrolled. Notably, 47.7 percent of students are six- or more years of age. Put another way, almost half of the students enrolled at the ECE level should be attending primary school. Figure 8-A shows this age distribution of students enrolled in ECE.

Overage enrollment in ECE undermines efforts to promote access to quality education, as overage children crowd out appropriately aged children who would benefit from school readiness support provided by enrollment in ECE. The 2015 ECE NER of 29 percent suggests that more than two-thirds of three- to five-year-olds do not benefit from ECE services. Age-appropriate enrollment would not only allow teachers to provide targeted and developmentally appropriate instruction, but would also ensure that children receive ECE services at the time when the impact of such services on their cognitive and social development is maximized.

Furthermore, overage enrollment in ECE needs to be taken into account in efforts to reduce the number of out-of-school children. In 2015/16, sixteen percent of 6- to 14-year-old children were estimated to be out-of-school (see Enrollment chapter). According to some definitions (see UNICEF 2012) children of primary or secondary school age who are attending ECE schools are classified as out-of-school, even though their families view them as attending school. Notably, evidence from neighboring countries (see Enrollment chapter) shows that overage students are more likely to drop-out of basic and secondary education. Improving right-age enrollment at the ECE level thus will not only improve school readiness of 3–5 year olds, but would likely reduce the number of out-of-school 6–14 year olds and improve completion rates in basic and secondary education.

A myriad of factors contribute to the prevalence of overage enrollment in Liberia, including distances to school, malnutrition, and a lack of parental awareness of the importance of ECE (as discussed in detail in Chapter 3 on Enrollment). Anecdotal evidence suggests that the practice of testing children for entry to Grade 1 could be another factor, despite the fact that these tests are not officially mandated. In this case, ECE schools enroll children who are of-age for primary education, but are not deemed ready for Grade 1. More importantly, this challenge highlights that age-appropriate enrollment not only requires the enforcement of official policy and practices, but also the development of mechanisms to ensure the smooth transition of large numbers of overage students to primary education or alternative programs. Further research is also needed to analyze the root causes of overage enrollment.

ECE Quality

ECE teachers often struggle to deliver quality ECE, due to an absence of specialized training, large classes and difficult teaching environments,.

The Bureau of Early Childhood Education has made progress in developing a professional development framework for teachers, but the majority of teachers are not yet properly trained in ECE instruction. The Early Childhood

Development National Professional Development Framework (draft) was developed in March 2016 and defines four levels of professional development:

- Level I. ECD Community Education and Awareness Program;
- Level II. ECD Skills-Based Training and Education Program;
- Level III. ECD Certificate Program; and
- Level IV. ECD University Programs.

Some teacher training materials have been developed and pilot activities launched, however more resources will be needed to fully implement the framework.

There is no government-approved ECE teaching qualification and almost all the ECE teachers have no training specific to the field, with the exception of a small number of teachers who participated in pilot initiatives run by the Bureau of Early Childhood Education. Technically, teachers are required to have a "C" certificate to teach in ECE schools, the same minimum qualification for teachers in primary education. In reality, according to the 2015/16 School Census, only half of ECE teachers (50 percent) have received any training (defined as Pre-Service C, In-Service C, Pre-Service B, In-Service B, AA, BSc in Education, MS in Education or TVET Certification). Furthermore, approximately 8 percent of ECE teachers had not completed secondary school. This rate is the higher among public school teachers (11.21 percent). The teaching of ECE requires specialized knowledge of child development and the ability to assess a child's readiness for Grade 1 education and beyond. Without proper training, teachers will not be able to deliver quality instruction, and the country will fail to fully realize the benefits of ECE.

Some headway has been made with the development of an ECE curriculum and teaching and learning materials, but these activities are at a nascent stage. A set of early childhood curriculum textbooks and teacher planners have been developed for the first four months of the academic year (September to December), but the completion and adoption of the curriculum is yet to take place. The materials currently being used in ECE are neither age-appropriate nor sufficient for the large number of children classrooms generally accommodate.

Challenging teaching conditions inhibit quality instruction. At the ECE level, individual interaction between a teacher and a child is particularly important. As shown in Table 8-2, the STR for public ECE schools is 53

TABLE 8-2 Teacher-Student Ratio Across School Types

School Type	STR	SQTR
Public	53.12	105.00
Private	27.25	54.21
Faith Based	27.43	59.03
Community	41.56	98.69

TABLE 8-3 NER and Teacher-Student Ratio by County

County	NER	Student-Teacher Ratio
Bomi	38%	52
Bong	21%	48
Gbarpolu	21%	55
Grand Bassa	17%	53
Grand Cape Mount	28%	59
Grand Gedeh	32%	41
Grand Kru	39%	33
Lofa	27%	52
Margibi	24%	36
Maryland	29%	37
Montserrado	47%	27
Nimba	19%	54
River Cess	16%	49
River Gee	11%	32
Sinoe	17%	39
Total	**29%**	**38**

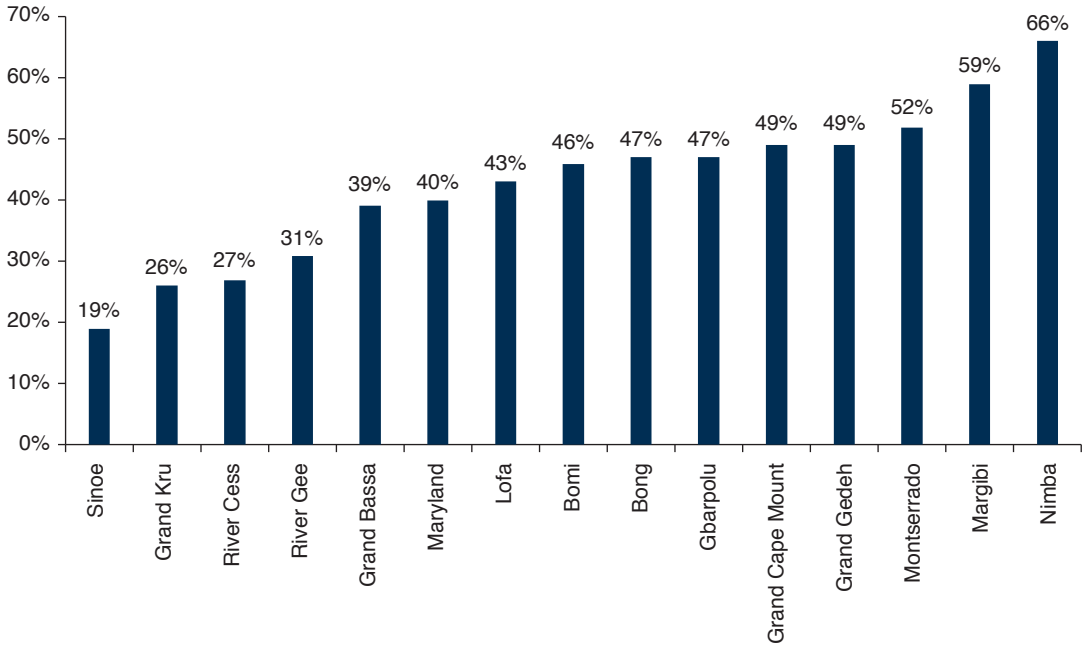
students to one teacher, while private and faith-based schools have a lower ratio of 27. Moreover, the SQTR is even higher. In a classroom where there are children with diverse needs, it is very difficult to effectively manage the classroom, let alone provide quality age-appropriate instruction. Furthermore, 35 percent of ECE classrooms are identified as "make-shift" or "partitioned", suggesting unsafe and unwelcoming conditions for both teachers and students.

Increasing Demand for ECE and Disparities in Access and Quality

Demand for quality ECE exceeds supply, as demonstrated by high STRs and a low NER. Furthermore, access to ECE varies considerably between counties. Table 8-3 highlights the four counties with the lowest NER, lowest percentage of qualified teachers, and highest STRs, respectively. For example, in River Gee County, the NER is only 11 percent, less than half of the national average. Its percentage of qualified teachers is also among the lowest across the counties. The differences reflect disparities in ECE across counties, which further disadvantage children from poor or remote areas.

Considering the large numbers of children not accessing ECE, it is clear the sector will remain under pressure to expand, which will require significant resources. The MoE currently does not have a dedicated budget for ECE, with the exception of funding the salaries of a portion of the ECE teachers. The MoE currently pays the salaries of 3,939 of the 5,308 teachers working in public ECE centers. A program-specific cost estimate for ECE would be needed for strategic planning in the sector.

FIGURE 8-B Percentage of Qualified Teachers by County



Parental Awareness

Many families, particularly in poor and deprived communities, may not understand the value of ECE. Parents are also concerned about the costs associated with ECE, including the costs of tuition, uniforms, and transportation. Policy permits public ECE centers to charge an annual fee of 3,500 Liberian dollars (approximately 41 US dollars) to cover costs. However, there is no definitive data on how commonly fees are being charged or the magnitude of the average fee. Nevertheless, current practices, including charging fees, act as disincentives to many parents with regard to sending their children to ECE schools.

Alternative Education

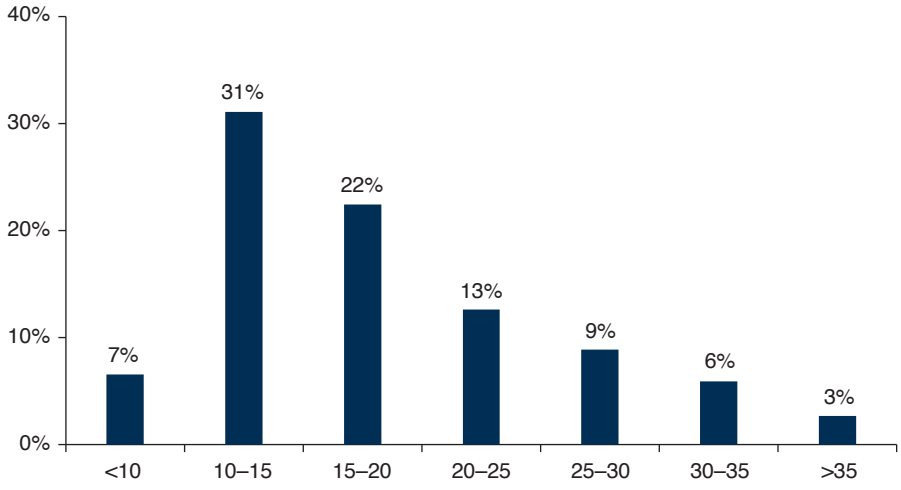
In 1988, the MOE introduced the Accelerated Learning Program (ALP) to provide basic education for over-aged and out-of-school children, many of whom had never accessed education as a consequence of the civil war. The need for Alternative Education remains strong. While progress has been made in reaching out-of-school children and reducing overage enrollment, approximately one-third of Liberian women between the ages of 15 and 34 and 13 percent of men in this age group have never been to school (DHS 2013).

Accelerated Learning Program (ALP)

ALP targets learners aged 8–18 to complete primary education and has reached a substantial number of the out-of-school population. ALP has been offered in all 15 counties, but is currently operating in nine counties. The current footprint of ALP is premised on the interests of funding partners. Montserrado County has the largest ALP enrollment. Due to the uncertainty with regard to the continuation of the program, enrollment declined from 75,820 in 2008, to 36,000 in 2010/11, and further to 2,396 in 2015.

ALP learners are heterogeneous in terms of age, gender, and social status as well as educational and occupational backgrounds. According to the ALP guidelines produced in 2008, the ALP program targets the enrollment of out-of-school children between the ages of 10 and 18. Youth aged 19 and above are directed to enroll in adult education programs. In 2015, 31 percent of total enrollment was between the ages of 10 and 15, and 22 percent were aged 15 to 20.

FIGURE 9-A Share of ALP Students by Age



Source: EMIS 2015.

In 2015, 57 percent of ALP teachers were public school teachers. With the announcement of the closure of ALP, there has been 'mass' exodus of ALP teachers (Manda 2011). The profile the teaching force in primary schools is generally reflected in the profile of teachers in ALP. Male teachers constituted 84 percent of the ALP teaching force in 2015. All ALP teachers are required to undergo training, even if they have graduated from an RTTI. Untrained teachers constituted approximately 12 percent of the ALP teaching force in 2015.

Evidence suggests that ALP contributed to improved learning outcomes. Academically, ALP learners were assessed to have performed at the same level as, and in some cases better than, students enrolled in conventional primary schools with regard to the four core subjects (Language Arts; Science; Mathematics and Social Studies) (Manda 2011). IBIS (one of the organizations implementing ALP) reported that between 2009 to 2013, 68 percent of ALP learners sitting the final exam successfully graduated, and that 45 percent of graduates were female. External evaluation suggest that motivation on the part of students to learn, and to continue learning, was enhanced as a consequence of their participation in ALP. Moreover, attendance in ALP has been shown to impact learners' self-confidence and self-belief, particularly with regard to setting aspirations, as well as recognizing the importance of establishing a stable life (IBIS 2013).

Implementing schools reported erratic or irregular attendance of students as commonplace. Prominent reasons for dropping out of ALP are identified in Table 9-1.

Alternative Basic Education

ABE is a more recent program geared towards helping youth and adults (13 to 38 years of age, and above) complete basic education, gain functional literacy and numeracy, and transition to further education, or livelihood activities. ABE seeks to help young mothers, working youth and young adults (who work on mines or plantations), and other youth who dropped out, or did not start school on time, to complete the equivalent of a full course of basic education.

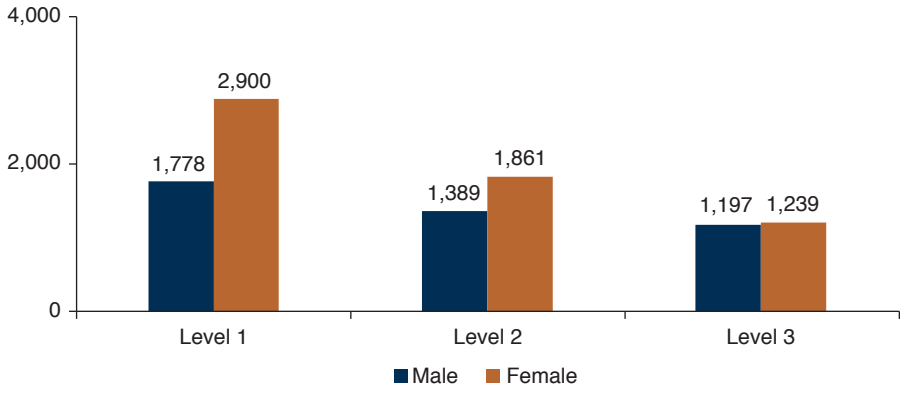
In recent years, ABE providers enrolled over 10,000 students per year, with 58 percent of students being female. ABE targets students aged 13 to 38

TABLE 9-1 Most Prevalent Reasons for Dropping out of ALP

Reasons	% who reported
Relocated to other (more urban) communities	27
Working, predominantly in the gold mines	21
Pregnancy or child caring duties (including boys)	16
Lost motivation to continue or were discouraged by poor results	8
Sickness	5

Source: IBIS Liberia 2013.

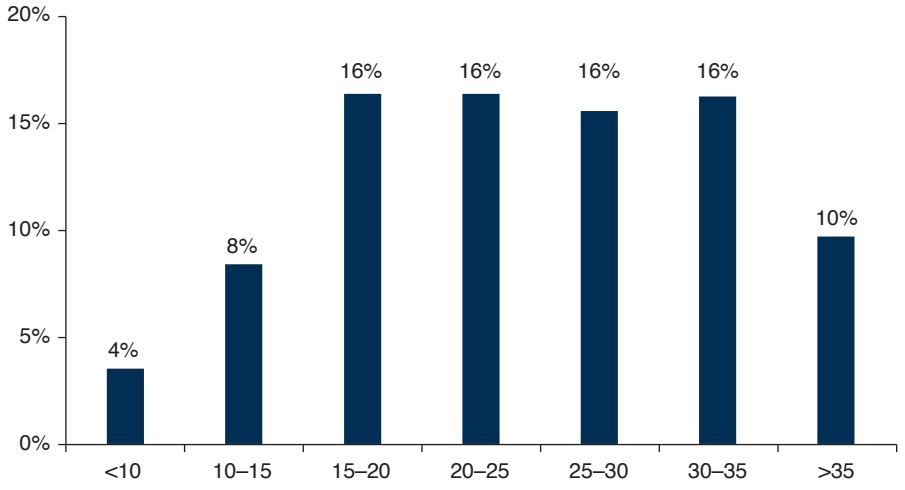
FIGURE 9-B Number of ABE Students by Grade, 2015 (EMIS 2015)



and up. In 2015, 65 percent of candidates enrolled in ABE were in the 15 to 35 years of age- age range.

The share of untrained teachers in ABE mirrors that in traditional primary education. At present, no pre-service training is offered for ABE teachers, and the current programming at RTTIs does include the opportunity to specialize in adult education. Current approaches to training ABE instructors include in-service training for MoE teachers already on payroll who deliver ABE in addition to their regular classes. Given low levels of literacy skills on the part of teachers, in-service training is dedicated to teaching content (i.e., literacy and numeracy) in addition to the psychosocial skills. Site administrators/principals seldom receive specialized training in education management to enable them to more effectively support on-site staff in the delivery of the ABE curriculum.

FIGURE 9-C Share of ABE Students by Age, 2015



Source: EMIS 2015.

Advancing Youth Project

The Advancing Youth Project (AYP) is a five-year, $35 million program funded by USAID intended to complement ABE. AYP was established in 2011 and has been implemented through evening classes in 120 government schools across five counties. AYP's target population is between the ages of 13 and 35, and includes those potential students who are either out-of-school, or have never been to school. The project utilizes public school teachers, and provides them an allowance for teaching in AYP. The AYP uses a three-level curriculum to deliver a basic education, work skills, and entrepreneurship training.

Youth participating in AYP are often caregivers who are engaged in farming or sales in the informal sector. Given participants' immediate need for income, and the limited time to engage in additional training, the project emphasis the provision of short-term skills development in conjunction with work readiness and financial literacy (EDC 2014).

Due to the poor literacy skills of many AYP participants entering the program, interactive audio instruction has been used to support the acquisition of literacy for some learners. An assessment of the program demonstrates that a majority of learners do not possess adequate literacy skills at the commencement of training, and that for a majority of these learners (60 percent of whom have never attended school before, and of whom only 10 percent speak English at home), the type and intensity of instruction was not sufficient for them to demonstrate overall progress on a test. On completion of ABE Level 1, the greatest gains were evident among learners receiving additional support through Interactive Audio Instruction (IAI). However, only 53 percent could correctly identify more than 19 letters in end-line testing, a pre-requisite to reading. Urban learners who had received IAI, demonstrated the most improvement in letter sounding (EDC 2014).

Achievements, Harmonization, and Challenges

MoE achievements in Alternative Education include:

- Developing a draft ALP/ABE harmonization policy,
- Creating tools for assessing the literacy skills of out-of-school youth,
- Ensuring the inclusion of data collection for ALP and ABE in the annual school census,
- Developing Program Quality Standards (PQS) for ABE,
- Conducting an Institutional Capacity Assessment (ICA) leading to the development of annual work plans and budget to support ALP and ABE activities at the central and decentralized levels,
- Appointing ABE Supervisors in six counties, getting them onto pay-roll and integrated into the County Education Office structures,
- Developing instructional materials, including facilitator manuals and learner workbooks, to support three levels of ALP and ABE, aligned to the national curriculum for primary education,

- Developing a three credit, 60-hour Introductory Course for ABE in conjunction with Stella Maris Polytechnic,
- Facilitating AE Technical Working Groups (TWGs) to ensure stakeholder involvement in critical areas such as the development of program quality standards, the development and review of curricula, and teacher professional development,
- Training ALP and ABE master trainers, facilitators and administrators, and
- Piloting teachers' salary payment by mobile money in five counties (MoE/AYP 2015)

ALP and ABE activities are guided by the Accelerated Learning Program Policy (2007) and the Alternative Basic Education Policy (2011). These policies are aligned with the basic education national curriculum and focus on four core subjects (Math, Science, English and Social Studies). ABE and ALP programming integrates skills acquisition, with a focus on work readiness, life skills and leadership.

