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Liberia Teacher Training Program

Tracer Study of C-Certificate Program Graduates: (Partial Replication Using 2014 EMIS Data)

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November 6, 2015

This publication is produced for review by the United States Agency for International Development. It was prepared by FHI 360.

This Report was made possible by the generous support of the American people through the United States Agency for International Development (USAID). The contents are the responsibility of the Liberia Teacher Training Program II and do not necessarily reflect the views of USAID or the United States Government.

Table of Contents

Table of Contents	i
Acronyms	iii
Executive Summary	1
Background to the Study	2
Objectives of the Study.....	3
Methodology.....	3
Table 1: Percentage of C-Certificate graduates found to be working in secondary schools according to analysis of the 2013 EMIS database	5
Findings.....	5
C-Certificate Graduates NOT in the 2014 EMIS Database of Primary School Teachers	6
Table 2: Percentage of C-Certificate Program Graduates NOT found in 2014 EMIS Primary School Database	7
Chart 1: Percentage of Graduates of Various C-Certificate Programs NOT found in the 2014 EMIS Primary School Database	8
Table 3: Number of Individuals with C-Certificates NOT found in 2014 EMIS Primary School Database	9
Table 4: C-Certificates graduates of LTPP-supported and other programs who were or were not found in 2014 EMIS primary school database.....	9
Employment Status of LTPP-Supported Pre-service C-Certificate Graduates.....	9
Table 5: Employment Status of <i>ALL Cohorts of LTPP-Supported Pre-service C-Certificate Program Graduates</i>	10
Table 6: Employment Status of <i>Cohort 1 of LTPP-Supported Pre-service C-Certificate Program Graduates</i>	11
Table 7: Employment Status of <i>Cohort 2 of LTPP-Supported Pre-service C-Certificate Program Graduates</i>	11
Table 8: Employment Status of <i>Cohort 3 of LTPP-Supported Pre-service C-Certificate Program Graduates</i>	12
Table 9: Employment Status of <i>Cohort 4 of LTPP-Supported Pre-service C-Certificate Program Graduates</i>	13
Table 10: Employment Status of <i>Cohort 5 of LTPP-Supported Pre-service C-Certificate Program Graduates</i>	13
Employment Status of LTPP-Organized In-service C-Certificate Graduates	13
Table 11: Employment Status of <i>ALL Cohorts of LTPP-Organized In-service C-Certificate Program Graduates</i>	14
Table 12: Employment Status of <i>Cohort 1 of LTPP-Organized In-service C-Certificate Program Graduates</i>	15

Tracer Study of C-Certificate Program Graduates

Table 13: Employment Status of <i>Cohort 2</i> of LTPP-Organized In-service C-Certificate Program Graduates.....	15
Table 14: Employment Status of <i>Cohort 3</i> of LTPP-Organized In-service C-Certificate Program Graduates.....	16
Table 15: Employment Status of <i>Cohort 4</i> of LTPP-Organized In-service C-Certificate Program Graduates.....	17
Table 16: Employment Status of <i>Cohort 5</i> of LTPP-Organized In-service C-Certificate Program Graduates.....	18
Employment Status of CFL-Organized In-service C-Certificate Graduates	18
Table 17: Employment Status of <i>CFL-Organized</i> C-Certificate Program Graduates.....	19
Employment Status of ECSEL-Organized In-service C-Certificate Graduates.....	19
Table 18: Employment Status of <i>ECSEL-Organized</i> C-Certificate Program Graduates	19
Employment Status of NTAL-Organized In-service C-Certificate Graduates	20
Table 19: Employment Status of <i>NTAL-Organized</i> C-Certificate Program Graduates	20
Employment Status of UNICEF-Organized In-service C-Certificate Graduates	21
Table 20: Employment Status of <i>UNICEF-Organized</i> C-Certificate Program Graduates.....	21
Conclusion	21
References	24

Tracer Study of C-Certificate Program Graduates

Acronyms

ALU	Association of Liberian Universities
CFL	Christian Foundation for Liberia
ECSEL	European Commission Support for Education in Liberia
EMIS	Education Management Information System
LTTP	Liberia Teacher Training Program II
MER	Monitoring, Evaluation, and Research
MoE	Ministry of Education
NTAL	National Teacher Association of Liberia
UNICEF	United Nations Children Fund
USAID	United States Agency for International Development

Executive Summary

This study is a partial replication of a previous study, which was based on 2013 EMIS data. The purpose of the study is to assess the extent to which graduates of USAID/Liberia Teacher Training Program (LTTP)-supported pre-service and in-service C-Certificate programs as well as other C-Certificate programs are employed as teachers or administrators in government or non-government primary schools. The study analyzes the Ministry of Education's 2014 EMIS primary school database, augmented by inserting information from lists of graduates from the five cohorts of LTTP-supported pre-service program, the five cohorts of the LTTP-organized in-service C-Certificate program as well as from in-service C-Certificate programs organized by other organizations (Christian Foundation for Liberia, European Commission Support for Education in Liberia, the National Teachers Association of Liberia, and UNICEF).

The study reports the percentages of graduates who are employed as teachers and administrators (principals, vice principals, and registrars) in government primary schools and those employed in such positions in non-government primary schools. The study finds that there are some interesting differences across the C-Certificate programs supported or organized by different partners. For the LTTP-supported pre-service program and the LTTP-organized in-service program the vast majority of graduates who were found in the EMIS primary school database were working in government primary schools, as teachers or administrators. A very small percentage of these programs' graduates were working in non-government primary schools. Similarly, graduates of the other organizations' C-Certificate programs were also more likely to be employed in government primary schools than in non-government primary schools.

The study also presents the percentages of graduates of the various C-Certificate programs who were not found in the 2014 EMIS primary school database. The study found that of the 6,710 individuals who earned a C-Certificate from one of these programs during the 2000 to 2013 period, 3,925 (63%) of them were not found in the 2014 EMIS primary school database. Undoubtedly, because of the limitations of this study, some of these graduates are in fact employed in the education sector. That is, some of the graduates may be working in the 422 schools (i.e., 9.5 %) whose principals participated in the EMIS trainings but did not return the annual school census questionnaires or they may be working in early childhood programs or secondary schools in the EMIS database¹. Furthermore, some of the graduates

¹ Please note that the 422 schools that did not return questionnaires include both primary and secondary schools as well as schools with alternative basic education and technical and vocational training programs. Although a breakdown of the number of primary schools that did not return questionnaires is not presented in the 2014 *Education Statistics Bulletin* (MoE, 2014), it is undoubtedly only a portion of the total that did not participate in the 2014 school census.

Tracer Study of C-Certificate Program Graduates

may be working in the education sector but under different names than they used when participating in their C-Certificate programs. However, it is very likely that many of the 3,925 graduates who were not found in the 2014 EMIS primary school database either had never been employed in the education sector or left the profession after completing the C-Certificate program. This likely constitutes a sizeable group of professionally “qualified” individuals who could be employed or re-employed as teachers or administrators in government or non-government primary schools.

Depending on the size of this group of professionally qualified individuals who are not currently employed in the education sector, the Ministry of Education may be in a position to increase the proportion of primary school teachers who have at least the minimum qualification (i.e., a C-Certificate).

Background to the Study

Over the last several years a significant amount of money and human resources have been invested by the Ministry of Education, Rural Teacher Training Institutes, USAID and other cooperating partners in preparing new primary school teachers or upgrading the qualifications of current primary school teachers so that they possess the minimum qualification (i.e., a C-Certificate) as stipulated in the *2011 Education Reform Act* (Republic of Liberia, 2011) and the *Liberia Education Regulations* (Ministry of Education, 2011). There is evidence that the proportion of primary school teachers possessing a C-Certificate has increased since 2010, when the Education Sector Survey conducted by the Association of Liberian Universities (ALU, 2012) found that 40% of government primary schools had at least this level of qualifications. According to the 2014 annual school census data presented in the *Education Statistics* publication, approximately 64% of teachers in government primary schools are “trained,” with this percentage varying across counties with a low of approximately 30% in Sinoe and a high of approximately 78% in Nimba (MoE, 2014, p. 50).