There is a need to refine the AE policy framework, to more effectively facilitate the return of out-of-school children, youth or adults to the formal education system, or, alternatively to support a smooth transition of program graduates into the world of work. At present the ALP (2007) and ABE Policies (2011) use a compressed three-level curriculum, equivalent to a Grade 1 to 6 education, delivered over a three-year period. However, there are no clear pathways for learners to transition back into the formal education system, or the world of work. Graduates from ALP and ABE programs can still be denied entry into the formal school system (e.g. entry into Grade 7). Similarly, youth who complete ABE face challenges in transitioning to junior high school, as there is no policy guiding admission into Grade 7. Following the Joint Education Sector Review (JESR) 2013, and as a direct result of activities included in the Ministry of Education's Operational Plan (2014–2017), the Bureau of Basic and Secondary Education is assessing ways to more effectively define and streamline Alternative Education program offerings.

There is limited capacity at central and decentralized levels to manage and oversee the implementation of AE programming. ALP, ABE and Adult Education programs are housed within the AE Division within the Bureau of Basic and Secondary Education of the MoE. Each program is managed by a Coordinator. According to the JESR (2015) and a recently drafted AE policy framework coordination and collaboration between the Central Ministry and the County Education Offices with regard to planning and managing AE is in need of strengthening.

The delivery of AE programs is inhibited by the limited supplemental instructional materials and the poor distribution of materials. A total of forty-eight titles, including learner workbooks and facilitator manuals have been developed for ABE covering Literacy, Numeracy, Work Readiness and the acquisition of Life Skills. However, to date, the procurement and distributed of these materials has only benefitted a small number of sites.

Relevance

Economic Outcomes

Labor Market Participation

Labor force participation in Liberia is 62.8 percent. Of the labor force, 30.8 percent work in the formal sector, 36.6 percent in agriculture, and 28.9 percent in informal or household employment (LFS 2010). Labor force participation is higher in rural areas than urban areas, and is higher among male workers compared to females. While unemployment rates in Liberia are low (3.7 percent), the vast majority of work is classified as vulnerable employment and is located in informal sectors.

Over three-quarters (77.9 percent) of the working population in Liberia is retained in some form of vulnerable employment (LFS 2010). "Own-account workers and contributing family workers together make up a category of "vulnerable employment." These workers face significant job insecurity and do not benefit from safety nets in periods when they are unable to work due to sickness or disability (SWTS, 2013:22). HIES (2014) evaluates the prevalence of vulnerable employment as 74.2 percent—slightly below estimates in the Labor Force Survey. Rural workers (85 percent) are more likely to be engaged in vulnerable employment than urban workers (65 percent), and female workers (85 percent) are significantly more likely to be engaged in vulnerable employment than their male counterparts (64 percent). Working in vulnerable employment is associated with poverty and social exclusion.

According to HIES, 67.9 percent of Liberians participating in the labor force are employed in the informal sector. This category of the economy includes large swathes of the agricultural sector as well as other forms of informal sector work. In Liberia,

> Informal employment includes … (a) paid employees in "informal jobs", i.e. jobs without either a social security entitlement, paid annual leave or paid sick leave; (b) paid employees in an unregistered enterprise

TABLE 10-1 Labor Market Indicators, 2010

	Labor force participation rate (%)	Inactivity rate (%)	Employment to pop. ratio (%)	Unemployment rate (%)	Vulnerable employment rate (%)	Informal employment rate (%)
National	62.8	37.2	60.5	3.7	77.9	68.0
Urban areas	54.9	45.1	52.0	5.5	67.5	59.3
Rural areas	71.2	28.8	69.6	2.3	86.1	75.0
Male	66.1	33.9	63.8	3.4	68.3	61.3
Female	59.9	40.1	57.5	4.1	87.3	74.7
Greater Monrovia	52.8	47.2	49.3	6.5	63.2	56.6

Source: Labor Force Survey 2010.

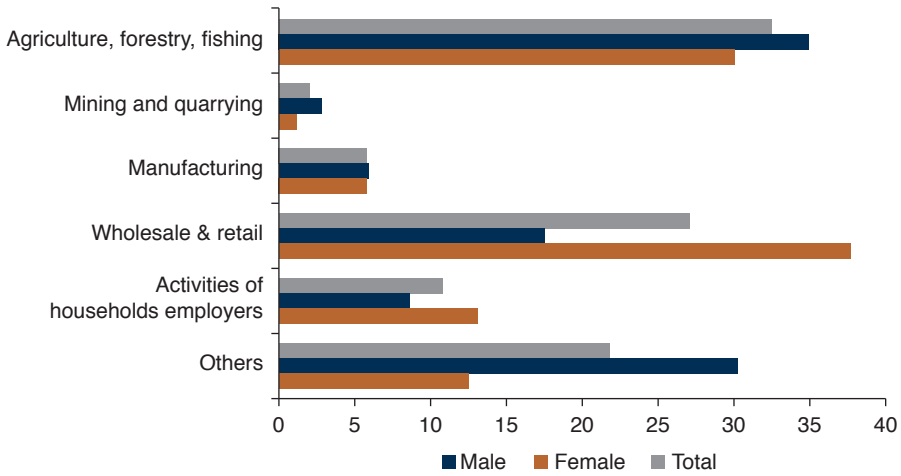
with size class below five employees; (c) own-account workers in an unregistered enterprise with size class below five employees; (d) employers in an unregistered enterprise with size class below five employees; and (e) contributing family workers. (SWTS 2013: 28)

According to HIES (2014), urban workers (69 percent) are more likely to be engaged in informal employment than rural workers (63 percent), and female workers (86 percent) are more likely to be engaged in informal employment than males (34 percent).

Formal sector employment is dominated by agriculture (including forestry and fishing) and wholesale and retail trade, followed by manufacturing and household employers. This pattern of employment, is similar for the youth (aged 15–34) population (Figure 10-A). A large share of young people are employed in agriculture, forestry and fishery activities (32.5 per cent), followed by wholesale and retail activities (27.1 per cent) and activities of households as employers (10.8 per cent). The latter is a category that includes workers engaged in domestic services for private households (for example, as cleaners, child-minders, chefs or chauffeurs). Compared to young men, a larger share of young female workers are retained as household employees (13.1 per cent) and work in the wholesale and retail sector (37.7 per cent). The share of young men in the agricultural (34.9 per cent) and in mining and quarrying sectors (2.8 per cent), by contrast, are greater than those of young women.

While 52.4 percent of Liberian youth (aged 15–35) are employed, the majority of these youth are self-employed (SWTS 2013). Of youth who are employed, 76.9 percent are self-employed. Nearly half of self-employed youth are own-account workers, a quarter of self-employed youth are contributing

FIGURE 10-A Employed Youth, Branch of Economic Activity, by Gender (SWTS 2012)



Note: The Others category includes sectors that accounted for less than 5 per cent of the total: electricity-gas-water, construction, transport & storage, accommodation & food services, information & communication, financial and insurance activities, professional & scientific activities, administrative & support services, education, human health & social work activities, arts and entertainment and other services.

family workers, and less than 10 percent are employers. Many youth report taking up self-employment because they have been unable to find a wage or salaried job (40.8 percent), and due to pressure from family (13.4 percent). In a survey of youth, the most significant business challenge reported is insufficient access to financial resources (cited by 69.4 percent of respondents).

Of employed youth, 14.3 percent are in wage and salaried employment (SWTS 2013), and of these, less than one-fifth have access to paid annual leave, with 27.4 percent reporting that their employers pay into the social security system.

Child labor remains a concern in Liberia. Slightly more than one-third (37.6 percent) of adolescents aged 15 to 17 years of age report that they are working. Of children and youth engaged in child labor, 63.4 percent are concentrated in domestic work and subsistence agriculture (SWTS 2013). Economic insecurity and other forms of household vulnerability lead many children and youth to participate in household economic activities, and, as children get older, they assume income generation responsibilities. Of youth aged 15 to 17 years of age, 16.5 percent are not attending school, most likely due to economic factors. Street Child (2016) states that for girl children, the need to participate in income generating activities influences decisions about school dropout. At present, there are no prohibitions against child labor in Liberia, with the exception of retention in hazardous work.

Education and the Labor Market

Educational attainment is positively associated with access to wage and salary employment. Table 10-2 presents the distribution of workers according to their status in employment and educational attainment. Of wage and salary workers, 17.2 percent had achieved a university education, and 70.8 percent reported a secondary education. Youth in paid employment in Liberia are primarily male (83.3 percent), are drawn from older cohorts of youth aged 25 to 29 (34.5 percent) and 30 to 35 years (38.2 percent), and are more likely to be located in urban areas (81.6 percent). Of own-account workers, 41 percent report having completed primary education and 45 percent report having completed secondary education. The majority of contributing family workers have a secondary education (54.6 percent).

The distribution of educational attainment and type of employment likely reflects a range of structural issues: (i) there are few wage and salaried jobs, (ii) a tertiary education makes youth more competitive for wage and salaried jobs (hence influencing the distribution), and (iii) the majority of youth in Liberia have some secondary education. As a consequence of the last point, the large share of youth with a secondary education in own-account and family work may be related to general population characteristics, as opposed to market features or skills demanded in these categories of employment.

The relationship between educational attainment, labor market activity and employment status varies by level of education. Youth who are economically active (employed and unemployed) demonstrate higher levels of

TABLE 10-2 Distribution of Employment Status and Educational Attainment

Level of completed education	Wage and salaried workers	Own-account + employers	Contributing family workers
None	4.2	6.9	8.2
Primary	6.3	41.1	29.3
Secondary	70.8	44.9	54.6
University and above	17.2	2.6	7.9
No stated	1.5	4.5	0.0

Source: SWTS-Liberia, 2012.

education than those who are not economically active. However, while youth with higher levels of educational attainment are more likely to be economically active, they are also more likely to be unemployed. For example, youth with a secondary education account for 49.4 percent of employed youth and 63.4 percent of unemployed youth (Table 10-3). By contrast, youth with a primary education account for 35.6 percent of employed youth and 18.7 percent of unemployed youth. The distribution indicated in table 10-3, is likely related to the bifurcated structure of the Liberia labor market, wherein a majority of jobs are located in the informal sector. As youth gain higher levels of education, they are more likely to desire access to formal sector employment. The phenomenon of growing graduate unemployment is witnessed across sub-Saharan Africa, as the number of tertiary graduates outpaces growth in formal sector employment.

Workers with higher levels of education are more likely to be employed in skilled and professional occupations (Table 10-4). Approximately 70 percent of workers with no, or incomplete, primary education work in the agriculture sector. In comparison only 12 percent of workers with complete secondary, or a higher level of education, are employed in the agriculture sector. For skilled and professional jobs, the trend is opposite: 46 percent of skilled and professional workers have attained secondary or higher education, while only 3 percent of skilled and professional workers have an incomplete or no primary education (DHS 2013).

There is a mismatch between the skills supplied by workers to the labor market, and the demand for skills (SWTS 2013). The mismatch falls into three primary categories:

TABLE 10-3 Completed Education Attainment by Current Activity Status (%)

	Employed	Unemployed	Inactive
None	7.9	7.5	14.8
Primary	35.6	18.7	58.7
Secondary	49.4	63.4	21.0
Vocational school	3.1	4.6	4.8
University and above	3.9	5.8	0.7

Source: SWTS-Liberia, 2012.

TABLE 10-4 Distribution of Selected Survey Respondents (Age 15–49), by Main Occupation and Education Level, 2007 and 2013

	2007		
	No education or incomplete primary	Complete primary and incomplete secondary	Complete secondary and beyond
Agriculture	69%	45%	12%
Sales and Services	26%	40%	41%
Skilled and Professional	4%	14%	47%
	2013		
Agriculture	66%	40%	12%
Sale and Services	31%	48%	41%
Skilled and Professional	3%	13%	46%

Source: DHS2007 and DHS2013.

- *Many youth are underqualified for their current jobs.* 47.8 percent of youth are considered undereducated for their jobs. This figure rises to 90 percent for workers in professional jobs (senior officials, managers and professionals), and 80 percent for technicians and associate professionals (SWTS 2013).
- *Many youth are qualified for jobs that don't exist.* Many youth obtain qualifications in fields where there is an over-supply of workers, or in fields in which there is no demand in the labor market.
- *A growing demand for professionally skilled workers is unmet by supply.* There is a shortage of jobseekers for skilled agricultural work, clerks, senior officials and managers.

The SWTS (2013) reported that a large share of unemployed youth (33 percent) seek work in an elementary/low-skilled occupations. This supply matches employer demand—which indicated that a large share of projected future job openings are expected to be in low skill positions.

Persistent difficulties in recruiting skilled workers suggest that education system is not fully aligned with the needs of the private sector. Hard to fill vacancies include: secondary education teachers, business services and administrative managers, managing directors and chief executive, and typists and word-processing operators.

Vacancies likely to expand in the medium term include a mix of low- and high-skill occupations. The fastest growing eight occupations identified by the STWS (2013) were: domestic helpers and cleaners, secondary education teachers, survey and market research interviewers, security guards, nursing professionals, subsistence crop farmers, tailors and dressmakers, and forestry and related workers.

Social Outcomes

Households in which the head of household reports higher levels of educational attainment are more likely to be wealthy and less likely to experience food poverty (Table 10-5). Conversely, households in which the head

TABLE 10-5 Impact of Education on Poverty and Wealth, 2014 (HIES 2014)

	No education	Primary	Junior Secondary	Senior Secondary	Higher
Overall poverty	71%	11%	7%	10%	1%
Extreme poverty	76%	11%	5%	8%	0%
Food poverty	69%	10%	7%	12%	2%
Q1	77%	12%	6%	5%	0%
Q2	72%	11%	7%	9%	1%
Q3	64%	11%	8%	14%	2%
Q4	57%	11%	11%	18%	3%
Q5	37%	10%	12%	32%	10%

has no education account for 76 percent of households living in extreme poverty, and 77 and 72 percent of households in wealth quintiles 1 and 2, respectively. Of households in the poorest quintile of income, 77 percent are headed by an individual who has never been to school and 12 percent are headed by an individual with some primary school. The remaining 11 percent of house heads reported having an educational attainment above primary school.

Education has a strong positive effect on female literacy rates. All females (100 percent) reporting some secondary or access to higher education are identified as literate. Only 0.6 percent of females with "no education" are considered literate; 61.7 percent of females reporting a full primary education are literate (Table 10-6).

Higher levels of education are associated with higher rates of contraceptive use among men and women, and lower fertility rates. Men and women with an incomplete secondary education or higher are nearly twice as likely to use contraceptives compared to men and women with an incomplete primary education or lower (over 30 percent compared to approximately 15 percent). Fertility rates decrease as women achieve higher levels of education. Of women between the ages of 20–29, a woman with no education has a fertility rate that is twice that of a woman with a completed secondary education (2.6 births per women compared to 1.3).

Women with more education wait for longer before having children. Age at first childbirth is 17.6 years old for women with "no education" compared to 19.6 years for women with a secondary education.

The likelihood that a woman will participate in an antenatal consultation and use vitamin A supplements increases with educational attainment. It is very common for Liberian women to attend antenatal consultation during pregnancy. Ninety-five percent of woman with no education report an antenatal consultation compared to 100 of women with completed secondary education. Approximately 55 percent of uneducated women use Vitamin A for two months following giving birth, compared to 65 percent of women with a primary or more education.

Men and women with more education are more likely to have had a HIV test; women are more likely to be tested than men: 43 percent of women

TABLE 10-6 Impact of Education on Social Behavior, by Education Level, DHS 2013

	No education	Incomplete primary	Complete primary	Incomplete secondary	Complete secondary	Higher
Use of contraceptives (%)						
All	15.4	16.8	23.4	32.1	33.7	37.8
Women	15.3	17.7	24.4	31.1	27.6	30.3
Men	15.7	14.7	21.5	33.4	37.7	45.5
Use of Iron Tablets During Pregnancy (%)	93.0	95.2	96.4	97.5	98.6	100.0
Antenatal Consultation (%)	94.7	96.9	99.0	98.9	100.0	100.0
Fertility rate (total number of living birth and current pregnancy)						
Respondents 20–29 yrs	2.6	2.4	2.1	1.6	1.3	0.9
Respondents 40–49 yrs	5.2	5.2	5.6	4.8	3.8	3.4
All respondents	4.0	2.3	3.5	1.8	1.9	1.6
Women's age at first birth						
Age 20–29	17.6	17.8	17.8	18.3	19.6	20.5
Age 40–49	18.6	18.1	17.5	18.2	18.8	20.2
All	18.2	17.7	17.6	18.2	19.7	20.6
Use of Vitamin A for 2 Months After Birth (%)	54.8	58.1	65.8	65.2	64.6	72.0
Ever practiced breastfeeding (%)	98%	98%	97%	96%	97%	92%
Women's age at first cohabitation						
Age 20–29	16.9	17.4	17.3	18	20	20.7
Age 40–49	18.5	19	19.6	19.4	21	24.3
All	17.8	17.7	18	18.5	20.7	22.2
Ever tested HIV (%)						
Female	42.7	44.3	56.7	57.9	70.0	80.1
Male	15.0	13.5	14.1	25.7	45.9	65.2

with "no education" have been tested for HIV, compared to the 15 percent of men without any education. Moreover, 70 percent of women and 46 percent of men who had completed secondary education had been tested for HIV.

Education Finance and Expenditure

Public Expenditure

Overview

From 2005 to 2013, the Liberian economy experienced steady growth. The Ebola crisis resulted in a sharp slowdown across various economic sectors, revenue loss, and increased demand for public expenditure (GoL Budget Framework Paper FY 15/16). The Liberian economy was estimated to have grown by 0.7 percent in 2014 and 0.3 percent in 2015. The outlook for the economy remains challenging. Growth in 2016 is projected to be 2.5 percent. Over the medium term, growth is expected to rise to an average of 6 percent per annum, as confidence improves following presidential elections and a successful security transition, offsetting the negative impact of delays in mining and oil exploration projects (IMF 2016).

The share of the education sector as a proportion of overall government expenditure has averaged 12 percent over the past five years. FY12/13 and FY14/15 witnessed a sharp decline in the share of education spending in the overall budget, dropping to 11.4 and 10.59 percent, respectively. In FY 15/16 investment in the education sector increased to 13.5 percent of government spending, due to implementation of the Economic Stabilization and Recovery Plan (ESRP) which was designed to revive the economy in the aftermath of the Ebola crisis, and included a specific focus on health and education. Over the course of the past five years, the overall education budget has been, on average, equivalent to 3.81 percent of Liberia's GDP.

Planned budget reductions for FY2016/17 will impose serious financial constraints on the education sector. The total government budget in 2016/17 is projected to drop to $553 million as compared to $623 million in 2015/16. In FY 2016/17, spending in the education sector is expected to decrease to $81.82 million. However, the share of education spending as a proportion of total government expenditure is expected to increase to 15 percent. Over the medium term, education sector expenditure is projected increase in line with annual GDP growth, at approximately 6 percent per year.