In order to learn the extent to which various cohorts of participants in LTTP-supported pre-service and in-service programs have been hired and remained in teaching positions in government (or non-government primary schools), the LTTP MER team conducted several studies to investigate this issue. A telephone-implemented tracer study of 2011 pre-service program graduates was conducted in 2012 (Tuowal, 2012). In the 2014 predecessor to the current study, Morris et al. (2014) traced graduates of C-Certificate programs supported by LTTP as well as other organizations and compared lists of C-Certificate program graduates with lists of teachers in the 2013 EMIS primary and secondary school databases. A follow-on to that study contacted C-Certificate holders not found in the 2013 EMIS database by phone to learn their employment status (Tuowal et al., 2014). Such information is critical to planning for future pre-service and in-service programs as well as for Ministry of Education

Tracer Study of C-Certificate Program Graduates

discussions about recruitment, training, and deployment of primary school teachers. See also the report on the *Study of Primary School Teacher Supply and Demand* (Goyee et al., 2015).

Objectives of the Study

The main purpose of this study was to assess the extent to which graduates of LTTP-supported and other C-Certificate programs are employed as teachers in government (or non-government) primary schools. More specifically, the study is designed to answer the following research questions:

1. For the five LTTP-supported *pre-service* C-Certificate program cohorts, what are percentages of male and female graduates who are:
 - a. Employed as teachers in *government primary* schools?
 - b. Employed as teachers in *non-government primary* schools?
 - c. Employed as administrators (registrars, vice principals, or principals) in *government primary* schools?
 - d. Employed as administrators (registrars, vice principals, or principals) in *non-government primary* schools?
 - e. Not employed by the MoE in primary schools (at least not in schools included in the 2014 EMIS primary school dataset)?
2. For the five LTTP-organized *in-service* C-Certificate program cohorts as well as the graduates of in-service C-Certificate programs organized by the Christian Foundation for Liberia (CFL), the European Commission Support for Education in Liberia (ECSEL), the National Teacher Association of Liberia (NTAL), and UNICEF, what are percentages of male and female graduates who are:
 - a. Employed as teachers in *government primary* schools?
 - b. Employed as teachers in *non-government primary* schools?
 - c. Employed as administrators (registrar, vice principal, or principal) in *government primary* schools?
 - d. Employed as administrators (registrar, vice principal, or principal) in *non-government primary* schools?
 - e. Not employed by the MoE in primary schools (at least not in schools included in the 2014 EMIS primary school dataset)?

Methodology

The study relies on data collected as part of the 2014 Annual School Census. In addition to the existing 2014 EMIS primary school database, this study uses information on which individuals previously participated in one of the cohorts of either the LTTP-supported pre-

Tracer Study of C-Certificate Program Graduates

service or in-service C-Certificate programs or other in-service c-certificates programs implemented by different organizations. The lists of graduates were obtained from LTTP files and from the records archived in the Ministry's Bureau of Teacher Education regarding other in-service program graduates.

In collaboration with the Ministry's EMIS and Monitoring and Evaluation (M&E) divisions and LTTP's EMIS staff, the LTTP Monitoring, Evaluation and Research Team (MER) analyzed the EMIS database and lists of C-Certificate program graduates to answer the research questions stated above. The team calculated the percentages of (male and female) C-Certificate program graduates who were not found in the 2014 EMIS primary school database as well as the percentages of (male and female) C-Certificate program graduates who had various categories of employment within the education sector.

Unlike the original 2014 tracer study, which looked at whether C-Certificate holders could be identified as primary or secondary school teachers, this partial replication focuses only on primary school teachers in the 2014 EMIS database. A C-Certificate is not a sufficient qualification to teach at the secondary school level in Liberia. The original tracer study (Morris et al., 2014) found that between 3% and 18.1% of LTTP/USAID supported in-service & pre-service C-Certificate program graduates respectively were employed in secondary schools (see Table 1 for details). Some of the C-Certificate graduates not found in EMIS primary schools data may have gone on to gain higher qualifications or may be teaching at the secondary level without the policy-stipulated minimum credentials. Additionally, these graduates could be teaching in early childhood programs but would not be captured as 'employed' in this study. Thus, one assumes that some of the graduates that were not found in the 2014 EMIS database might actually be working in government and non-government secondary schools or in early childhood programs as teachers and administrators.

Though the findings of this study are robust enough to facilitate dialogue about current policies, procedures, and practices, it is important to keep in mind three additional limitations. First, according to the 2014 *Education Statistics Bulletin* (MoE, 2014, p. 134), principals from all but 422 (i.e., 9.5 %) of the 4,460 schools who participated in the EMIS training did not return questionnaires.² While the missing data represent a limitation to this study, one should note that the database provides an almost complete portrait of the teaching force in Liberia. Moreover, school coverage is better in the 2014 school census data, which included questionnaires from 1,189 more schools than in 2013.³ Nevertheless, it is possible that some of the C-Certificate program graduates who were not found in the 2014

² Please note that the 422 schools that did not return questionnaires include both primary and secondary schools as well as schools with alternative basic education and technical and vocational training programs. Although a breakdown of the number of primary schools that did not return questionnaires is not presented in the 2014 *Education Statistics Bulletin* (MoE, 2014), it is undoubtedly only a portion of the total that did not participate in the 2014 Annual School Census.

³ The 1,189 schools are primary schools as well as schools at other levels.

Tracer Study of C-Certificate Program Graduates

EMIS primary school database were currently working in one of the schools that did not return their annual school census questionnaire.

Table 1. Percentage of C-Certificate graduates found to be working in secondary schools according to analysis of the 2013 EMIS database

	LTTP- supported Pre-service C-Certificate programs	LTTP- supported In-service C-Certificate programs	CFL- organized C-Certificate programs	ECSEL- organized C-Certificate programs	NTAL- organized C-Certificate programs	UNICEF- organized C-Certificate programs
% working as secondary teachers	2.7%	11.9%	12.9%	15.4%	11.2%	5.4%
% working as secondary administrators	0.3%	6.2%	7.7%	7.2%	4.5%	5.7%
Total % working in secondary schools	3.0%	18.1%	20.6%	22.6%	15.7%	11.1%

Second, it is also likely that some individual graduates were not found in the database because their names in the database were different than their names on the lists of graduates. For example, if a female got married after graduating, she may be using a different name. There are also other reasons that teachers may use different names in different contexts (for findings relevant to these issues based on the 2013 EMIS data, see Tuowal et al., 2014).

Findings

This portion of the report presents the results of data analyzed to answer the research questions on the employment of C-Certificate program graduates. Information on the percentage of graduates from the various C-Certificate programs that were not found in the 2014 EMIS primary school database are highlighted initially. Then we discuss categories of employment (teacher or administrator in government or non-government school) of those graduates who were identified in the EMIS 2014 primary school database.

C-Certificate Graduates NOT in the 2014 EMIS Database of Primary School Teachers

Table 2 and Chart 1 show the percentage of graduates of C-Certificate programs whose names we were not able to match with names in the 2014 EMIS primary school database. As mentioned above, it is likely that some of the graduates not found are in fact employed in schools. These individuals may be working in secondary schools or in early childhood education programs, teaching at schools that did not return census questionnaires, or may be using a different name than when they graduated from their C-Certificate program.

As can be observed in Table 2, 57% of *all* LTTP-supported pre-service program graduates, 69.7% of the *all* LTTP-organized in-service graduates, 52.7% of CFL-organized in-service graduates, 60.3% of ECSEL-organized in-service graduates, 68.4% of NTAL-organized in-service graduates, and 84.9% of UNICEF-organized in-service graduates were not found in the 2014 EMIS primary school database.⁴

Note that the percentage of graduates of cohort 5 of the LTTP-supported pre-service program not found in the EMIS 2014 primary school database was higher than the percentage of graduates of earlier cohorts (70.7% versus between 48.8% and 55.1%). This reflects not only their more recent graduation but also a slower pace of hiring pre-service program graduates by the Ministry of Education. More surprising, and perhaps more disturbing, are the percentages of graduates of the cohorts of the LTTP-supported in-service program that were not found in the 2014 EMIS primary school database. These percentages, which range from 58.8% for cohort 1 to 81.8% for cohort 5, raise concerns because the participants in these programs were already employed as primary school teachers when they entered these programs.

Additionally, for the LTTP-supported pre-service program cohorts 1, 2, 4 and 5 the percentages of female graduates not found in the 2014 EMIS primary school database were higher than for males, while the opposite was the case for cohort 3. With regard to the LTTP-supported in-service program, one observes that the relatively larger proportions of female graduates of cohorts 1, 2, and 4 were not found in the 2014 EMIS primary school database.