TABLE 11-1 Education Expenditure, 2010/11–2015/16

	2010/11	2012/13	2013/14	2014/15	2015/16
Education Budget	53,005,030	76,928,436	70,942,476	64,156,410	83,822,000
Total GoL Budget	408,380,000	672,050,000	582,931,413	605,900,000	622,740,000
% of Edu in GoL Budget	12.98%	11.45%	12.17%	10.59%	13.46%
GDP (USD billion)	1.54	1.746	1.962	2.01	2.02
Education (% of GDP)	3.44%	4.41%	3.62%	3.19%	4.15%

Source: GoL national budget.

TABLE 11-2 Projection of Education Expenditure, in USD

	2015/16 Budget	2016/17 Projection	2017/18 Projection	2018/19 Projection	2019/2020 Projection
Education Budget	83,822,000	81,820,000	87,925,887	93,201,440	98,793,527
Total GoL Budget	622,743,420	552,993,000	586,172,580	621,342,935	658,623,511
% of Edu in GoL Budget	13%	15%	15%	15%	15%
GDP (USD billion)	2.02	2.07	2.19	2.32	2.46
Education Exp. As % of GDP	4.15%	3.95%	4.01%	4.02%	4.02%

Source: projection based on Ministry of Finance and IMF GDP projection.

Liberia compares poorly with other sub-Saharan African countries with regard to its allocation of government resources in support of the education sector. Moreover, recent data underlines the vulnerability of education allocations, with the potential for future external shocks and crises negatively impacting resources available to education. Education spending in Liberia is below the government's target in the Education Sector Plan 2010-20 which is aligned with the Global Partnership for Education minimum benchmark of 20 percent of total government spending.

Within the current budgetary, finance and human resource constraints, it is not possible for the Government of Liberia to provide universal, free and quality basic education in the medium term. An additional increase of 20 to 30 percent in recurrent expenditure would be required to ensure that the current population of out-of-school children (aged 6–14) could access basic education.

Sources of Financing

In addition to education financing provided through the national budget, there are several other sources of education financing in Liberia, including: household expenditure (at public and private schools); county development funds; concession agreements; volunteer and youth service teaching (over 3,000); and development partner (and NGO) financing and programming in education. Table 11-3 identifies public and private sources of education finance in Liberia.

TABLE 11-3 Sources of Education Finance in Liberia

Public/quasi-public sources	Private Sources
• National government budget • County budget and funds, including social /county development funds. • Concessional arrangements • Development partner programming	• School fees and PTA fees, especially at secondary and post-secondary levels. • Other household expenditures • In-kind / community contributions • Private foundation/scholarships

Expenditure by Level of Education

In 2014/15, 40 percent of the education budget was allocated in support of primary education (inclusive of the cost of pre-service teacher training). Twelve percent of the overall education budget was allocated in support of secondary education (8 percent for JH and 4 percent for SH). There is no formula informing the allocating of public resources to different levels of education, and there is no system to accurately track education expenditure in each level of education. Due to the large share of the education budget allocated to support employee compensation, the number of teachers in each level of education is the best proxy for government investment. Education expenditure is most accurately estimated using share of teachers employed in each level of education, and direct transfers to institutions. See Table 11.4.

The higher education sub-sector receives a high share of total public education expenditure. Between 2012/13 and 2014/15, spending in support of higher education accounted for the second largest share of total education spending and was on an upward trajectory. In 2014/15, the share of government expenditure on higher education was 32 percent of total public spending in support of education.

Unit Cost

The unit costs of education in Liberia vary considerably across levels and types of education, with the cost of TVET and teacher training being relatively expensive. Based on an estimate of the number of teachers by level of education, spending per public primary school pupil is approximately $71 per year. Junior and senior secondary school per student spending is higher at $79 and $90 per year, respectively. This is primarily related to the low STRs resulting from the use of subject teachers at the secondary level, the relatively high number of non-teaching staff, higher salaries premised on a teacher's qualifications, and more expensive teaching and learning materials (World Bank 2010). Many TVET institutions do not fall under the MoE's budget, but under Ministry of Youth and Sports. Combining the different sources of funding, TVET unit costs are calculated at $1100 per student per year, more than 15 times the annual cost of education a primary school student.

TABLE 11-4 Budget Share of Each Level of Education

	2012/13	2013/14	2014/15
ECE	11%	11%	11%
Primary	40%	40%	40%
Junior Secondary	9%	9%	8%
Senior Secondary	4%		
TVET	6%	5%	5%
Higher Education	29%	30%	32%

Source: Budget execution report and budget document.

TABLE 11-5 Unit Cost by Level of Education

Level of Education	Unit Cost	As % of Primary Unit Cost
ECE	24	34%
Primary	72	100%
Junior Secondary	79	110%
Senior Secondary	90	125%
TVET	1100	1535%
Teacher Training	5709	7968%

Source: National budget, MoE budget execution report and EMIS 2015[a].

[a] To calculate the cost per student educated in government schools, EMIS 2015 and budget execution report is used. The cost per student is calculated as the total expenditure allocated to each level divided by the total number of students enrolled in public and community schools.

The three semi-autonomous RTTIs provide free residential pre-service teacher training to candidate teachers. High per student spending in the RTTIs is linked to the relatively low number of students enrolled in the institutions, the recruitment of lecturers from the Liberian diaspora at relatively high cost, and high running costs associated with food and the maintenance of dormitories (World Bank, 2010). In Kakata Rural Teacher Training Institute (KRTTI), a "B Certificate" pilot program was launched in 2015/16 with a $400,000 special allocation, aside from the need to service salaries for 100 in-service teachers.

Ministry of Education Expenditure

The share of MoE expenditure in the total government education expenditure has declined from 62 percent in 2012/13 to 52 percent in 2015/16. The balance of the education budget is comprised of direct transfers to tertiary and TVET institutions, the Monrovia Consolidated School System, the West African Examination Council (WAEC) and RTTIs.

In recent years, the Ministry of Finance has funded less than half of the MoE budget request, leaving many priorities severely underfunded. In the 2013/14 fiscal year, the treasury approved funding for $38.7m of $93.2m requested by the MoE (MoE Comparative Budget Analysis 2013–14).

The current budget framework does not reflect the MoE priorities and does not allow for programmatic budgeting. There are no clear guidelines within the MoE to mainstream strategic areas during budget preparation. Investment in each level of education is not planned or tracked, and critical information such as unit cost do not inform the budget request. In 2014/15, 94 percent of funding allocated to MoE was used to compensate employees; in 2015/16, the share of MoE funds allocated to employee compensation decreased to 80 percent. The share of the MoE budget allocated to support the procurement of goods and services declined from 7 to 3 percent between 2012/13 and 2014/15 and increased to 14 percent in 2015/16.

Historically, transfers of public money and resources have supported the operation of private and faith-based educational institutions.

TABLE 11-6 Ministry of Education Budget and Expenditure, 2012/13–2015/16

	FY2012/13			FY2013/14		
	Budget	Actual	Share	Budget	Actual	Share
Compensation of Employees	41,315,437	41,211,270	87%	34,341,519	34,303,981	86%
Goods and Services	4,037,401	3,350,051	7%	3,060,760	2,874,497	7%
Consumption of Fixed Capital	650,250	181,684	0%	239,575	172,935	0%
Subsidy	2,597,069	2,463,698	5%	3,636,698	2,403,252	6%
Capital Expenditure	0	0	0%	—	—	0%
Unspecified	16,802	0	0%	—	—	0%
Total	48,616,958	47,206,703	100%	41,278,552	39,754,665	100%
Share in Total Edu. Exp.	62%	67%		56%	56%	

	FY2014/15			FY2015/16	
	Budget	Actual	share	Annual Appropriation	share
Compensation of Employees	34,950,977	34,894,426	94%	34,909,000	80%
Goods and Services	1,578,518	1,006,812	3%	5,264,433	12%
Consumption of Fixed Capital	236,250	236,249	1%	736,250	2%
Subsidy	1,160,551	1,153,582	3%	2,622,801	6%
Capital Expenditure	—	—	0%	0	0%
Unspecified	—	—	0%	0	0%
Total	37,926,297	37,291,069	100%	43,532,484	100%
Share in Total Edu. Exp.	57%	55%		52%	

Source: GoL Budget and Ministry of Education Division of Finance.

"Subsidies" to selected private and faith-based educational institutions are allocated on an ad-hoc basis. The process of subsidy allocation is both un-co-ordinated and non-transparent. These subsidies appear in the MoE budget, but the MoE has no influence over them. Schools that receive a subsidy in one year may lose funding in the next year due to an election and a change in representative. The legislature may add schools to the subsidy list resulting in institutions lobbying directly with the legislature. Within the MoE budget, actual expenditure on subsidies remained constant between 2012/13 to 2013/14 at approximately $2.4 million. Following a significant decline in 2014/15, subsidies climbed to more than $2.6 million in 2015/16, accounting for 6 percent of the MoE budget.

The execution rate for employee compensation within the MoE budget has reached 100 percent. However, execution rates for goods and services, and fixed capital expenditure has fluctuated. The execution rate of spending on subsidies 99 percent in FY2014/15. Overall, the execution rate for spending under the MoE budget is high, surpassing 97 percent for the years FY2012/13 to FY2014/15. However, large underspending on subsidies was apparent in 2013/14, as some recipient institutions did not submit the request for allotment to MoE. Over the past three years, MoE has not allocated any

TABLE 11-7 Ministry of Education Execution Rate, FY2012/13–FY2014/15

Items	FY2012/13	FY2013/14	FY2014/15
Compensation of Employees	100%	100%	100%
Goods and Services	83%	94%	64%
Consumption of Fixed Capital	28%	72%	100%
Subsidy	95%	66%	99%
Capital Expenditure	—	—	—
Unspecified	0%	—	—
Total	97%	96%	98%

Source: Ministry of Education Division of Finance.

funds to capital projects from public resources (such as school infrastructure), with all public funds allocated to recurrent spending.

Compensation of employees and subsidies account for more than 85 percent of the MoE budget, leaving little room for other activities essential for enhancing the education quality such as in-service teacher training, curriculum development, school monitoring and the development of a national assessment. In FY2016/17, the MoE is expected to receive 56 percent of requested funds to support its education budget, an increase on 52 percent in FY2015/16. Compensation of employees is projected to remain constant due to the ongoing payroll verification and teacher vetting exercise. In FY2017/18, compensation of employees is expected to increase.

Payroll Expenditure

The payment of teachers is managed by the Civil Service Agency (CSA). At the beginning of the budget cycle, DEOs and CEOs forward lists of teachers to the MoE. These lists include key information such as name, qualification and age, and are used to calculate teachers' salaries. The estimated cost of payroll feeds into the draft MoE budget and is submitted to Ministry of Finance and Development Planning (MoFDP). However due to the ongoing payroll verification, the MoFDP is reluctant to accept cost projections made by MoE. As a consequence, the line item supporting the compensation of employees has remained relatively unchanged since 2013/14, and even decreased in 2015/16. Support for payroll obligations is expected remain the same until MoE completes the teacher vetting/payroll cleanup exercise. Teacher recruitment has been halted for an extended period of time, wasting government resources spent in support of pre- and in-service teacher training.

The MoE currently supports two payrolls: regular and supplementary. An estimated 60 to 70 percent of teachers on the supplementary payroll hold qualifications (C-certificate or Associate Degree) and are underpaid. The average salary on the regular payroll is $151 per month, while the average salary on supplementary payroll is $97 per month. Additional resources required to accommodate all teachers on the regular payroll is estimated at approximately $2.7 million.

Subsidy Expenditure

Approximately 90 percent of institutions receiving subsidies from the MoE are private or faith-based schools and institutions. Most of these schools levy student fees and impose entrance tests on students. The MoE spends between $72per student enrolled in government primary schools. The limited sample of private and religious schools captured in EMIS 2015, suggest a per student subsidy of approximately $387 per year.

Subsidies allocated to higher education are significant. Over $1.7m was budgeted for non-government higher education institutions in 2015/16, more than the entire line item supporting school grants to all government basic education schools.

Some of the schools operating in hard-to-reach areas and serving students from low-income households show high per capita costs. However, the lack of a clear subsidy policy makes it impossible for MoE to determine the eligibility of schools, or devise a formula for different types of schools. Reform of subsidy policies would allow MoE to improve systems of accountability for institutions that receive subsidies, and more equitably allocate resources in the future.

There is limited monitoring and evaluation of the utilization of subsidy funding. Institutions receiving subsidies do not always request MoE support, resulting in the wasting of scarce resources.

Currently the Ministry of Education is drafting a subsidy policy and listing the qualifications of schools eligible for subsidies. For example, the MoE may stipulate that if a school receives a subsidy, then it is not allowed to charge fees or impose entrance tests. If schools that are not eligible for subsidies on these terms are removed from the budget, efficiency gains of $1,066,752 per year are estimated; equivalent to half of the current budget for subsidies.

Scholarship and Grant Expenditure

The provision of MoE scholarships has been reformulated to be more closely aligned to national development priorities. The number of local scholarships has been reduced from 5,000 to 1,052 and foreign scholarships have been limited to funding graduate level study only. However, scholarships remain a substantial proportion of the budget with foreign scholarships alone consuming an average of $2.1m annually (2.8 percent of the total education sector budget). In 2015/16 budget, $2 million was approved under the "National Priority Project", which was later allocated to foreign scholarship instead of infrastructure investment.

The MoE's school grants program provides direct grants with an average value of $1,000 to over 2,500 schools supporting nearly 500,000 children. The MoE school grants program seeks to (i) support school-based management, (ii) enhance community participation, and (iii) support progress toward educational objectives (access, quality, etc.). The most common uses of the school grant were to purchase instructional and teaching materials, complete minor repair works, purchase / repair furniture, and otherwise

improve the school environment (e.g., buy sports equipment). Grants appear to have fostered community participation and helped schools address several small-scale locally identified issues.

Capital Expenditure

The majority of capital expenditure in the education sector is supported by external resources. The share of government education spending on infrastructure fluctuated between 0 and 2.4 percent between 2013/14 and 2015/16. In 2016/17, the MoE's budget request did not request any funding for capital expenditure. In contrast the current GPE project has spent over $17 million to construct over 300 classrooms (GPE-BEP 2016) and a recent EU project spent nearly 4 million Euro on infrastructure (ECSEL 2014).

In early 2009, the MOE's Division of Educational Facilities estimated the cost of building a school at $102,920. This amount is for the construction of a standard two block, six classroom primary/junior high school, inclusive of a principal's office, a teachers' preparation room, a reading room, an eight-unit VIP latrine block, and a well with a hand pump. The estimated cost also includes costs associated with planning (1.8 percent), a contingency fund (5 percent), and management and supervision costs (13 percent) (World Bank 2010).

Donor Support

Development partner resources have, and are expected to continue to, significantly supplement government resources in the education sector. While the share of external funding to education demonstrates annual variability, data suggests that external (i.e., donor) resources accounted for between 30 and 50 percent of expenditure on education between 2011/12 and 2013/14 (PER 2014). This calculation does not include household, private, county or concession funding in support of education and is limited to national expenditure included in the budget. In 2012/13, donor contributions to the education sector amounted to $60.92 million, equivalent to 43.8 percent of total education spending. In 2015/16, aid to the education sector is projected to increase to $79 million, representative of 9.3 percent of all aid received by Liberia.

The share of donor investment in overall investment in education declined from 53 percent in 2009 to 45 percent between 2009 and 2011 as

TABLE 11-8 Donor Education Budget vs. Donor Total Budget

Donor Budget	2012/13	2013/14	2014/15	2015/16
Education	59,485,529	61,570,679	60,714,660	79,010,000
Total donor Contribution	487,656,661	648,766,568	764,180,000	792,290,000
%	12%	9%	8%	10%

TABLE 11-9 Share in Overall Enrollment in Private and Mission/Religious Schools

	ECE	Primary	Junior High	Senior High
Public	54%	53%	42%	30%
Private	28%	29%	36%	39%
Mission	12%	13%	18%	29%
Community	6%	6%	3%	2%

Source: EMIS 2015.

a result of the decreasing USAID funding and improved government spending. Donor spending as a proportion of total spending rebounded to 48 percent over the past three years. Donors have played a significant role in infrastructure projects, accounting for the majority of expenditure on capital infrastructure projects in public schools over several years (PER 2014).

Challenges remain regarding improving the utilization of aid in the education sector. There is no robust tracking mechanism for donor contributions in the sector. Most donor funds are channeled directly to implementing agencies, outside of the national budget system. In addition, many donors are frustrated at the low-levels of government investment in the education sector, and the unsustainability of donor projects in the absence of government commitment. For example, in a recent EU project, EU funding was made dependent on MoE funding of costs associated with the salaries of teachers participating in the project (ESA Consultations).

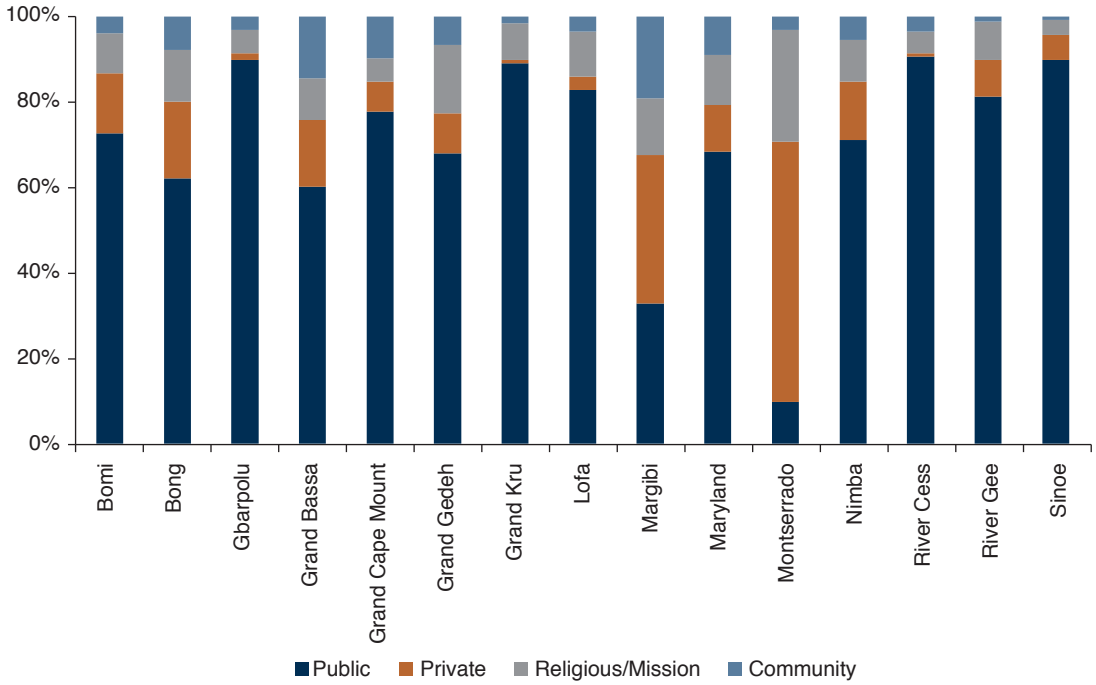
Private Education Cost

There is a long history of private, religious and community education providers operating in the Liberian education sector. According to the 2015 EMIS data, private and religious (or mission) schools accounted for more than 40 percent of primary and junior secondary enrollment and upwards of 60 percent of student enrollment in the senior secondary subsector.

There is significant heterogeneity in the non-government school sector in terms of school ownership, school mission, school location, population served, fee structure and quality. In recent exercises, non-government operated schools have been classified under the following categories: private proprietor, non-government organization, established church (e.g., Wesleyan, Episcopalian, Methodist, Catholic), independent church (i.e., not affiliated to one of the established churches), mosque and community (EMIS 2014, Tooley and Longfield 2013). The highest share of share of private and mission primary schools is in Montserrado County where these two types of schools account for 87 percent of all schools in the primary subsector.