The relatively large percentage (84.9%) of UNICEF-organized in-service program graduates that were not in the 2014 EMIS primary school database is at least in part a consequence of these programs having operated almost a decade or more ago (i.e., 2000-2004). Thus, many of the graduates of this program may have moved on from primary school teaching posts they obtained during or immediately after the Second Liberia Civil War (1999-2003).

⁴ Typically, a higher percentage of female than male graduates of programs could not be found in the EMIS primary school teacher lists. Exceptions where percentages were notably higher for males are LTTP pre-service Cohort 3 and the CFL-organized in-service program.

Tracer Study of C-Certificate Program Graduates

It is also interesting to note that some graduates of the ECSEL, CFL, and UNICEF in-service programs enrolled in the LTTP-supported in-service program to gain additional knowledge and skills as well as a second C-Certificate.

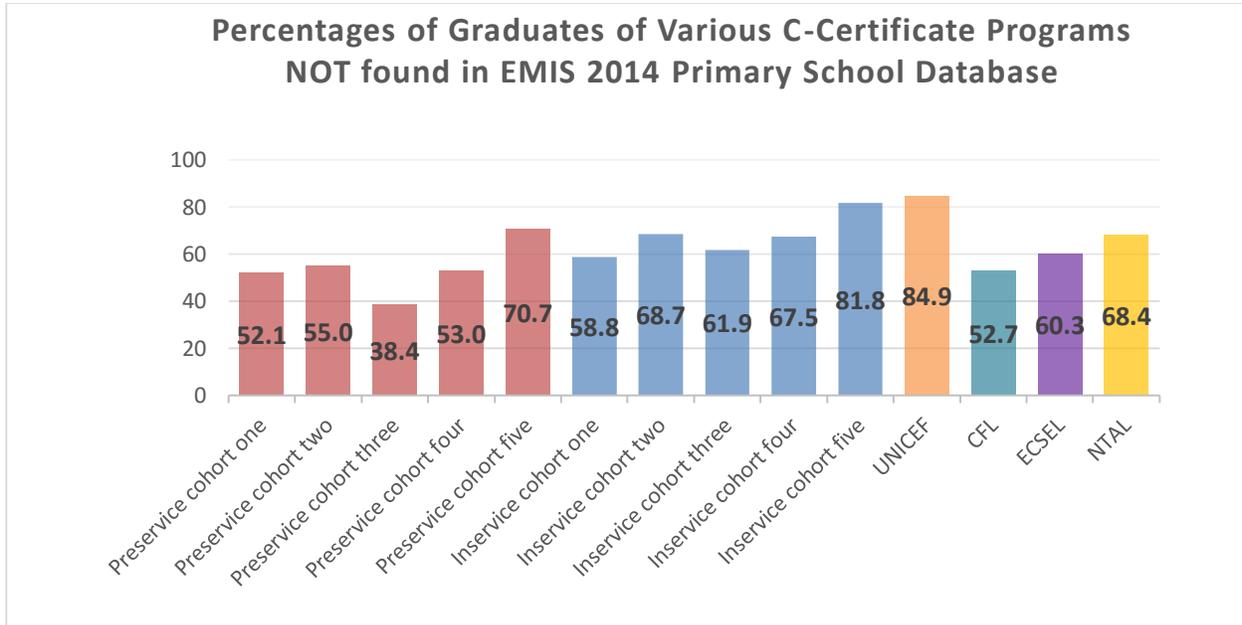
Looking at the percentages of graduates from various in-service C-Certificate programs who are not in the 2014 EMIS primary school database, we may conclude that substantial numbers of individuals who were teaching at the time they participated in these programs were teaching at other school levels or left the teaching profession at some point after completing their certification program.

Table 2: Percentage of C-Certificate Program Graduates NOT found in 2014 EMIS Primary School Database

C-Certificate Program (years implemented)	% Female	% Male	% Total
All LTTP <i>Pre-service</i> Program Cohorts (2008-2013)	66.8	55.3	57
LTTP Pre-service Cohort 1 (2008-2009)	55.3	51.8	52.1
LTTP Pre-service Cohort 2 (2009-2010)	69.1	52.8	55.1
LTTP Pre-service Cohort 3 (2010-2011)	39.7	50	48.8
LTTP Pre-service Cohort 4 (2011-2012)	67.6	50.6	53
LTTP Pre-service Cohort 5 (2012-2013)	81.2	68.3	70.7
All LTTP <i>In-service</i> Program Cohorts (2007-2013)	79.4	68.4	69
LTTP In-service Cohort 1 (2007-2008)	72.7	55.9	58.8
LTTP In-service Cohort 2 (2008-2009)	74.1	68	68.7
LTTP In-service Cohort 3 (2009-2010)	60	62	61.9
LTTP In-service Cohort 4 (2010-2011)	100	65.8	67.5
LTTP In-service Cohort 5 (2012-2013)	80	82	81.8
Christian Foundation of Liberia (CFL) In-service Program (2010-2013)	46.8	53.5	52.7
European Commission Support for Education in Liberia (ECSEL) In-service Program (2009-2012)	83.9	58.3	60.3
National Teacher Association of Liberia (NTAL) In-service Program (2010-2012)	71.4	66.7	68.4
UNICEF In-service Program (2000-2004)	88.7	83.8	84.9

Tracer Study of C-Certificate Program Graduates

Chart 1: Percentage of Graduates of Various C-Certificate Programs NOT found in the 2014 EMIS Primary School Database



As shown in Table 3, the combination of pre-service and in-service C-Certificate graduates who are not in the 2014 EMIS primary school database equals 3,925 individuals. More specifically, there are 2,220 LTTP-supported program graduates (1,408 from pre-service programs and 812 from in-service programs), 289 CFL graduates, 240 ECSEL graduates, 54 NTAL graduates, and 1,122 UNICEF graduates who were not found in the 2014 EMIS primary school database. While a portion of them are certainly employed as teachers, there is undoubtedly a substantial pool of “qualified” individuals who could be employed or re-employed in the education sector, either in government or non-government primary schools.

This conclusion is reinforced by the findings presented in Table 4, which shows that 63% of all C-Certificate program graduates were not found in the EMIS 2014 primary school database. Thus, unless these graduates were employed at secondary or early childhood levels, in one of the primary schools not covered during the 2014 annual school census, or they used a different name than what was included on the list of graduates, either they were never employed in the education sector or they left the sector before the 2014 EMIS data were collected.

Tracer Study of C-Certificate Program Graduates

Table 3: Number of Individuals with C-Certificates NOT found in 2014 EMIS Primary School Database

Program	Females	Males	Both Genders
LTTP Pre-service	244	1164	1408
LTTP In-service	112	700	812
CFL In-service	29	260	289
ECSEL In-service	26	214	240
NTAL In-service	20	34	54
UNICEF In-service	251	871	1,122
TOTAL	682	3,243	3,925

Table 4: C-Certificates graduates of LTTP-supported and other programs who were or were not found in 2014 EMIS primary school database

Teachers Category	%Females	%Males	%Both Genders
Teachers in the EMIS' primary school database	28%	39%	37%
Teachers Not in the 2014 EMIS' primary school database	72%	61%	63%
Total Percentage	100%	100%	100%
Total Teachers	943	5,276	6,219

Employment Status of LTTP-Supported Pre-service C-Certificate Graduates

The analyses presented in this section focus mainly on the 37% of the C-Certificate program graduates who were found in the 2014 EMIS primary school database, enabling us to identify the categories of their employment in the education sector (as teachers or administrators in government or non-government schools).

Looking at Table 5, which presents data on graduates of *all* cohorts of the LTTP-supported pre-service C-Certificate program, we note that the vast majority of those in the 2014 EMIS primary school database were working in government primary schools. Just over a third of

Tracer Study of C-Certificate Program Graduates

the graduates (34%) were government primary school teachers and a very small portion (4.1%) were employed as government primary school administrators (principals, vice principals, or registrars). Reflecting on the gender of the graduates, one sees that a somewhat smaller percentage of female graduates (26.8%) compared to male graduates (35.3%) were employed as teachers. Similarly, a slightly smaller percentage of female graduates (1.6%) compared to male graduates (4.5%) were employed as administrators. One can also observe that more graduates were working as teachers in government primary schools (34%) than in non-government primary schools (4.7%).