Private and mission/religious schools charge a variety of fees, such as tuition, PTA fees, exam fees, registration fees, and other miscellaneous fees relating to, for example, uniforms and sports. The table below presents a summary of median fees levied in for-profit and non-profit schools prepared for the 2013 report by Tooley and Longfield. On average, for -profit and

FIGURE 11-A Percentage of Primary Schools by County and Ownership, 2015



Source: EMIS 2015.

non-profit schools charge $48 to $50 in fees per annum for each student enrolled in primary education and $71 to $76 for a student enrolled in junior secondary education.

Household Expenditure on Education

Households shoulder a significant share of costs associated with education in Liberia. HIES 2014 reported annual educational expenditure per household member, including all formal education related expenditure (not only tuition fees and textbooks, but also notebooks, stationary, uniforms, school provided transport) as well as expenditure for non-formal education (vocational training, pre-school, etc.). The report found that household expenditure on education per pupil varies greatly by household wealth, with slightly more than half of households spending less than 6,000 Liberian dollars per annum on education (Table 11-11). When this figure is broken down by

TABLE 11-10 Median Fees Charged by for-Profit and Non-Profit Schools

	ECE				Primary					Junior Secondary		
for profit	40	41	39	44	45	46	50	51	54	68	70	75
non-profit	43	41	39	45	47	48	53	54	55	72	77	79

Source: Tooley and Longfield (2013), study carried out in 7 slum areas.

TABLE 11-11 Share of Households in Education Expenditure Category, by Quintile

Education Expenditure (Liberian Dollars)	Liberia	1st Quintile	5th Quintile
1–499	0.8%	3.9%	0.00%
500–999	4.0%	12.9%	1.40%
1,000–1,999	17.7%	37.3%	4.90%
2,000–3,499	18.0%	24.7%	9.50%
3,500–5,999	15.2%	10.3%	12.10%
6,000–9,999	16.4%	9.0%	15.10%
10,000–14,999	11.3%	1.0%	17.90%
15,000–19,999	7.3%	0.5%	15.20%
20,000–29,999	6.0%	0.4%	13.90%
30,000–49,999	2.2%	0.0%	6.00%
50,000 +	1.2%	0.0%	4.00%
Total	**100%**	**100%**	**100%**

Source: HIES 2014.

wealth quintile, it becomes clear that nearly 80 percent of families in the first quintile (poorest) spend less than 3,500 Liberian dollars annually, while almost three-quarters of households in quintile 5 spend more than 6,000 Liberian dollars annually on education. The distribution of expenditure may in part be accounted for on the basis that families from higher wealth households are more likely to enroll their children in higher levels of education, and in non-public schools.

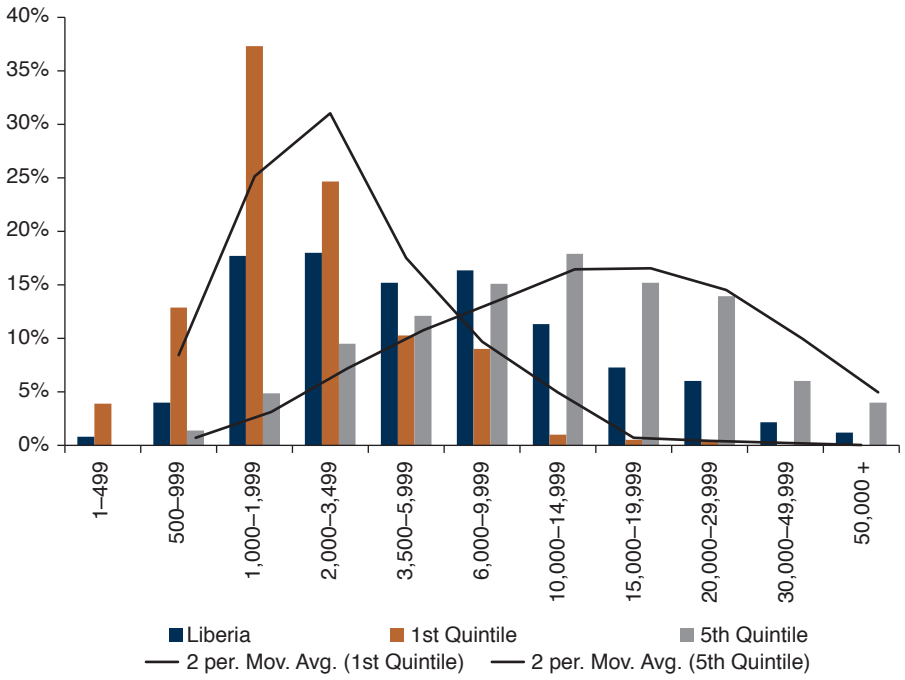
Figure 11-B shows the distribution of household expenditure on education. Spending by households in the first quintile ranges from 500 to 3,500 (Liberian dollars) range, whereas more than 60 percent of quintile 5 households annually spend 6,000 to 30,000 Liberian dollars on education. Moreover, the majority of rural households spend less than 3,500 Liberian dollars annually mon education; while 55 percent of urban households spend more than 6,000 Liberian dollars per year on education.

Quintile 5 households spend nearly five times more, per 6 to 11-year-old student, compared to households in quintile 1. Figure 11-C illustrates education expenditure on 6 to 11-year-olds disaggregated by quintile. Nationally, the average expenditure on education on the part of households with a 6 to 11-year-old child is 1,463 Liberian dollars, of which 813 is spent on school fees and 262 to service the cost of a school uniform. Poor families in the first quintile spend approximately 40 percent of this amount (638 Liberian dollars), while families in the fifth quintile spend almost twice the national average (2,966 Liberian dollars).

Figures relating to household expenditure on education point to the following important observations:

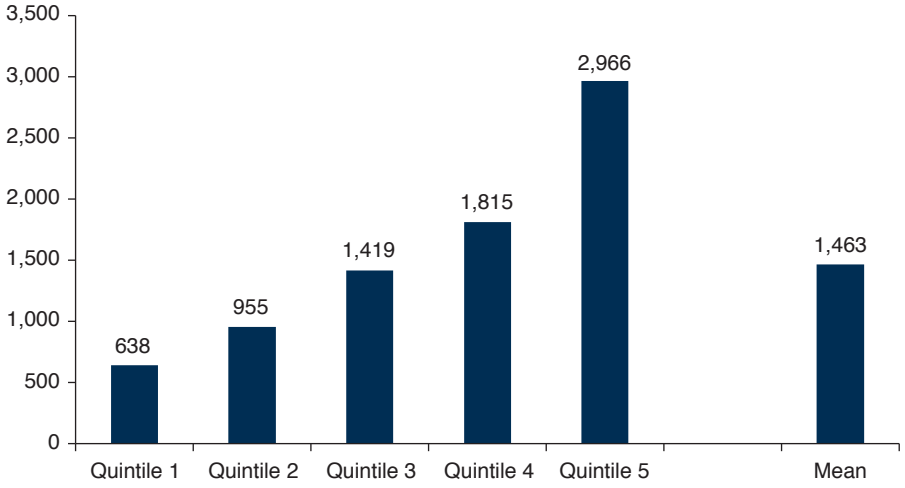
1. Households significantly contribute to education finance in Liberia.

FIGURE 11-B Education Expenditure (Liberian Dollars) Distribution by Wealth Quintile



Source: HIES 2014.

FIGURE 11-C Annual Mean Expenditure on Education on a 6-11 Year Old, by Household Wealth



Source: HIES 2014.

2. By law, public basic education is meant to be free of fees, however, data from HIES 2014 demonstrate that in practice almost all households pay some form of school fees.
3. School fees vary greatly, while uniform costs do not.
4. The ability to pay fees likely gives children in quintile five households a significant advantage over children from households that are unable to pay fees.

However, these data should be interpreted with some caution. A large number of 6 to 11 year-old children are enrolled in ECE, which is not fee free. Moreover, children from wealthier households are more likely to attend private or mission schools which levy school fees.

Concession Agreements

Concession schools educate a large number of children, but resources relating to concession agreements are not counted under the MoE budget. Firestone, Arcelor Mittal, the Liberia Agriculture Company, and Sime Darby are examples of corporations that run schools catering to 16,000, 13,000, 6,000, and an undetermined number of children respectively. These companies spend hundreds of thousands of U.S. dollars to run their school systems.

The Education Refom Act (2011) states that "concession agreements… shall require that sixty percent (60%) of any signature fees realized shall be allocated to the education budget" (p. 42). However, this mandate does not appear to be implemented.

Oil and mining concessional agreements mandate private sector support to higher education. Resources derived from these agreements have been used to improve the quality of engineering and mathematics in higher education.

Governance, Management and Accountability

Education Governance

The Education Reform Act of 2011 prescribes the organization structure, as well as the management roles and responsibilities of MoE central office organizational units and decentralized bodies. National Education Policies (2011) and the Liberia Education Administration Regulations (2011) elaborate on the Education Reform Act. All ECE, basic and secondary education and schools in Liberia are overseen by the MoE. In addition to being responsible for over 1.4m students, 19,000 teachers and other staff, and 2,500 schools in the public sector, the MoE is also responsible for policy and oversight of approximately the same number of private, mission and community schools. Given the country-wide reach and cross-cutting nature of MoE programming, the MoE, must liaise with the CSA, the Ministry of Finance and other Ministries at the central level, as well as a large number of stakeholders at the county and district levels to successfully execute its governance, management and accountability functions.

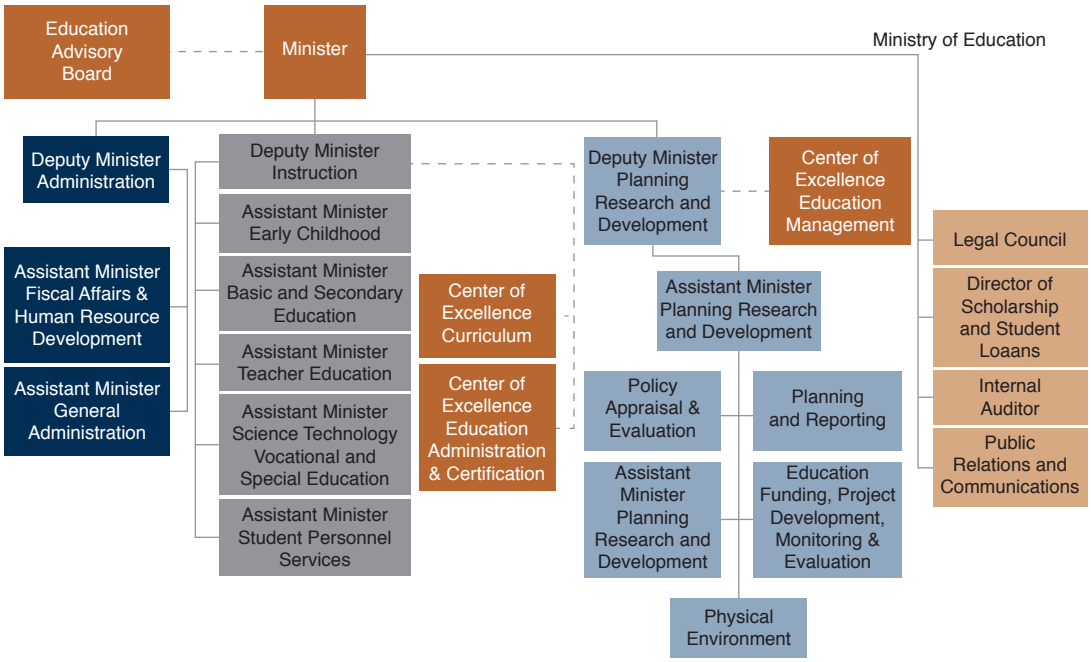
National Level Structures

At the national level the MoE coordinates with the following stakeholders:

- The Presidential Cabinet,
- Ministries, Agencies and Special Commissions, including the Civil Service Authority, the Ministry of Finance, the Ministry of Internal Affairs, the Ministry of Gender, and the National Governance Commission,
- Educational institutions, including RTTIs, Colleges and Universities, and the National Higher Education Council,
- Educational Organizations, including the National Teachers Association of Liberia (NTAL), the National PTA of Liberia, the West Africa Examinations Council, Religious Organizations and the Association of Private School Operators,
- Local non-governmental and civil society organizations,
- Private sector organizations and institutions, and
- Multi-lateral and Bi-lateral Development Partners, inclusive of the Education Sector Development Committee (ESDC).

In 2015, the MoE commenced a process of restructuring to align organizational structure of the ministry and its staffing with its mandate as laid out in the Education Reform Act (2011). The MoE has three departments, overseen by Deputy Ministers in Administration, Instruction, and Planning (see below organogram). The restructuring of departments, as well as the bureaus and divisions within each department, has been

Ministry of Education Organogram, 2016



Centers to become semi-autonomous and will have limited permanent staff, recruiting temporary expertise as needed

Source: EMIS 2014.

completed. The Education Reform Act calls for the establishment of a National Education Advisory Board (NEAB), to be comprised of stakeholders representing different institutions engaged in education, to serve as an advisory body to the MoE. The President constituted the NEAB in April 2015. The Act also calls for the establishment of three Centers of Excellence in Accreditation and Certification, Curriculum and Research, and Education Management. Once established, these centers will be responsible for several important governance functions, including the development of the national curriculum, development of accreditation and quality assurance systems, licensing teachers, and strengthening school, district and county management systems.

County School System

The Education Reform Act (2011) envisions the establishment of County School Systems, led by Country School Boards (CSB) and supported by MoE Education Officers at county and district levels. The role of CSBs is to "facilitate, monitor and oversee the operation of all schools in the local county school system" including the identification of qualified teaching staff and annual budget preparation and reporting (Education Refom Act 2011:29).

TABLE 12-1 Budget Request vs. Amount Funded, Selected Lines, 2013/14

Budget Line	Requested	Funded
Center for Accreditation	$1.7m	$0m
Center for Curriculum Development	$1.2m	$9,000
Basic and Secondary Education (inclusive of free education, materials provision, and maintenance)	$22.6m	$953,000
Department of Planning (total, inclusive of EMIS, research, M & E)	$2.4m	$72,000

Source: See footnote.

The Education Refom Act and National Education Policies, 2011 provide detail on CSB governance and roles.

MoE offices at the county level are led by a County Education Officer (CEO) and staffed by five personnel. These personnel include a Monitoring and Evaluation Officer, a Planning Officer, a Personnel Analyst, an Accountant, and a Procurement Officer. The CEO serves as the representative of the MoE responsible for the "operations of the school system in the county, including the responsibility of the personnel in the system" (Education Refom Act 2011:34). The CEO oversees District Education Officers (DEOs). The Act also outlines roles and responsibilities of personnel in teacher support and management, including those assigned to school principals and DEOs. The Act offers guidelines for Administrative Hearing and Review processes to deal with offences and grievances, which are elaborated in the Code of Conduct for Teachers and School Administrators in Liberia (CoC).

For established departments, bureaus, and units, insufficient resourcing severely limits capacity for carrying out key governance functions. ESA consultations, and a review of applicable literature, highlight the fact that several units, including the Planning Department (responsible for sector monitoring and evaluation), the Bureau for Basic and Secondary Education (which oversees strategic initiatives in basic and secondary education) and Community School Boards, CEOs and DEOs (who are positioned as key stakeholders in governance at decentralized levels) are unable to execute critical governance functions due to a lack of resources.

In recent years, the Ministry of Finance has funded less than 50 percent of the MoE's budget request, leaving many MoE departments and priorities severely underfunded. In the 2013–14 fiscal year, the Ministry of Finance approved funding for $38.7m out of a MoE budget request of $93.2m (MoE Comparative Budget Analysis 2013–14). The table below identifies specific items wherein funding was significantly below the amount requested.

TABLE 12-2 Recent Liberia Education Sector Analysis and Planning Documents

Document	Year	Description
Liberia Primary Edu. Recovery Program	2007	Planning document focused on short- and medium-term post war reconstruction of the primary education sub-sector.
Liberia Education Country Status Report	2010	Similar structure to this ESA, though covering a smaller number of themes.
Liberia Education Sector Plan 2010–2020	2010	Thorough and comprehensive review of, and plan for, the sector
Education Refom Act	2011	Guidance for the education system priorities, governance and institutional structures
Agenda for Transformation	2013	Liberia medium term development strategy; provides guidance to MoE Operational Plan 2014–16.
MoE Operational Plan 2014–2016	2013	Operational plan builds on the Liberia ESP 2010–2020 with specific operational priorities and targets for 2014–16.

Sector Planning, Monitoring and Policy Evaluation and Research

Sector Planning and Analysis

Liberia's most recent Education Sector Plan and Operational Plan were completed in 2010 and 2014, respectively. The Education Sector Plan 2010–2020 is a ten year plan covering all sub-sectors and grounded in an analysis of the entire sector (World Bank 2010). The MoE Operational Plan 2014–16 provides a three-year operational framework, associated costing to support implementation of sector priorities, and importantly, updates sector priorities based on changes in the policy and institutional context, including, the Education Reform Act (2011) and the Agenda for Transformation (2013).

The Operational Plan 2014–16 includes many priorities identified by the ESP 2010–20, including: payroll reform, the development of a system for learning assessment, teacher professional development, and strengthening school quality assurance systems through improved support to CEOs and DEOs. In 2015 and 2016, the MoE developed a Getting to Best policy and roadmap to identify strategic priorities and targets for implementation during the last phase of the ESP 2010–2020 cycle. The Getting to Best (2015) policy framework draws on previous plans to identify nine core priorities, and six secondary priorities, to be implemented over the course of three years. The below table identifies key sector planning and analysis documents from 2007–2015.

The most recent analysis of Liberia's education sector was completed in 2010 (World Bank 2010). In the interim, there have been a number of changes in sectoral policy and the applicable legal framework (e.g., the Education Refom Act, the Agenda for Transformation), within the system itself (e.g., enrollment growth, population growth, urbanization), and within the broader

social, political and economic environment (e.g., the effects of the Ebola crisis, macroeconomic challenges).

Processes informing the development of the national budget have hampered MoE efforts to strengthen the link between strategic planning and its operational budget. The current MoE budget, as specified by the Ministry of Finance, is aligned to accounting conventions and practices that do not allow the MoE to link expenditures to strategic programs. In previous years, the MoE submitted program-based budget requests to the Ministry of Finance, but these budgets were not been accepted. Despite these challenges, in several instances the MoE has been able to work with the Ministry of Finance to secure supplemental funding for critical priorities (for example the transfer of $800,000 to implement school grants). In two other recent cases (the completion of the 2015 EMIS and teacher verification activities), the MoE was able to marshal additional internal and external resources to ensure ongoing support to priority activities.

Sector Monitoring and EMIS

Monitoring of ESP 2010–20 implementation has been implemented through joint sector reviews and annual school census exercises. Since the launch of the ESP 2010–20, the MoE has led two JESRs in 2013 and 2015. A 2014 review was cancelled due to the impact of the Ebola crisis. The 2015 JESR collected input from stakeholders across 15 counties and organized discussion along seven technical areas, each led by a working group. Findings are outlined in a workshop report (MoE JESR 2016) and a JESR field summary report (MoE 2015). Currently, annual reviews offer a forum for stakeholder discussion and consultation, but these are not explicitly grounded in monitoring progress towards priorities and targets identified in existing plans.