Table 5: Employment Status of *ALL Cohorts* of *LTTP-Supported Pre-service C-Certificate Program Graduates*

Category of Employment	% Female	% Male	% Total
Government Primary School Teacher	26.8	35.3	34
Government Primary School Administrator	1.6	4.5	4.1
Non-government Primary School Teacher	4.4	4.8	4.7
Non-government Primary School Administrator	0.3	0.1	0.2
NOT found in 2014 EMIS primary school database	66.8	55.3	57
Graduates (Total %)	100%	100%	100%
TOTAL Number of Graduates	384	2147	2531

Now we investigate the employment categories of each of the five cohorts of LTTP-supported pre-service C-Certificate programs separately to examine cohort trends. As shown in Table 6, the cohort 1 graduates who could be found in the EMIS database were mainly employed in government primary schools. We observe that more than one third (36.5%) were government primary school teachers and also a small portion (4.8%) were government primary school administrators. Note that slightly more female cohort 1 graduates were serving as administrators in government primary schools than their male counterparts (5.3% versus 4.8 %).

As shown in Table 7, cohort 2 graduates of the LTTP-supported pre-service program were mainly employed in government primary schools as well. We also observe that a larger proportion of these graduates were employed as teachers (36.5%) than as administrator (4.5%) in government primary schools. Additionally, male cohort 2 graduates were somewhat more likely to be administrators compared to females (5.0% versus 1.5%). Also note that more male cohort 2 graduates (37.4%) were working as teachers in government primary schools than their female colleagues (25.6%).

Tracer Study of C-Certificate Program Graduates

Table 6: Employment Status of *Cohort 1 of LTTP-Supported Pre-service C-Certificate Program Graduates*

Category of Employment	% Female	% Male	% Total
Government Primary School Teacher	31.6	36.9	36.5
Government Primary School Administrator	5.3	4.8	4.8
Non-government Primary School Teacher	7.9	6.5	6.7
Non-government Primary School Administrator	0	0	0
<i>NOT included in 2014 EMIS primary school database</i>	55.3	51.8	52.1
Graduates (Total %)	100%	100%	100%
TOTAL Number of Graduates	38	401	439

Table 7: Employment Status of *Cohort 2 of LTTP-Supported Pre-service C-Certificate Program Graduates*

Category of Employment	% Female	% Male	% Total
Government Primary School Teacher	26.5	37.4	36
Government Primary School Administrator	1.5	5.0	4.5
Non-government Primary School Teacher	2.9	4.6	4.3
Non-government Primary School Administrator	0	0	0
<i>NOT included in 2014 EMIS primary school database</i>	69.1	52.8	55.1
Graduates (Total %)	100%	100%	100%
TOTAL Number of Graduates	61	435	496

Looking now at Table 8, one sees that the cohort 3 graduates of LTTP-supported pre-service program who could be found in the EMIS primary school database were mainly employed in government primary schools as teachers (33.9% of all graduates), though 3.2% were working as teachers in non-government primary schools. Note that more female cohort 3 graduates (47.9%) were to be primary school teachers than their male colleagues (28.8%).

Tracer Study of C-Certificate Program Graduates

Whereas, more male graduates (4.7%) were to be government primary school administrators than their female colleagues (2.7%).

Table 8: Employment Status of *Cohort 3* of *LTTP-Supported Pre-service C-Certificate Program Graduates*

Category of Employment	% Female	% Male	% Total
Government Primary School Teacher	47.9	28.8	33.9
Government Primary School Administrator	2.7	4.7	4.8
Non-government Primary School Teacher	4.1	2.8	3.2
Non-government Primary School Administrator	2.7	4.7	4.8
<i>NOT included in 2014 EMIS primary school database</i>	39.7	50	48.8
Graduates (Total %)	100%	100%	100%
TOTAL Number of Graduates	60	425	485

As highlighted in Table 9, a higher percentage of LTTP-supported pre-service cohort 4 graduates were employed as government primary school teachers than as non-government primary school teacher (36.6% versus 3.9% of all graduates). The same proportions of graduates were working as administrators in government primary as in non-government primary schools (3.3% for both). Looking at the gender differences of the graduates, a larger proportion of males (38.6% as teachers and 3.6% as administrators) were employed as teachers and administrators in government primary school than female colleagues (24.3% as teachers and 1.4% as administrators). In non-government primary schools, more female graduates (5.4%) were employed as teachers than their male colleagues (3.6%).