Since 2005/06, the MoE has regularly conducted a school censuses and successfully published statistical yearbooks. The responsibility for the annual school census falls under the MoE's Planning Department. In 2011, the MoE transitioned to a new methodology for conducting and analyzing the annual school census, resulting in some gaps in data collection between 2012 and 2014 (discussed in an annex to this report). The 2015 school census addressed the majority of deficiencies identified in school census exercises conducted between 2012 and 2014.

Evaluation and Policy-Relevant Research

The MoE has developed a National Monitoring and Evaluation Policy and Strategy, but this strategy has not yet been implemented. The strategy identifies key processes and indicators that need to be addressed to strengthen MoE-led monitoring, evaluation and research. One barrier to implementation of policy-relevant research is linked to funding constraints. For example, in 2013–14, in response to a budget request of $2.4m to support the activities

of the MoE's Planning Department (which included implementation of the annual school census and IT), $72,000 was allocated by the Ministry of Finance. While external funders provide significant resources to support research, monitoring and evaluation activities in the sector, it is not clear that the MoE has a system in place to ensure that these activities will be sustained, and that associated experience and reporting are catalogued and available at the MoE. In many instances, externally funded and led evaluation activities draw on MoE expertise and experience to inform evaluation and research findings.

County and District Level Monitoring and Accountability

County and District Offices play an important role in monitoring and strengthening education service delivery. Responsibilities of CEO and DEO staff are outlined in the Education Refom Act (2011) and the Code of Conduct (2014) and include responsibilities towards:

- Teacher hiring, firing, transfer and disciplinary procedures,
- Providing support (i.e., management, administrative) to school principals and teachers,
- Responding to school concerns and grievances (e.g., learning materials, contractors),
- Facilitating and monitoring school grant and school improvement activities,
- Relaying information from the MoE central office,
- Responding to administrative and criminal offenses, and ensuring administrative hearings are held, or, where appropriate, local law enforcement is engaged, and
- Ensuring registration/effective oversight of non-government schools in the district.

The DEO is responsible for enforcement of the CoC and monitoring for, and reporting, offences, malfeasance, and criminal conduct, inclusive of allegations of sexual violence, professional misconduct, and theft.

In recent years there has been significant turnover of personnel retained on County School Boards (CSB) as well as in the critical decentralized roles of CEO and DEO. In 2012, the MoE established CSBs in all 15 countries and trained board members with regard to their roles and responsibilities. In 2015, the terms of existing board members expired and many CSBs no longer appear to be operating as envisioned by the Act (MoE JESR 2015). In 2015/16, the MoE identified 45 DEO and CEO staff of retirement age and began a process of re-hiring for all 75 county-level support positions. Given these two issues, staff retirement and the hiring of new EO staff, in 2016–17, nearly half of CEO and DEO staff will be new to their positions.

The majority of CSB, CEO and DEO staff have not received professional training related to their job descriptions, and the MoE has not yet developed training programs or clear MoE guidance or tools to support these staff in the execution of their job responsibilities. As a result, many critical accountability functions, such as holding administrative hearings on teacher offenses and conducting regular school inspections, do not occur with the regularity envisioned in policy.

CEO and DEO staff do not appear to have the material and financial resources required to successfully fulfil their job descriptions. Specifically, CEO and DEO staff do not have sufficient resources to support travel to schools to conduct periodic school monitoring and quality assurance activities. In the 2015/16 budget, less than $200,000 was allocated for non-salary related CEO and DEO activities. Several recent evaluations highlight the extent to which a lack of petrol, difficulty in maintaining vehicles, and communication challenges (e.g., airtime, or no access to a network) combined with logistical challenges (i.e., remote schools and roads which are impassable during rainy season) restrict the execution of key CEO and DEO job responsibilities. Selected excerpts from these evaluations note:

> Unless some logistical problems, such as the lack of transportation, are solved, it is unlikely that CEOs or DEOs could conduct quality monitoring over the remaining life of LTTP II. (USAID 2013:26)
>
> Based on observations and meetings with the DEOs, it is unlikely that either (i) supervision takes place or (ii) that its focus is instructional. DEOs typically do not have the resources to carry out this task on a regular, scheduled basis. Limited to travel by motorcycle, which often lacks fuel, and unable to reach the far corners of their counties, the DEO's ability to fulfill the mandate is severely compromised. (USAID 2013:28)
>
> [Listed as a challenge in a program evaluation] Logistical challenges in most of the counties and in particular limitations at CEO level (transport, funds, administrative capacity) towards the delivery of supplies to school level. (EU 2014: 27)

Partnerships

International and local partners have offered technical expertise, provided financial and material support, and have introduced innovative practices to Liberia's education sector. Partners include multilateral funding agencies, international NGO organizations, local NGOs and advocacy groups, corporations implementing schools in concession areas, religious and private organizations, local and international foundations and trusts, and many other organizations which work across sectors and geographic areas in Liberia. A large number of stakeholders (i.e. religious organizations, corporations, several NGOs) have been involved in the Liberian education sector for decades and many are on the ground providing educational services in schools. Notably, private operators, religious and mission organizations and

Adopted innovative practices	Potential adoptions
• Mobile money • Early Grade Reading Intervention • School grants	• Mobile M & E and data collection • Inclusive and special education • Improved service delivery in rural areas

corporations run schools which enroll over 350,000 children in basic education and employ over 15,000 teachers

Over the past five years, non-MoE education sector stakeholders have spent more $40 million per annum in support of education in Liberia. Over the past five years the financial contribution made by external stakeholders to the education sector has been equal to or more than the size of the MoE annual budget. Over the life of the ESP 2010-20, external funders have made significant contributions to the following MoE priorities:

- Teacher Professional Development
- Alternative Education (ALP and ABE)
- Teacher payroll verification
- Decentralization
- Infrastructure development
- Girls' education and cross-cutting gender initiatives, and
- Technical and Vocational Education and Training (TVET)

Partners have played an important role in introducing and piloting several innovative practices, including: the Early Grade Reading intervention and assessment, mobile money for the delivery of school grants and teacher salaries, and the piloting of the school grants program. Stakeholders are engaging in a large number of other innovative practices, some of which support MoE objectives. For example, several organizations are using mobile technology to offer more accurate and cost-effective methods of monitoring and data collections, several religious organizations have expertise and experience in working with children with special needs, and several NGOs have developed expertise in reaching rural and remote areas with innovative service delivery methods.

The MoE works with an Education Sector Development Committee (ESDC) and with individual development partners to plan and design new

TABLE 12-3 Variables Supporting the 2016 Implementation of Two MoE Priorities

Variable	Payroll vetting	EMIS strengthening
Included in previous ESP / OP	✓	✓
Required intensive DP support over 3+ years	✓	✓
Built MoE capacity which remains with MoE	✓	✓
Required a significant share of budget	✓	✓
Transition to MoE ownership required non-budgeted MoE and external resources	✓	✓
Effective transition required urgent intervention from senior MoE leadership	✓	✓

activities supported through external funding. Monthly ESDC meetings allow for coordination, interface and sharing among MoE stakeholders, development partner agencies, and NGO and civil society implementing and advocacy organizations. However, given the extensive engagement of external stakeholders to Liberia's education sector, sector stakeholders also engage with MoE through special committees, networks and technical working groups, and during the design of new programs, through *ad hoc* committees that incorporate key MoE decision-makers.

The MoE has demonstrated several successful interventions and reforms (i.e., payroll verification and EMIS 2015 completion) that offer lessons for future activities in the sector. Payroll verification and the completion of the 2015 EMIS share several characteristics that have contributed to their success. They were: long-term initiatives identified as priorities in the 2014–16 Liberia MoE Operational Plan, required intensive external technical and financial commitments over several years and developed and supported the retention of MoE implementation capacity (i.e., human resources, institutional mandate, MoE budget support). The continuation of these programs in 2016 also offers lessons: their continuation required additional non-budgeted MoE resourcing and the securing of new external resources through urgent interventions on the part of MoE leadership. While successful, these activities should sound a note of caution given the significant time investment, and allocation of management and financial resources required to ensure sustainability.

Civil Society and Social Accountability

Social accountability of the education sector at the National Level is exercised by an active press, local and international advocacy groups, and representative and membership bodies that operate outside of line ministry structures. National and international advocacy groups include the Center for Accountability and Transparency in Liberia (CENTAL), the Coalition for Transparency and Accountability in Education (COTAE), and the Education NGO Forum (comprised of representatives from international and local NGOs). Some local advocacy organizations have close ties with international organizations, including Action Aid and the Open Society Foundations. The Parliamentary Education Committee, the National Education Advisory Board, and member organizations, including the National PTA Association and the National Teachers Association of Liberia (the teachers' union), also play a social accountability role. Over the past five years, improving transparency, monitoring and accountability in public procurement processes, and strengthening decentralized governance and management structures have been prominent issues advocated for by civil society organizations (COTAE 2011).

Participation on the part of parents and communities in schooling has improved in recent years. In 2015, 93 percent of primary schools reported a functioning PTA, a steady increase on previous years. In these schools 71 percent of PTAs met four or more times per year (EMIS 2015). Increased

participation is likely a result of multiple overlapping interventions: In 2015, the MoE reached 2,026 schools with PTA training, using the PTA Operational Manual. Moreover, the MoE distributed school grants to over 2,500 public schools in the 2015/16 school year. In order for the school to access these grants, the school needed to produce a School Improvement Plan. Finally, the MoE has leveraged partnerships with NGOs to progressively train PTAs across Liberia on critical social issues, including girls' education promotion, gender-based violence, the code of conduct, school feeding, psychosocial support and psychological first aid (MoE Annual Report, 2015).

While parent and community participation in schools has improved, planning documents argue that community participation requires further strengthening. Due to the legacy of the more than 30 years of war and unrest, many parents, older women, and even grandparents did not attend school. As a result, many parents may not have clear expectations of "what should be expected" of schools and teachers, and may not have a strong sense of how they can play a positive role in the education and development of their children. The Operational Plan 2014–16 and Agenda for Transformation prioritize capacity development for PTAs and SMCs.

Principals and School Management

More than 2,500 principals are retained in public schools in Liberia. Principals oversee school staff, including vice principals for Instruction and Administration and all teachers active in the government school system. The Liberia Education Administration Regulations (MoE 2011) provide detail on the varied responsibilities and expectations of the school principal. The LEAR notes:

> As the key ranking administrator, principals are responsible for the management, maintenance, school policy regarding discipline, coordination of instructional program and other overall school matters. In addition to these responsibilities, school principals are also required to lead school reform that would raise student achievement. ... Principals also interact with parents who serve on school advisory boards such as the parent-teacher associations (PTAs) ... [and] are responsible for making sure that their schools' campuses are safe and secure and in good working order (MoE, 2011, pp. 80–81).

A majority of principals have not received extensive training with regard to the responsibilities of their job. Tuowol et al (2014), Norman (2012), and MoE (2011, 2014 and 2015) suggest that the majority of Liberian school principals do not have degrees, diplomas, or certification related to their work. In terms of experience and promotion, it appears that the majority of school principals 'rose through the ranks' from teacher to school principal. In a small qualitative study of 12 principals in Monrovia, Norman (2012) writes,

> [most] principals did not undergo any prescribed leadership education or training or hold any principalship licensure. The principals said that ascendency to the principal-ship was largely based on teaching experience, political patronage, or social connections or a combination of these factors. In addition to their teaching experience, some of the principals previously served in capacities such as registrar, vice principal for instruction and vice principal for administration. (Norman 2012:76)

While these results are from small scale study, Norman's description of the promotion process appears to align with current policy that identifies work experience and some training (often in teaching, rather than school management) with promotion to school principal (GoL 2011, MoE 2015).

Principals and DEOs work under very difficult conditions with few resources and limited support. Within the present system, principal and DEO staff do not have the resources, or tools required to fulfill their instructional leadership duties. Principals generally focus on administrative tasks, and often, due to the insufficient number of teachers, teach classes. USAID (2013) notes:

> School principals are working under very difficult conditions, with limited (practically no) resources, scant remuneration and nothing in the way of incentives, rewards or recognition. Communication with the MOE county or central office management is via the District Education Officer, who may come once in a month, once in a quarter, or, more often, not at all. (p. 34)

Since 2008, Liberia's sector plans and analyses have emphasized the need to extend professional development to school principals. These observations are corroborated by several small-scale studies including those conducted by the LTTP project, which determined that many "principals were insufficiently prepared and lacked the qualifications to provide the necessary supervision for their teachers. ...and that … principals needed more assistance in order to effectively supervise instruction and support newly trained teachers in their schools" (MoE draft Educator Management Policy 2015). Both the Educator Sector Plan 2010–20 and the Operational Plan 2014–16 identify the professional development of school principals as a priority. To address this issue, in 2008/09, the MoE, in collaboration with the Liberia Teacher Training program, piloted an in-service training program for school principals in six counties

There are several sources of guidance for developing training in school management and leadership. Liberian colleges and universities provide degree programs in school administration. In addition, the draft Educator Management Policy suggests offering certificate or diploma programs in school management. Moreover, the MoE has details for implementing an in-service professional development program as outlined in the Principals Training Manual. The Manual was developed based on an assessment of the qualifications of school principals and their ability to provide instructional

and managerial leadership in schools in 2008. A brief description of the Principals Training Manual follows:

> This training tool has 3 parts which covers each aspect of the principals' work, based on MOE policy and outline of the responsibilities of a principal: 1) Leadership; 2) Communities; and 3) Learning. Part One covers school and education management topics every principal should know, such as MOE policy on recruitment of principals; educational leadership; school leadership; school management; accounting principles and record keeping. Part Two topics include strategies for building community relations both internal and external to the school; rights-based education; supporting women and girls; healing classrooms and guidance and counselling. Lastly, Part Three addresses key instructional issues such as participatory learning; lesson planning; developmental psychology; classroom management and teacher observations. (Principal Training Manual 2010:3–4, qtd. in MoE 2015:75)

Over the past five years professional development of principals has been implemented through piece-meal training. A brief review of program reports demonstrate that school principals have participated in short-term training in the following areas: early-grade reading and mathematics, school census surveys, the teachers' code of conduct, deworming, community participation and PTAs, child-friendly schools, Ebola Response, gender equity, WASH, alternative basic education, and school feeding (MoE 2015 Annual Report 2016).

Technical and Vocational Education and Training

Overview

Liberia is struggling to provide employment to a young and vulnerable labor force. According to the 2008 census, youth between the ages of 15 and 34 constitute over a third of the Liberian population, and most seek employment. One third of Liberian youth are estimated to be unemployed (Lindburg 2014), and an additional one-third are classified as NEET—not in education, employment or training (MoE Getting to Best 2015).

Many Liberian youth lack the foundational skills and basic education to facilitate a successful transition to the world of work and/or further education and training. Only 59 percent of Liberians over the age 15 are literate, and more than half of all youth in rural areas have not completed primary school. Many youth combine school with work, and for this reason, some youth above the age of 19 continue to pursue basic primary education.

Youth rely heavily on informal sector jobs and self-employment. Only 6.2 percent of 15 to 24-year-olds find paid employment in the formal sector (World Bank, Youth Skills Development 2016), while the rest are occupied in unpaid family work or self-employment, primarily in agriculture and small-scale household enterprise activities.

Many Liberian youth enter the labor market with poor skills and insufficient preparation for productive employment. While youth recognize that a lack of skills and relevant experience are impediments to employment, there has not been sufficient study of what youth know in terms of skills training, and how training impacts labor market outcomes.

TVET has the potential to play an important role in enabling youth to more effectively transition to the world of work. Given the scale of unemployment in Liberia and low levels of educational attainment among Liberian youth, TVET has the potential to play a pivotal role in (i) improving the employability, productivity and income earning capacities of youth, and (ii) raising the competitiveness of the workforce. TVET supporting the development of livelihoods skills and skills relevant to informal and local economies is especially important for youth who do not have access to formal secondary or higher education.

Legal and Policy Context

TVET has been at the foundation of Liberia's growth and development for many decades. The acquisition of skilled labor for President Tubman's five-year Development Plan (1946–50) and the need for skilled labor for concessions drove the development and expansion of Liberia's TVET sector. By the 1980s, the sector had graduated from dealing with challenges associated with a paucity of TVET institutions, to grappling with issues of coordination,

standardization and certification across a range of institutions. In the late 1980's and through the following decade, efforts to improve coordination, standardization and certification were thwarted by the civil war.

In a post-conflict context, the further development of TVET is aligned with Liberia's overall development aspirations. Vision 2030 and the Agenda for Transformation state the country's long-term aim of attaining middle income country status by 2030. The vision calls for a revitalization of the TVET system to produce skilled human capital in the expectation that skilled workers will revitalize economic growth and industrialization. The Agenda for Transformation outlines several interventions related to the TVET sector (see Box below).

In 2014, an Inter-Ministerial TVET Taskforce (IMTTF) was formed by the President, in the absence of an independent TVET authority. The IMTTF was mandated to develop a comprehensive plan for the sub-sector, with the aim of achieving the TVET goals outlined in the Agenda for Transformation (2012–2017). The elaboration of a National Policy for Technical and Vocational Education and Training 2015–2020 was led by the Taskforce and is the guiding TVET policy in Liberia.

TVET legislation has been proposed to provide a legal framework for implementation of the policy goals and objectives of the National TVET Policy. In particular, the legislation seeks to establish a Liberia TVET Commission (LiTCOM) that will lead implementation of the National TVET Policy Governing Board for LiTCOM. The TVET legislation is in the process of submission for Cabinet approval. However, the implementation of LiTCOM and the operational structures may take some time. In absence of LiTCOM, an Interim Governance Structure has been proposed by MoE.

While there has been some progress towards harmonizing the TVET system, it remains fragmented across several ministries and agencies. The

TVET Relevant Interventions in the Agenda for Transformation Results Framework Matrix

- Development of a national commission to oversee TVET development and governance,
- Convene a national commission to review and revise existing policy, and identify the roles and responsibilities of line ministries,
- Construction and equipping of community colleges in rural counties,
- Development of Adult Basic Education (ABE) curriculum in literacy, numeracy, work readiness and life skills,
- Development of certification and formal recognition of ABE,
- Setting-up of linkages between ABE and programs for out-of-school youth in areas such as gender violence prevention and environment protection,
- Customization of existing teacher training for ABE for use at teacher training institutions,
- Training of master trainers at each teacher training institutions in ABE, with particular emphasis on females,
- Baseline study on TVET needs for vulnerable youth who have missed out on school,
- Development of harmonized TVET curriculum for vulnerable youth and provide relevant textbooks and equipment for the curriculum,
- Piloting of teacher training scheme with Booker Washington Institute and Kakata Teacher Training Institute, to provide qualified and skilled teachers for TVET,
- Distribution and Implementation of TVET curriculum in TVET institutes,
- Development of M&E tool for TVET centers/institutions for quality assurance

MoE's the Bureau of Vocational and Technical Education is responsible for implementing vocational and technical education programs at the pre-tertiary level in the government school system. The Bureau of Vocational and Technical Education also plays a supervisory role in overseeing TVET in the private sector, and to make sure that national standards are met. However, the MoE is not the only entity responsible for TVET in Liberia, and various ministries including Youth and Sports (MYS), Health, and Agriculture provide TVET, with distinct governance and management practices.

While a number of significant challenges persist in the TVET sector, there have also been a number of significant achievements, including:

- Creation of an Inter-Ministerial TVET Taskforce;
- Elaboration of the first National TVET Policy in Liberia with a detailed operational plan and costing;
- Consideration of a dedicated TVET legal framework;
- The existence of a variety of TVET training institutions both in rural and urban areas;
- An existing structure for formal skills development programs;
- Growing interest to involve other stakeholders, including the private sector;
- The establishment of seven guiding principles for the TVET system; and
- The sector has attracted interest from many external partners including, but not limited, to the World Bank, UNIDO, USAID, IBIS, YMCA Liberia and UNDP. Lessons learned from past programs are therefore substantial (EU 2016).

Description of the TVET Sector in Liberia

TVET in Liberia is multi-faceted and diverse in organization and delivery. The following definition of TVET is adopted by the Ministry of Education based on the National Policy for Technical and Vocational Education and Training 2015–2020:

i. *Technical and Vocational Education and Training (TVET)* is used in its broadest sense to encompass all aspects of skills development and acquisition from all learning environments, whether formal, non-formal and informal. TVET involves the acquisition of practical knowledge and employable skills and the study of related sciences and technologies. It also addresses the issues of employability, the demand and supply of skills, up-skilling, re-skilling, multi-skilling, and lifelong learning.
ii. *Formal TVET* refers to institution-based or in-school TVET that follows a standardized curriculum with precise learning objectives, usually leading to certification that is nationally recognized.
iii. *Non-formal TVET* refers to skills acquisition outside of the school system which is not nationally certified, such as internship training, short-term skills training by NGOs, or on-the-job training in enterprises.

iv. *Informal TVET* refers to skills acquisition on the job in formal sector employment or through traditional apprenticeships schemes in the informal sector of the economy.

Training Providers

The MoE and MYS are key training providers while other ministries, NGOs and private sector providers play a substantial role in the TVET sector. TVET training providers in Liberia can be broadly divided into two types of institutions: (i) Training providers that provide classroom-based training in both vocational and technical skills development; and (ii) Training providers that provide on-the-job training or apprenticeships in a particular type of trade or skill. The former tend to be offered in formal TVET institutions, offering designated qualifications that can be used for further education or entry to the labor market. The latter are more likely to be offered in an informal setting and may not offer certification. Training from these providers can leveraged for entry into the informal labor market and other informal income generating activities. Given the variety of providers and fragmented data in the sector, the providers and programs included in this chapter may not be exhaustive. Sector management and planning would benefit from a mapping exercise.

Formal TVET Programs

In the public sector, the MoE and MYS offer different TVET courses at different levels. These are summarized below.

Ministry of Education TVET Provision:

- From Grade 1 to 12, the MoE has encouraged every school to provide elective learning opportunities in at least one vocational skill (examples include, bead art, computer science and agriculture science). This initiative was introduced in the 2016/2017 Calendar Year and is not yet implemented.
- From Grade 7, basic formal TVET courses are organized to provide students with basic vocational skills for the labor market.
- From Grade 10 to 12, at the senior high school level, the MoE offers pre-vocational education alongside the general academic program to expose students to technical and vocational training.

Ministry of Youth and Sports TVET Provision:

The MYS operates vocational training centers that offer TVET courses at the basic and intermediate levels. Typically, MYS institutions target students who have dropped out of high school at, or before, Grade 10.

- For students who have dropped out of school prior to Grade 10 training is offered at the basic level. For students who have completed Grade 7, basic TVET courses (such as in tailoring, cookery and beautician trades) are offered.
- For students with educational attainment between Grade 10 and 12 training is offered at the intermediate level. Intermediate level programs are generally 18-months in duration, and include 6 months of on-the-job training. Eighty percent of students enrolled at the intermediate level are senior high school graduates who were unable to proceed to higher education (Liberia National TVET Policy 2015–20).
- Other programs run by MYS include 'Youth on the Job Training' for disadvantaged youth who are apprenticed to master artisans in their communities and the 'Youth Agricultural Training Centre' which provides training in cash crop development (palm, cocoa, rice, etc.) vegetable production, animal husbandry, and fishing.

In Liberia, some Community Colleges offer TVET training at the post-secondary level with strong linkages to tertiary education. At the tertiary level, students can either attend junior college which offer technical training for middle-management positions, or regular full-time colleges that grant degrees in professional disciplines. Some private polytechnics offer technical courses up to a bachelor degree level in specializations including Electronical Engineering, Civil Engineering, and Building Construction Technology. In light of the fact that a Grade 9 certificate is the minimum requirement for entry to formal TVET, a large proportion of the potential student population is excluded from this type of TVET education.

Non-Formal and Informal TVET Programs

On-the-job skills acquisition is the most common form of informal TVET training in Liberia. This form of TVET is primarily concentrated in the manual trades (carpentry, welding, construction, auto mechanics, and artisanal skills) and is more difficult to quantify. Some on-the-job training opportunities also exist in services sector fields such as tailoring, cosmetology, hospitality and catering. Programs are typically longer than formal TVET Programs, and about half of informal and non-formal TVET students are in programs offered by their primary employer, or offered by a workplace colleague. Youth from poorer households and with lower levels of educational attainment are more likely to choose apprenticeships and on-the-job training (World Bank, Youth Skills Development 2016).

A number of Ministries including the MYS, Ministry of Agriculture, Ministry of Commerce and Industry and the Ministry of Gender as well as private providers, development partners and NGOs run non-formal and informal TVET programs.

Training Institutions and Enrollment

There are critical informational gaps with regard to the number of TVET institutions in Liberia. More than 100 TVET institutions in Liberia operate under the responsibility of a government ministry. It is likely that private and NGO operators operate an even large number of TVET programs.

Documents reviewed by the MoE estimate a total of 132 TVET centers, while a review by MYS suggests that 148 TVET institutions are operational in the country. The 2015/2016 EMIS captured 65 active TVET institutions. It is estimated that at least three relatively large institutions offering only technical and vocational education, as well as several TVET institutions falling under the authority of MYS, may not have been captured by EMIS. It is likely that there are several other TVET schools operating without the MoE's knowledge. Further research is needed to provide a reliable assessment of the number of TVET institutions operational in the country and their enrollment figures. At the same time, a large number of informal TVET providers are not accurately surveyed. According to the Building Markets 2014 assessment, there are approximately 470 training providers in Liberia. Roughly three-quarters, or 74 percent, of these offer apprenticeships and on-the-job training, with the balance of 26 percent offering facility-based formal TVET programming.

The Following Sections Utilize 2015/2016 EMIS Data and their Accuracy Should Be Treated with Caution.

Formal TVET provision is delivered by public, private, religious and community providers, predominantly in urban areas. 2015/2016 EMIS data suggest that the majority of TVET institutions are private (63 percent), with public (20 percent), religious/mission (11 percent) and community-owned (6 percent) TVET institutions making up the balance of education provision in the sector. The majority of TVET institutions are located in urban and densely populated areas, including Montserrado (43 percent), followed by Nimba (23 percent) and Margibi (12 percent), highlighting the need to consider spatial imbalances in access to TVET.

Enrollment in formal TVET institutions is evenly divided between public and private institutions. While the number of private providers outstrips that in the public sector, public TVET schools are generally enroll a larger number of students. As a consequence, TVET enrollment is evenly divided between public and private institutions as illustrated in Table 13.1. A total of 11,871 students are currently enrolled in TVET institutions, of whom 46.73 percent are female. This is a marked decrease in enrollment in the sector (from 18,032 students in 2006 to 16,884 in 2012) although this change may be a consequence of inconsistencies in data collection. A comparison of TVET enrollment using sources provided by EMIS and lists of registered TVET institutions demonstrated significant inconsistencies. *EMIS data on TVET institutions should be treated with caution.*

TABLE 13-1 Enrollment in TVET Institutions by Provider 2015/2016

Provider	Total	Male		Female	
		Count	% total	Count	% total
Public	4,478	2,922	65.25%	1,556	34.75%
Private	4,366	1,877	42.99%	2,489	57.01%
Religious/Mission	2,156	987	45.78%	1,169	54.22%
Community	871	538	61.77%	333	38.23%
Total	**11,871**	**6,324**	**53.27%**	**5,547**	**46.73%**

Source: 2015/2016 EMIS.

Fewer females are enrolled in public TVET institutions than in private institutions. While overall enrollment figures suggest a relatively equal distribution of enrollment by gender, far fewer female students (34.75 percent) are enrolled in public institutions compared to male students (65.25 percent). Female enrollment in private TVET institutions is higher (57.01 percent) than male enrollment (42.99 percent), which may be related to the type of courses offered in the public sector.

While the 2015/16 EMIS data appears to demonstrate that women are well-represented in vocational training, fewer females enroll in apprenticeships and on-the-job training. Many of the skills imparted through apprenticeships are typically associated with male-dominated professions (carpentry, automotive, construction and engineering), which may negatively influence female entry to this form of training.

EMIS figures state that 3,617 students graduated from TVET institutions in 2014/15, of whom 50.5 percent were female. Between 2004 and 2007, it is estimated that 6,932 TVET students graduated from a total of 8,359 enrolled students (ILO 2008). These estimates suggest that an increasing number of students are graduating from TVET programs, However these figures should be treated with caution.

Available data suggests that youth face significant barriers to accessing TVET. According to the 2010 Labor Force Survey approximately 255,000 youth, representing 14 percent of the population between the ages of 15–34 the age of 15, had access to some form of formal TVET. The report does not distinguish between formal or informal TVET. A school-to-work survey carried out in 2012, estimated that only 5.1 percent of Liberian youth participate in vocational education or training (ILO 2013). Formal TVET training is more commonly reported by older and more educated youth due to the fact that participants are largely responsible for the payment of tuition fees. Many youth reporting TVET training have completed secondary or even university education (World Bank 2016). Most training programs are located in urban areas, limiting opportunities for students in rural locations without the means to relocate. 2015/2016 EMIS estimates indicate that 84.34 percent of students enrolled in TVET institutions are located in Montserrado, Margibi and Nimba.

TABLE 13-2 Enrollment in TVET Institutions by Area of Specialization

Specialization	Total	Male		Female	
		Count	% total	Count	% total
Computer Science	3,464	1,782	51%	1,682	49%
Agriculture	954	633	66%	321	34%
Other	935	335	36%	600	64%
Home Arts	730	83	11%	647	89%
Auto-Mechanic	680	564	83%	116	17%
Accounting	591	317	54%	167	28%
Electricity	577	510	88%	67	12%
Plumbing	575	404	70%	171	30%
Business Education	571	240	42%	331	58%
Building Trades	528	422	80%	106	20%
Tailoring	502	108	22%	394	78%
Electronics/ICT	425	366	86%	59	14%
Pastry	276	31	11%	245	89%
Type & Dye	225	92	41%	133	59%
Architectural Drafting	217	178	82%	39	18%
Wood-Work	145	23	16%	122	84%
Carpentry	142	113	80%	29	20%
Soap-Making	139	41	29%	98	71%
Hospitality Science	73	22	30%	51	70%
Metal Work	65	48	74%	17	26%
Interior Decoration	57	12	21%	45	79%
Total	**11,871**	**6,324**	**53%**	**5,440**	**46%**

Source: 2015/2016 EMIS.

Skills Areas

According to EMIS 2015/16, the largest concentration of TVET enrollment by subject is in Computer Science which accounts for nearly 30 percent of candidates. The second most commonly reported area of specialization is agriculture (8 percent). Courses offered in formal TVET institutions are concentrated in traditional vocational fields such as carpentry, masonry, plumbing, cookery, tailoring, soap making, and secretarial services.

Enrollment by subject is somewhat segregated along traditional gender lines, although computer training is popular with both young men and women. Subjects that are strongly divided on gender lines include 'Electricity,' 'Auto Mechanic,' 'Building' and 'Carpentry' where more than 80 percent of enrolled students are male. On the other hand, 'Pastry,' 'Home Arts,' and 'Tailoring' are dominated by female enrollment.

In addition to providing technical skills, some programs emphasize job skills and life skills. Job skills include general business skills, literacy and IT skills, while life skills refer to socio-emotional skills that enable students to work with others, learn effectively, and serve essential roles in their families,

communities and places of work. There is growing demand and interest in adding both job-skills and life-skills components to technical and vocational skills programs.

Teaching Workforce and Quality of TVET

Information regarding the current TVET teaching workforce is limited. The 2015/2016 EMIS estimated a total of 507 teachers are active in the sector. However, this figure may underestimate the number of trainers due to the large number of private providers. Eighty percent of teachers enumerated by EMIS were male and 78.3 percent of teachers were concentrated in Montserrado, Margibi and Nimba counties. EMIS data indicate that the age of the average TVET teacher is 45.8, which is consistent with averages across all levels and types of education. There is currently no dedicated vocational teacher training center and there are no standards for certifying TVET teachers.

The appropriateness of training resources, including equipment, and teaching and learning materials is questionable. Field visits suggest a lack of equipment, mishandling of existing equipment (i.e., non-functional or not maintained), poor penetration of new technologies, and insufficient consumables for training (such as wood, metal etc.).

Indicators of the quality of TVET instruction and delivery are limited, but recent field assessments point to substantial room for improvement.

Education and Employment TVET Pathways

The large majority of employment opportunities in Liberia are concentrated in the informal sector. Most apprenticeship and on-the-job training providers have substantial industry experience, are well connected with their industry, and are equipped to support the youth they train. Sixty-two percent of apprenticeship providers report more than ten years of relevant work experience, with only 12 percent reporting five-years of experience, or less (World Bank 2016). The importance of strengthening the dialogue between local education authorities, businesses, and community representatives to more effectively facilitate job placement and employment for youths graduating from informal and non-formal skills programs was highlighted in the lessons learned from IBIS projects supporting vocational skills training (IBIS 2013).

TVET education in Liberia is generally poorly aligned with the needs of the labor market. A survey from 2010 highlighted the mismatch between training provided and labor market demand. Sixty-eight percent of respondents reported that their training lacked relevance to their needs while only 19 percent of TVET trainees reported being employed in the trade that they learnt. The remaining 81 percent were underemployed or unemployed. Of the unemployed, 53 percent reported being unemployed due to insufficient training, 28 percent indicated that their certificate was not recognized, and 17 percent reported that they were unemployed due to a lack of demand for their type of training. Trainees most likely to find employment were trained as

tailors, agricultural extension workers, cosmetologists, masons, home economists, construction workers, agricultural production workers and secretaries. Trainees from the fields of auto mechanics, electrical installation, electronics, computer and IT, metallurgy and metal work, goldsmiths and furniture making and wood-work were the least likely to be employed (World Bank 2010).

Recent data suggests that the agriculture sector accounts for the largest share (33.5 percent) of youth employment, followed by employment in wholesale and retail trade (27.1 percent) and employment in private households (10.8 percent). The latter two sectors employ a higher share of young women than men. Service and shop and market sales workers constitute 28.8 percent of total employment, with 18.1 percent of young workers engaged in low-skill occupations (LISGIS 2011/13).

TVET Challenges

Limited availability of reliable TVET data. The lack of a coordinating agency means that there is no hub for information-gathering and data collection on TVET in Liberia. As a consequence no comprehensive study or survey on formal, non-formal and informal TVET has been conducted, undermining planning and decision-making (ILO 2016).

Outdated and limited equipment. Many TVET institutions lack modern training equipment and adequate facilities to provide the job-ready skills demanded by employers. Moreover, most TVET schools are constrained by basic infrastructural constraints, including a lack of power and poor access to water and sanitation. An assessment conducted in relation to the YES project (2012/13) included a comprehensive overview of physical facilities: 47.5 percent of respondents reported no hand and electric tools, with a quarter of respondents indicating that when tools were available they were in an unacceptable condition. A further 23 percent of respondents indicated that no adequate workshop equipment was available.

Insufficient numbers of, and poorly incentivized, trained teachers. TVET instructors and trainers are aging, unskilled, poorly compensated and unmotivated (EU 2016). There is no training and recruitment plan to replace an aging work force, and many current instructors do not have access to professional development or exposure to more modern and advanced technologies and capabilities.

There is no standardized TVET curricula or assessment system, and no system for the accreditation of programs or institutions. The absence of a credible accreditation system and a standardized TVET curricula has prevented the development and implementation of a nationally certified qualifications system. Consequently, certificates delivered are insufficient to effectively signal skills competence and thus limit employability.

Poor linkages between TVET curricula and the private sector. A significant mismatch exists between the skills offered by training providers and labor market demand, due to a combination of factors, including: (i) overly theoretical curricula, with insufficient development of practical skills leaving learners

unprepared for the labor market, (ii) the absence of studies on skills gaps and tracer studies; (iii) a general absence of public-private partnerships and; (iv) poor private sector involvement in the provision and governance of TVET.

Poor management of TVET at central and local levels, and insufficient coordination among TVET stakeholders. Public TVET institutions are often understaffed and management is poorly skilled, with low capacity for generating additional revenue and promoting local partnerships with the private sector. Decentralized administration of TVET institutions with strong linkages with the private sector could contribute to improving management of the system (EU 2016). At the same time, the capacity of line ministries to monitor program interventions, planning and management, and governing the teacher body needs to be strengthened (National TVET Policy 2015). The TVET system is highly fragmented, compromising coherence and accountability. The coordination of activities administered by different government ministries and agencies is not supported by an appropriate legal framework, and trust between the government and the private sector is lacking.

There is limited policy discussion on the role of TVET in improving livelihoods, self-employment and skills for the informal economy. In addition to contributing to the productive sectors of the economy, TVET can play an important role in improving livelihoods. Several alternative education programs (including the Accelerated Youth Program), provide training in skills related to subsistence agriculture, small-scale production and income generation activities, in additional to the development of job-related and life skills. The prevalence of informal sector work also demonstrates non-skills related constraints to entry (i.e., lack of capital and infrastructure), and that there may be limited absorptive capacity in the formal sector. Education for informal sector work needs to be grounded in local realities and a long-term vision. For example, is the goal the creation of permanently self-employed workers, the gradual absorption of workers and small businesses into the formal sector, or to provide education supporting small-scale income generating activities designed to provide extra income to the household?

Higher Education

Background

The Liberian higher education system suffered a heavy toll as a consequence of the civil wars: Liberian universities lost many of their most highly qualified faculty and administrators in a brain drain; institutions were shut intermittently due to conflict and student unrest; and infrastructure including equipment, facilities, libraries, laboratories, and buildings was destroyed, sustained damage, or was looted (NCHE 2012a). The Report of the Visiting Delegation of the Association of American State Colleges and Universities to Liberia (2007) wrote with respect to the legacy of the war, that:

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

The outflow of professors and university lecturers remains a significant challenge for the system (NCHE 2012a).

Approximately 8.1 percent of the Liberian population has accessed university-level education. According to HIES (2014), 10.8 percent of men and 4.6 percent of women in the Liberian population have had access to higher education.

Access to higher education in Liberia is in line with regional trends. In 2012, the GER for tertiary education in Liberia was 11.6 percent, approximately equivalent to the average for sub-Saharan Africa (UIS 2016).[9] There is significant variation in access to higher education across the sub-Saharan Africa region. For example, in 2012 countries demonstrating GER for tertiary education above the regional average included Benin (13 percent), Botswana (18 percent), Ghana (12 percent), and South Africa (18 percent). Countries reporting a higher education GER below the regional average included Burkina Faso (4.5 percent), Burundi (3.6 percent), Central African Republic (2.7 percent), Gambia (3.1 percent), Malawi (0.8 percent), Niger (1.7 percent), and Uganda (4.5 percent) (UIS 2016). In line with the general trend observed in the region, male participation in Liberian tertiary education is

[9] Notably, this figure is much higher than the 3.1% GER identified in the 2014 HIES survey.

higher than female participation, as demonstrated by GER's of 14 and 9.5 percent, respectively.

Legal and Policy Context

The Act on Higher Education (1989) provides legal guidance on higher education in Liberia. The National Commission on Higher Education (NCHE) was established by the Act to monitor, evaluate and accredit all institutions of higher learning. The NCHE coordinates activities related to strategy development, and is the primary implementation agency overseeing strategy and policy recommendations (NCHE 2012a). Amendments to the Act on Higher Education have been proposed, and this discussion is ongoing.

The NCHE is responsible for the licensing and accreditation of Higher Education Institutions (HEI). All institutions must be licensed by NCHE, under the auspices of the Ministry of Education, before consideration for accreditation. Accreditation is voluntary; however, all public institutions must be accredited. Unaccredited private institutions may not receive government subsidies, and students enrolled in unaccredited HEIs are ineligible for government scholarships or any other form of government financial aid. Following accreditation, institutions cannot change their missions. In 2012, the NCHE drafted a Higher Education Strategic Plan for Liberia which provides guidance for strategic investment and operational planning and priorities in Liberia.

HEIs and Enrollment

Higher Education Institutions

Higher education in Liberia is comprised of public, faith-based and private HEIs. Public HEIs include the University of Liberia and Tubman University, and six community colleges in Lofa, Grand Gedeh, Nimba, Bomi, Bong and Grand Bassa. Major faith-based HEIs include the African Methodist Episcopal University, the United Methodist University, the African Methodist Episcopal Zion University College, Cuttington University, and the Stella Maris Polytechnic. There are more than twenty other HEIs in Liberia, each of which accounts for a less than a one percent share of HEI student enrollment. A complete list of HEIs in Liberia is contained in NCHE 2012a.

There are 33 accredited HEIs in Liberia. The majority of accredited HEIs, 19 of 33, are located in Montserrado County.

Of the ten HEIs with the largest student enrollment in Liberia, five offer programming up to a Bachelor's degree, and two grant degrees up to Master's degree level. The University of Liberia and Cuttington University offer up to a Master's degree. The highest level of degree on offer in half of Liberia's HEIs is an Associate's degree.

Liberia's flagship public university, the University of Liberia, is organized into six colleges, three professional schools and three post-graduate

TABLE 14-1 University of Liberia Colleges and Professional Schools

Colleges	Professional Schools	Graduate Programs
• Social Sciences and Humanities • Business and Public Administration • Science and Technology Agriculture and Forestry • General Studies • Forestry Teachers College	• School of Law • College of Medicine • School of Pharmacy	• International Relations • Regional Science • Education Administration

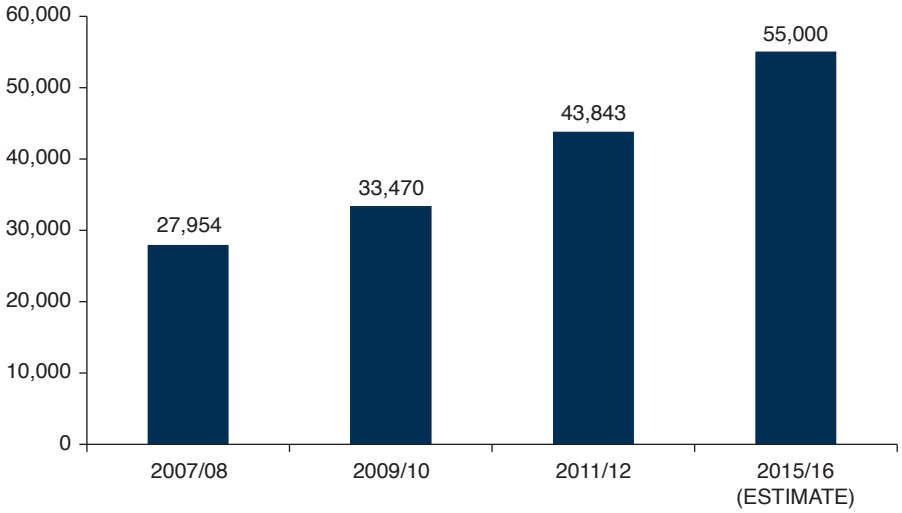
programs as listed in Table 14-1. Other large universities are similarly organized into faculties and professional schools. NCHE 2012a and 2012b provide more background on program offerings in Liberia's major HEIs.

Enrollment in HEIs

The NCHE is responsible for monitoring the status of higher education institutions. The first comprehensive census of institutions was completed in June, 2010. The second census of HEIs was completed in 2012 and published with a complementary report, *The Status of Higher Education: Census Survey of Institutions* (NCHE 2012c).

There has been a significant increase in student enrollment in higher education over the course of the past decade. Figure 14-A shows student enrollment in HEIs for selected years. The figures include all students enrolled in HEIs (masters, bachelors, diploma programs; full-time and part-time). Between 2009/10 and 2011/12, enrollment increased on average by 14 percent per year at the country's largest universities. Growth in enrollment at the University of Liberia was approximately 10 percent per annum (NCHE 2012c).

FIGURE 14-A Student Enrollment in HEIs



Sources: World Bank 2010, NCHE 2012c, various estimates (2015).

TABLE 14-2 Student Enrollment in HEIs, 2012

Male	Female	Total Enrollment	Female Share
27,585	16,258	43,843	36%

The most recent national level data on higher education in Liberia dates from 2012. At that time, the female share of enrollment in higher education was 36 percent. At the University of Liberia, the female share of total enrollment is 28 percent.

Recent education data demonstrates that female students are enrolling in HEIs at a higher rate than male students. The rate of growth for female students between 2007 and 2011 averaged 11.3 percent. In the two most recent years for which data is available, spanning 2009 to 2011, the rate of growth for female enrollment jumped to 21 percent. By comparison, the growth rate for male enrollment was 6.1 percent between 2007 and 2011, increasing to 9 percent for the years spanning 2009 and 2011. The comparatively high rate of growth in female enrollment resulted in the share of female enrollment in total HEI enrollment rising from 34 percent in 2009 to 39 percent in 2011. If the relative increase in enrollment on the part of female students can be sustained, male and female enrollment will reach parity by 2026.

Demand for higher education exceeds the supply of higher education. In 2011, the net intake into higher education was equivalent to approximately half the number of secondary school graduates. At the University of Liberia, which enrolls more than half of all HEI students in the country, only one in four (approximately 6,000 out of 23,000) applicants were admitted in 2011. In 2011, Cuttington University also accepted approximately 25 percent of approximately 2,000 university applicants. According to NCHE (2012a), at Liberia's largest universities, admissions are limited by constraints relating to faculty and facilities, rather than student competency. In recent years, unmet demand for higher education has increasingly been filled by an expansion of private universities and colleges. According to NCHE 2012a, "the proliferation of higher education institutions exploits the demand [by students] and the quality of these alternatives remains a question" (2012a:4).

Enrollment in universities offering master's and bachelor's programming is listed in tables 14-3 and 14-4. The University of Liberia accounts for the majority of HEI enrollment in Liberia, accounting for 75 percent of all students enrolled in master's level education, and 60 percent of students enrolled in bachelor's level institutions (Table 14-3 and 14-4). The top five HEIs in Liberia, in terms of enrollment, account for approximately 80 percent of student enrollment in higher education (NCHE 2012c). In recent years,

TABLE 14-3 Enrollment in Master's Programs, 2012

Institution	Male	Female	Total Enrollment	Female Share
University of Liberia	1,153	274	1,427	19%
Cuttington University	291	221	512	43%
Total	1,444	495	1,939	26%

TABLE 14-4 Enrollment in Bachelor's Institutions, 2012

Institution	Male	Female	Total Enrollment	Female Share
All (11 HEIs)	23,110	12,294	35,424	34.7%
UL and Cuttington only	16,806	7,428	24,234	30.7%

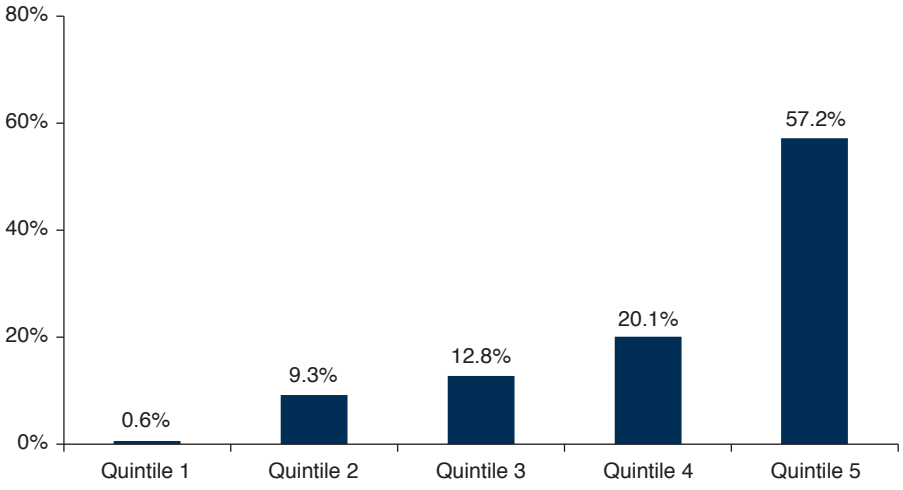
Liberia has sought to expand and strengthen the development of community colleges. At present, there are six community colleges in operating in the country.

Equity

Access to higher education is significantly influenced by a students' socio-economic status. Despite continued efforts on the part of the Liberian government to improve equitable access to higher education, large numbers of youth do not have access to education due to long distances between their homes and schools, the poor quality of educational infrastructure, cultural norms and poverty. Economic factors, such as an inability on the part of households to pay school fees, or the need for children of school-going age to help contribute to household income, are cited as the primary reasons contributing to some children never attending school (Sajith de Mel & Vansteenkiste, 2013). As a consequence, many children from disadvantaged background are excluded from the education system at an early stage.

Students from the wealthiest households (quintile 5) constitute 57 percent of enrollment in Liberian HEIs (Figure 14-B), while students from the poorest quintile of households account for only 0.6 percent enrollment in higher education. The 2014/15 HIES reported a GER for tertiary education of 3.14 percent, which is significantly below the figure of 11 percent reported by

FIGURE 14-B Wealth Quintile Share of Student Enrollment in Higher Education



Source: HIES 2014.

UIS in 2012. The reason for this discrepancy is not clear. The GER reported by HIES does not include students form high income households who attend HEIs in other countries.

Quality and Relevance

Student Quality

Data suggests that a majority of students entering higher education institutions are insufficiently prepared for the rigors of higher education. This is evidenced by:

- In recent years, the overwhelming majority of students sitting the University of Liberia's entrance failed to pass. In 2013, 15 of 13,000 students passed the exam, and in 2014 not one of the 25,000 students who sat the exam passed. At Tubman University, a large number of applicants fail, or fare poorly on placement tests.
- In 2015, over 10,000 University of Liberia undergraduate students (nearly one-third of those enrolled) were placed on academic probation due to their failure achieve a 2.0 Grade Point Average (a C-average) (Daily Observer, 2015).
- The majority of students sitting the secondary school matriculation exam administered by WAEC score below 50 percent, and the majority of Liberian students who pass do so at the 3rd level (the lowest level).

Many Liberian universities offer remedial programs for new students who are considered unready for a college education. The University of Liberia, Cuttington University and Tubman University, among others, provide remedial programs as attested to by ESA consultations and previous diagnostic work. The utility of these programs is often questioned, due capacity constraints that undermine their ability to help students. Some students continue to battle to cope with higher education following remediation, and consider the programs a waste of time. Due to the extra cost of these programs, some students consider them exploitative. At Tubman University, students who fare poorly on the placement test are required to take a year-long college preparation course.

HEI Faculty

Despite improved faculty recruitment, the operations of universities are inhibited by the low number of faculty holding advanced degrees. At universities offering master's and bachelor's degrees in Liberia, there are fewer than 100 faculty members who hold a Ph.D. and less than 500 full-time faculty holding master's degrees (Table 14-5). The number of full-time faculty at these institutions has not changed over time, however the number of part-time faculty holding advanced degrees has realized modest growth.

TABLE 14-5 Faculty Composition at Master's-Bachelor's Degree Inst., Selected Years

Qualification	Full-Time Faculty		Part-Time Faculty	
	2009/10	2011/12	2009/10	2011/12
Ph.D.	57	55	31	38
Master's	440	448	217	489
Bachelor's	245	208	59	269
Associate	5	3	2	7

Source: HEIs Survey 2009/10 and 2011/12.

The increased use of part-time faculty may be a consequence of expanded enrollment. Over two-thirds of Liberia's HEIs are located in Montserrado County, and, as a consequence, many of the institutions share faculty (NCHE 2012a). Some stakeholders report that poor salaries for lecturers and professors make it generally unaffordable for these staff to hold only one position. Females staff account for 12 percent of faculty at master's and bachelor's degree granting institutions. Nine HEIs granted master's or bachelor's degrees in 2010, rising to eleven in 2012.

Challenges relating to the recruitment, retention, and development of faculty are shared across HEIs. The pool of academic talent is small, teaching and academic staff generally cannot afford to hold only one position, and opportunities for professional development are limited. Cuttington University requires all faculty to complete a training program on teaching at the college level through its Center for Teaching and Learning. Instructors participate in semester workshops and submit their syllabi, notes, quizzes, and resources for each semester. The University of Liberia supports some training aimed at increasing qualifications, and receives funding to support faculty scholarships to upgrade qualifications, with an emphasis on critical areas such as geology and education. Notwithstanding these examples, the majority of HEIs have no programs for faculty development.

The University of Liberia temporarily closed a number of advanced courses due to shortages of suitably qualified staff. The suspension of programs has generally been for only one year, and affected the Master's in Business Administration program, physics, mathematics, biology/chemistry, and education. The University aims to focus resources on improving the quality of one discipline/major at a time (NCHE 2012a).

Infrastructure and Equipment

NCHE (2012a) notes that all HEIs have resource constraints relating to limited and inadequate classrooms and a shortage of libraries, laboratories, and other resources for quality programming. Due to a shortage of science laboratories and poor access to modern technology in Liberia's tertiary institutions, the capacity to produce original scientific knowledge or research, and drive innovation is limited. Sumaworo (2015) found that at the University

of Liberia, some poorly equipped classrooms (for example, no microphones or projectors) accommodate more than 100 students . To mitigate overcrowding, the University divided students into two groups on the basis of seniority, with each group studying on a rotational basis with one month on, and the other off (Sumaworo, 2015). Similar concerns we raised in consultation with Tubman University staff regarding inadequate labs, libraries, computers, and student and faculty housing. Cuttington University and community colleges report similar infrastructure, equipment and operational constraints.

Curriculum Quality and Relevance

University curricula and programming is poorly aligned with demand in the Liberian labor market. Universities have limited knowledge of the dynamics of demand in the economy: no tracer studies have been undertaken, there are no systems for soliciting and incorporating feedback from large employers (via the Chamber of Commerce), and interactions with small businesses and entrepreneurs (Liberian Business Association) is limited and anecdotal. The alignment of university programs with need in the economy is speculative rather than evidence-based. At the University of Liberia, approximately 57 percent of the graduates in 2012 graduated from fields related to business (44 percent of all students). The largest concentration of graduating students in the business field majored in accountancy (20 percent).

Evidence suggests that employers continue to struggle to fill certain skilled positions, such as secondary education teachers, business services providers, administrative managers and managing directors (SWTS 2013). An inability to source local workers results in the recruitment of foreign workers. For professional occupations, there is an expectation on the part of employers for job applicants have a tertiary education (33.9 per cent of employers expect this). This preference among employers of production workers is slightly lower (at 23.8%). See chapters on Relevance and TVET for further discussion.

HEI Finance and Expenditure

There are five main sources of finance to support higher education in Liberia: government subsidies, government scholarships, student fees, real estate and donations.

Approximately one third of HEI expenditure is financed through government subsidies. The Ministry of Finance allocates subsidies to HEIs to support recurrent expenditure, primarily salaries. Institutions have the autonomy to generate income from other sources, with monies procured through the levying of student fees, donations, and real estate. In 2011, the HEIs received more than $15 million in government subsidies with an additional $25 million sourced from student fees, real estate income and donations.

Government transfers represent an important source of funding for public institutions and constitute more than half of their budgets (56

percent). Private institutions are more dependent on donations (65 percent), and faith-based institutions depend primarily on income generated by student fees and real estate (which account for 81 percent of their income). In general, private and faith-based institutions are constrained by a shortage of funds and limited support, which makes them more dependent on part-time faculty. As such, private and faith-based institutions generally have very little money to support investment or research.

Public institutions rely heavily on government subsidies, scholarships, and student fees (which account for 95 percent of financing) and they have the lowest costs per student. Tubman University is the most reliant on government financing which accounts for 91 percent of finances. Of private and faith-based institutions, Cuttington University receives one of the highest government subsidies, yet this source of income constitutes only 8 percent of the institution's income. Government subsidies contribute only 7 percent of the finance accessed by private institutions, with student fees contributing approximately 26 percent to the income of private institutions. The balance of income for private HEIs is derived from the lease and sale of buildings and land (Cuttington University) or donations, such as at Lincoln Dujar College.

Faith-based institutions derive 13 percent of their income from government subsidies and scholarships, and 52 percent of their finances from student fees. The balance of their income is derived from the sale and lease of buildings and land, and donations.

Private institutions demonstrate the highest total cost per student ($1,944); almost double that of students in public institutions ($1,060), and significantly higher than the unit costs of a student enrolled in a faith-based institution ($1,281). The higher costs associated with education in private HEIs may be attributable to specialized programming. Private institutions also have the highest personnel costs per student ($4,029); almost double that of public HEIs ($2,347) and significantly higher than faith-based higher education ($3,296).

Subsidy

HEIs are allocated funding through the national budget. These subsidies are directly transferred to the institutions from central government. Additional resources are transferred to HEIs through the MoE budget, but these monies are generally much smaller than allocations derived through direct transfers. In the 2015/16 budget, only $150,000 was channeled to HEIs through the MoE, while over $30 million was directly transferred to institutions (See Table 10-6).

The University of Liberia is the largest recipient of government of subsidy in support of higher education. Since 2010, the annual transfer to the University of Liberia has exceeded $10 million. In 2014/15 the University of Liberia over-executed the budget at a rate of 129 percent. In 2015/16, funding to University of Liberia increased by over $4 million compared to the 2014/15 budget. Salaries at the University of Liberia have increased significantly from approximately $125 to nearly $1,400 per month for staff in the highest

categories of remuneration, and from $45 to $780 per month for lower levels of faculty. Figures cited in this paragraph are from 2012 (see NCHE 2012a).

The amount of resources transferred to HEIs appears to be based on funding in previous years and the lobbying power of each institution. The amount allocated to institutions is volatile and can change on the basis of shifting political power in Congress. Despite each HEI receiving a particular allocation, funds are regularly under- and over-executed . As a result, execution rates for higher education transfers is far from efficient. In the 2013/14 fiscal year the execution rate for higher education transfers was 75 percent, compared to 114 percent in 2014/15. Once subsidies for HEIs are approved in the national budget, the funding is allocated to support general expenditure, and can be used to fund any type of expenditure.

Additional HEI financing is derived from oil and mining concessional contracts which include prescribed allocations to support higher education. Finances procured in this way have been used to improve the quality of education in engineering and mathematics (NCHS 2012a).

Foreign and Local Scholarships

The MoE has reformed the provision of scholarships to focus support on development priorities, and in so doing, limits support for foreign study to the graduate level only. However, foreign scholarships remain a substantial

TABLE 14-6 GoL Subsidy to HEIs 2012/13–2014/15

Sector Institution	FY2012/13	FY2013/14	FY2014/15	FY2015/16
	Actual Expenditure	Actual Expenditure	Actual Expenditure	Annual Appropriation
301 - Ministry of Education	47,206,703	39,754,665	37,276,084	44,577,383
302 - University of Liberia	10,997,698	10,327,805	13,979,978	15,150,000
304 - Booker Washington Institute	2,059,884	2,144,614	1,775,774	3,302,603
306 - Cuttington University College	1,055,509	1,280,703	480,199	683,880
307 - National Commission on Higher Education	712,718	750,915	936,579	641,225
308 - William V.S. Tubman University	5,131,627	5,673,520	4,869,129	6,154,520
316 - Agricultural & Industrial Training Bureau	358,780	270,959	162,264	259,056
326 - Zorzor Rural Teacher Training Institute	609,097	859,875	451,728	740,250
327 - Webbo Rur.Teacher Training Institute	598,421	631,802	467,818	742,933
328 - Kakata Rural Teacher Training Institute	595,433	882,098	897,199	1,381,972
329 - Bassa County Community College	705,617	719,750	513,640	831,209
330 - Bomi County Community College	281,000	383,750	297,114	589,650
333 - Nimba Community College	349,363	693,792	620,287	841,900
334 - Lofa Community College	349,987	699,933	642,399	838,834
335 - Bong Community College	0	369,756	569,717	975,000
341 - Grand Gedeh Community College				500,000

line item in the education budget, costing on average $2.1m per year (or 2.8 percent of the total education budget). In the 2015/16 budget, $2 million was approved for a "National Priority Project", which was later allocated to support foreign scholarships instead of infrastructure investment.

Foreign scholarship only target graduate education. Recipients of foreign scholarship to support graduate study abroad have to sign a Memorandum of Understanding with the government, and agree to return to Liberia and work for the government for a minimum of two years. The program prioritizes specific strategic areas of study such as science, agriculture and education. Scholarships vary on the basis of the destination country. Addressing Gender imbalances in the provision of scholarships remains an important challenge.

Local scholarships are extended to support both undergraduate and graduate study. However, the local scholarship program has been suspended since 2012 and no new scholarships have been allocated to students studying in Liberian universities. The only students currently receiving support under the program are students who were had been enrolled in the program and are yet to graduate. In 2015, the total number of students benefiting from the program was 1,052, a significant drop compared to the number of students supported in previous years (more than 5,000). The majority of the students supported by local scholarships are concentrated in STEM disciplines. In 2014/15, $500,000 was dispersed to students currently benefiting from the program. However, a $1.5 million funding gap persists with regard to covering the costs of all students.

Student Fees

In 2011, student fees constituted the primary source of income for HEIs. In that year, HEIs managed to generate more income from student fees ($17.3 million) than what they received from government subsidies ($15.1 million). Student fees make-up the largest share of the institutional income (44 percent), with the second largest share derived from government subsidies (38 percent), followed by real estate income (11 percent), donations (5 percent), with the remaining 2 percent derived from other sources. Student fees consist of primarily of tuition fees. Other charges include exam and admission fees, and charges for matriculation, library access, etc.

Fees vary from one institution to another. In 2011, the average fee per student at the University of Liberia was $768, equivalent to two and a half times the per capita income in Liberia. By way of contrast, tuition per student in Cuttington University (the largest of the private institutions) was $224. Recent attempts to increase fees at HEIs has been met with strong resistance on the part of students.

Currently university charges and student fees are not means-tested, and there are no sources of financial aid or scholarships to support economically disadvantaged students. Lack of means testing limits the ability of students from poor families to access university. Current admissions policies are based solely on performance on the WAEC twelfth grade examinations, and

university entrance tests. The underlying assumption is that talented but disadvantaged students will find their way on the basis of merit. The NCHE (2012a) identifies several strategies to improve access to higher education to qualified students from poor and marginalized backgrounds. The expansion of the community college system is seen as providing an alternative path into higher education for poor and disadvantaged students

According to NCHE (2012a) only six Liberian HEIs demonstrate sufficient enrollment to ensure the viability of their program and financial sustainability. Small enrollment limits the number of faculty available, and the investment in academic programs and facilities. Liberian institutions have used, perhaps accidentally, the strategies of small institutions to survive by accessing limited government support, and sharing faculty through part-time faculty arrangements. While sharing faculty saves money, it limits campus time for faculty, and limits time for program development.

HEI Expenditure[10]

Recurrent expenditure constitutes 72 percent of total expenditure in higher education, with more than two-thirds of that supporting payroll for teaching and non-teaching personnel. Capital expenditure accounts for 28 percent of total expenditure on higher education, with the majority of this expenditure (88 percent) allocated to expenditure relating to construction, and the procurement of equipment, and materials.

Payroll accounts for a higher share of expenditure in public institutions (66 percent) than in the faith-based (63 percent) and private (58 percent) institutions. Private institutions demonstrate the highest cost per student ($1,944), which is almost double that of public institutions ($1,060) and higher than faith-based institutions ($1,281). This is mainly due to the fact that private institutions have the highest staff cost per student ($4,029), almost double equivalent cost per student in public institutions ($2,347). Private institutions depend disproportionately on part-time faculty. The higher cost for private institutions may be attributable to their specialized programs.

Salaries for faculty are generally low, especially in public institutions. Annual raises are minimal and, in conjunction with poor salaries, require large numbers of teaching staff to seek additional jobs to supplement their income. Pressure to increase enrollment has led some institutions to prioritize the recruitment of additional full-time and part-time faculty over increasing the salaries of existing staff. To ensure that faculty time is devoted to teaching, and in order to better retain high level staff, the University of Liberia increased the salaries of faculty and staff substantially in recent years. For example, the monthly salary of a member of faculty with a Ph.D. increased from $125 in 2007 to $1,300 in 2011.

[10] *Section content is from NCHE 2012a.*

Final Note

ESA consultations in 2015 and 2016 included meetings with stakeholders to the higher education sector in Liberia and involved a review of existing literature, data and policy resources. In this chapter, the preponderance of the content included is based on work conducted in 2011 and 2012. Key sources for this chapter include:

NCHE. (2012a). Diagnostic Paper for Higher Education in Liberia. NCHE: Monrovia.

NCHE. (2012b). Status of Higher Education. Census Survey of Existing Institutions. NCHE: Monrovia.

NCHE. (2012c). Higher Education Strategic Plan for Liberia. NCHE: Monrovia.

Annexes

A1. Population Projections and EMIS Data

Population Projections

Population statistics for Liberia are sourced from the 2008 Housing and Census completed by LISGIS. The HIES (2014) survey draws on the 2008 Census data to make population projections. For the ESA, we use HIES (2014) population projections by county and projected them forward by two years. These projections are used to make computations related to gross and net enrollment ratios and to estimate the number of out-of-school children. These projections are different from those used in the EMIS database, which, since 2012, has drawn on projections made from 2008 census data and projected forward with each year. HIES projections of population were subjected to a greater degree of methodological rigor and are considered to be more accurate than those in the EMIS database.

The EMIS 2015 population projections are as follows: Primary (755,355), JH (316,791), SH are 268,000.

EMIS: School Census Data

Analysis of the 2015 School Census data and EMIS are the most accurate and up-to-data school census data in Liberia. School census data from 2012–2014 were not considered for this ESA on the basis that: (i) the 2012 census covered only government basic and secondary schools, (ii) the 2013

Population Projections for 2016, Used for ESA Computation of Ratios

County	6–11 year olds	12–14 year olds	15–17 year olds
Bomi	20,180	6,760	4,685
Bong	67,369	26,662	16,076
Gbarpolu	16,991	6,220	4,124
Grand Bassa	55,694	21,575	15,968
Grand Cape Mount	28,770	9,562	8,766
Grand Gedeh	26,836	10,652	7,017
Grand Kru	12,010	4,256	3,091
Lofa	54,941	21,569	16,066
Margibi	46,630	23,457	17,714
Maryland	31,245	13,700	9,401
Montserrado	218,638	99,328	80,670
Nimba	106,174	32,138	26,374
River Gee	15,095	6,061	3,851
Rivercess	16,782	4,767	4,221
Sinoe	23,822	8,807	5,091
Total	**741,180**	**295,514**	**223,115**

and 2014 school census activities received returns from fewer than 70 percent of all schools in Liberia, and (iii) the impact of the Ebola epidemic (and school closures) on data collection on 2014 census numbers is uncertain. The main reason for concern about 2014 school census data appear to be the low coverage. Specifically, the MoE collected data from approximately 4,000 schools in 2014, while in 2015, 5,500 schools were identified and sent school census surveys. Importantly, the 2015 school census addresses all of the issues—indicating the incremental growth and strengthening of EMIS.

School census data from 2010/11 are not included in this ESA. This is because of significant methodological differences between the administration of the 2015 school census and the 2010 school census. There were several differences in methodology between the 2010 and 2015 census, including differences in: census questionnaires used; data collection strategies; time of data collection (i.e., Feb 2011 and Sept–Nov 2015); data validation and cleaning strategies; and external support provided to MoE. According to the school census report, the collection of 2010/11 data faced severe challenges, including logistical challenges in collecting data and issues during the data entry and cleaning stages because of erratic electricity supply to the MoE in early 2011.

In most instances the ESA uses 2007/08 as a comparison year for EMIS 2015 data. Due to the fact that Liberia was still recovering from the conflict, there are also some concerns about the quality of the 2007/08 data.

To support triangulation and robust analysis, the ESA also draws extensively on household survey data to compare with school census data, where applicable.

A2. ESA Methodology

This section provides an overview of the methods used to conduct the ESA and the sources for and validation of qualitative and quantitative data. The ESA drew on a wide range of quantitative and qualitative data sources and triangulated across data sources to strengthen the diagnostic. Discussion of data limitations and gaps is shared at the end of this chapter.

This ESA builds on prior sector analysis and sector planning work in Liberia. The table below outlines some of the previous studies and other documents consulted. An annex includes the results of a review process of the ESP 2010–20 and the Operational Plan 2014–16. Most recently, Getting to Best (2015) and the MoE 2015 Annual Report (2016) identify education sector priorities. Following the EVD crisis, recovery plans including, the Economic Stabilization and Recovery Plan (2105) and the Education Cluster Strategic Recovery Plan (2015), identified sector diagnostics and priorities. Each of these documents has been reviewed to inform this sector analysis.

The framework and methodology used to conduct the Liberia Education Sector Analysis follows, and builds on, guidance provided through Global Partnership for Education resources. The Liberia ESA follows guidance provided in *Education Sector Analysis: Methodological Guidelines, Volumes 1 and*

Recent Liberia Education Sector Analysis and Planning Documents

Document	Year	Description
Liberia Primary Edu. Recovery Program	2007	Planning document focused on short and medium term post war reconstruction of the primary education sub-sector.
Liberia Education Country Status Report	2010	Similar structure to this ESA, though covering a smaller number of themes.
Liberia Education Sector Plan 2010–2020	2010	Thorough and comprehensive review of, and plan for, the sector
Education Reform Act	2011	Guidance for the education system priorities, governance and institutional structures
Agenda for Transformation	2013	Liberia medium term development strategy; provides guidance to MoE Operational Plan 2014–16.
MoE Operational Plan 2014–2016	2013	Operational plan builds on the Liberia ESP 2010-2020 with specific operational priorities and targets for 2014–16.

2 (UNESCO, UNICEF, World Bank, GPE 2014).The guidelines emphasize analysis covering the following themes.

- Sector context: social, humanitarian, demographic, political, economic, and public finance contexts,
- Enrollment, internal efficiency, and out of school children,
- Costs and financing,
- Quality, system capacity and management,
- External efficiency: the economic and social impacts of education, and
- Equity

ESA consultations identified several additional issues which stakeholders indicated would offer a more contextualized picture of the critical challenges and opportunities facing the sector. These issues, which have been integrated into this analysis, including: Violence/gender-based violence, and safe schools; Water, Sanitation, and Hygiene (WASH) and inclusive education.

A Technical Team appointed by the Ministry of Education, led by the Deputy Minister for Planning led ESA design and implementation. The Technical Team was comprised of ten core staff from the MoE Planning Department and supplemented by other MoE staff, including frequent consultation with Deputy Ministers and Assistant Ministers, on an as needed basis. The Technical Team was in engaged in ESA activities from October 2015–June 2016.

An interactive process, involving regular and collaborative dialogue with key sector stakeholders, was used to complete the Sector Analysis. The table below outlines the steps followed in designing the ESA, implementing the ESA, cross-examining preliminary data and analysis, and completing draft reports for review and dialogue. The process was designed to elicit multiple viewpoints, highlight data gaps and assumptions, and encourage dialogue over key issues.

The ESA process engaged a wide range of stakeholders. Stakeholders engaged are identified in the table below.

Consultative and Collaborative Process to ESA Development

Activity	Dates
ESA outline. Co-develop ESA outline and roadmap. Revise based on stakeholder comments.	November–Dec. 2015
Preliminary ESA findings. Present and debate preliminary ESA findings, identify key questions and data gaps. (Six one-day working sessions in Monrovia).	January 2016
Online dialogue. Online dialogue addressing specific themes and issues identified in the Liberia Aide Memoire (Jan.-Feb. 2016), including (i) privatization, (ii) concession agreements, (iii) access/quality trade-offs, and (iv) evaluation of MoE, GPE and DP programs.	Feb–March 2016
ESA brief. Completion of draft ESA, including 3-5 pages on each major theme based on desk review and country consultations. ESA brief reviewed by MoE technical team and key stakeholders during March 2016 mission.	Feb–March 2016
Additional research and data collection. Completion of 2015 Annual School Census; analysis of 2014 HIES data; review/ analysis of MoE financial and payroll vetting data; implementation of information gathering activities on other areas of interest	Feb–May 2016
ESA (first draft). Full draft shared with key stakeholders for comment, supplemented by in-country dialogues. This draft played a key role in informing the development of the June ESP.	Mid–April 2016
Delay of ESA to October 2016. MoE wanted to add additional chapters to the ESP, which also required additional diagnostic work.	May 2016
New chapters and data. The delay allowed for the inclusion of chapters on TVET and Higher Education and including of the final EMIS 2015 data and additional analysis of HIES 2014 data.	July–September 2016
Presentation of Draft ESA to MoE, DPs and key stakeholders.	September 2016
MoE Internal Review of ESA	October 2016
ESA Completion	October 2016

Data Sources

Quantitative Data

The ESA also draws on household survey data, population and census data and MoE finance and administrative data, among other sources to collect and triangulate quantitative information. Data sources include:

- *Household survey data:* DHS 2007 and 2013, CWIQ 2007 and 2010, and HIES 2014
- *Population and census data*: LISGIS 2008, LISGIS 2015 (population projections)
- *GoL and MoE administrative and finance data*: Payroll vetting data, national and education budget and expenditure data
- *Development partner and GPE finance and expenditure data*
- *Public Expenditure Review data and analysis*: PER 2012 and PER 2014

Stakeholders Engaged
• MoE Central Office. Staff from all key departments. • Education Sector Development Committee and the NGO Forum • Development Partners • INGOs / DP implementing partners • Higher Education representatives • Selected decentralized staff (supplemented by literature review)

Qualitative Data

The ESA process makes extensive use of qualitative data sources to inform the diagnostic. The ESA is grounded in an extensive desk review of literature which sought to provide relevant international comparative data on ESA themes. For example, qualitative research and analysis on out-of-school children (UNICEF 2012), quality and accreditation (Snyder and Coleman 2013), Teacher Policy (MoE 2015), and Sector Planning (MoE JESR 2016) contributed to the analysis included in this ESA. There are several themes and questions for which qualitative sources provide the richest set of empirical data as in the dearth of female teachers (Stromquist et al. 2013), school-related gender-based violence (Passing the Test 2014) and county-level perspectives on sector challenges (MoE JESR 2015). All sources are included in the references section. Sources of qualitative data and analysis information include:

- MoE policy, program and research documents,
- Development Partner program reports, program studies and evaluations,
- Academic literature and grey literature covering Liberia specific topics and international comparative data,
- ESA consultation activities and interviews, and
- ESA funded field visits and field studies.

Limitations and triangulation. To the extent possible, the ESA makes use of primary source data. Where data are not aligned, the ESA acknowledges the issue and discusses analytical options. For qualitative perspectives or simple disagreements, the ESA seeks to identify the varied perspectives and disagreements, the awareness of which could be used to inform future planning activities. For example, there are several disagreements on teacher policy and what it means to be a 'qualified' teacher. The ESA needs to give voice to these debates so that decision-makers can draw on this information, heterogeneous though it may be, to inform planning and programming decisions.

A3. Resources

Ministry of Education Documents

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Abbreviations

ABE	Alternative Basic Education
AfT	Agenda for Transformation
ALP	Accelerated Learning Program
AYP	Advancing Youth Project
BEP	Basic Education Project
CASS	Continuous Assessment Score
CEDAW	Convention on the Elimination of All Forms of Discrimination Against Women
CENTAL	Center for Accountability and Transparency in Liberia
CEO	County Education Officer
CoC	Code of Conduct
COTAE	Center for Transparency and Accountability in Education
CSA	Civil Service Association
CSB	County School Board
CSE	Comprehensive Sexuality Education
CWIQ	Core Welfare Information Questionnaire
DEO	District Education Officer
DHS	Demographic Household Survey
ECD	Early Childhood Development
ECE	Early Childhood Education
EFA	Education for All
EGRA	Early Grade Reading Assessment
EMIS	Education Management Information System
EQUAL	Education Quality and Access in Liberia
ESDC	Education Support Development Committee
ESP	Education Sector Plan
ESRP	Economic Stabilization and Recovery Plan
EVD	Ebola Virus Disease
HIV	Human Immunodeficiency Virus
ICA	Institutional Capacity Assessment
IMTTF	Inter-Ministerial Technical and Vocational Education and Training Taskforce
GDP	Gross Domestic Product
GEEAP	Gender Equitable Education and Achievement Program
GER	Gross Enrollment Ratio
GNI	Gross National Income
GOAL	Girls' Opportunities to Access Learning
GPE	Global Partnership for Education
GPI	Gender Parity Index
HEI	Higher Education Institutions
HIES	Household Income and Expenditure Survey
JESR	Joint Education Sector Review
JH	Junior High School

LEAR	Liberia Education Administrative Regulations
LEC	Liberia Education Cluster
LitCOM	Liberia Technical and Vocational Education and Training Commission
LJHSCE	Liberian Junior High School Certificate Examination
LRA	Liberian Revenue Authority
LSHSCE	Liberian Senior High School Certificate Examination
LIBTRALO	Liberia Translation and Literacy Organization
LTTP	Liberia Teacher Training Project
MCSS	Monrovia Consolidated School System
MoE	Ministry of Education
MoH	Ministry of Health
MYS`	Ministry of Youth and Sports
NCHE	National Commission on Higher Education
NAR	Net Attendance Ratio
NEAB	National Education Advisory Board
NER	Net Enrolment Ratio
NGO	Non-Governmental Organization
NIR	Net Intake Rate
NIPECD	National Inter-Sectoral Policy on Early Childhood Development
NTAL	National Teachers Association of Liberia
PCR	Primary Completion Rate
PRS	Poverty Reduction Strategy
PQS	Program Quality Standards
PTR	Pupil Teacher Ratio
RTTI	Rural Teacher Training Institute
SCR	Student-Classroom Ratio
SDG	Sustainable Development Goal
SGBV	Sexual and Gender-Based Violence
SH	Senior High School
SQTR	Student Qualified Teacher Ratio
SRGBV	School-related Gender-Based Violence
STEM	Science, Technology, Engineering and Mathematics
STR	Student-Teacher Ratio
TVET	Technical and Vocational Education and Training
TWG	Technical Working Group
UNICEF	United Nations Children's Fund
UNFPA	United Nations Population Fund
UNMIL	United Nations Mission in Liberia
WAEC	West African Examinations Council
WASH	Water, Sanitation and Hygiene
WFP	World Food Program
WHO	World Health Organization

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