Table 10 highlights the employment categories of the LTTP supported pre-service cohort 5 graduates. It reveals that more graduates of this cohort were employed as teachers in government primary schools (21.8%) than in non-government government primary schools (4.8%). A slightly higher proportion of male than the female graduates of this cohort were administrators both in government and non-government primary schools.

Tracer Study of C-Certificate Program Graduates

Table 9: Employment Status of *Cohort 4 of LTTP-Supported Pre-service C-Certificate Program Graduates*

Category of Employment	% Female	% Male	% Total
Government Primary School Teacher	24.3	38.6	36.6
Government Primary School Administrator	1.4	3.6	3.3
Non-government Primary School Teacher	5.4	3.6	3.9
Non-government Primary School Administrator	1.4	3.6	3.3
<i>NOT included in 2014 EMIS primary school database</i>	67.6	50.6	53
Graduates (Total %)	100%	100%	100%
TOTAL Number of Graduates	75	428	503

Table 10: Employment Status of *Cohort 5 of LTTP-Supported Pre-service C-Certificate Program Graduates*

Category of Employment	% Female	% Male	% Total
Government Primary School Teacher	14.9	23.4	21.8
Government Primary School Administrator	0	2.8	2.3
Non-government Primary School Teacher	4	5	4.8
Non-government Primary School Administrator	0	0.2	0.2
<i>NOT included in 2014 EMIS primary school database</i>	81.2	68.5	70.8
Graduates (Total %)	100%	100%	100%
TOTAL Number of Graduates	123	514	637

Employment Status of LTTP-Organized In-service C-Certificate Graduates

Looking now at Table 11, which presents data on graduates of all cohorts of the LTTP-organized in-service C-Certificate program, we note that the vast majority of those found in the EMIS 2014 primary school database were working in government schools. Specifically, more than one fourth (25.2%) of all LTTP-organized in-service program graduates were employed as government primary school teachers and a small portion (3.3%) were working

Tracer Study of C-Certificate Program Graduates

as government primary school administrators (principals, vice principals, or registrars). With respect to gender differences, a somewhat higher percentage of male graduates were employed as both teachers (26% of males versus 19% of females) and administrators (3.6% of males versus 1.4% of females). It is also worth noting that only a small percentage of LTTP-organized in-service program graduates were working in non-government primary schools as teachers.

Table 11: Employment Status of *ALL Cohorts of LTTP-Organized In-service C-Certificate Program Graduates*

Category of Employment	% Female	% Male	% Total
Government Primary School Teacher	19.1	26	25.2
Government Primary School Administrator	1.4	3.6	3.3
Non-government Primary School Teacher	0	1.8	1.5
Non-government Primary School Administrator	0	0.3	0.3
<i>NOT included in 2014 EMIS primary school database</i>	79.4	68.4	69.7
Graduates (Total %)	100%	100%	100%
TOTAL Number of Graduates	248	1359	1607

We now examine the categories of employment of the individual cohorts of the LTTP-organized in-service program. Table 12 presents the findings for cohort 1. It shows that the vast majority of those in the EMIS 2014 primary school database were working in government primary schools. And, similar to the overall pattern of employment among LTTP-organized in-service program graduates (see Table 11), about one third (36.2%) of in-service cohort 1 graduates were employed as government primary school teachers and a small portion (2.7%) were working as government primary school administrators (principals, vice principals, or registrars). With respect to gender, male graduates were more likely to be employed as teachers (38.0% versus 27.3%) and administrators (3.3% versus 0%) than their female colleagues.

It is also worth noting that only a small percentage of LTTP-organized in-service program cohort 1 graduates were working in non-governmental schools, either as teachers or administrators at the primary level, as was the case overall for all graduates of LTTP-organized in-service C-Certificate programs (see Table 11).

Tracer Study of C-Certificate Program Graduates

Table 12: Employment Status of *Cohort 1* of LTPP-Organized In-service C-Certificate Program Graduates

Category of Employment	% Female	% Male	% Total
Government Primary School Teacher	27.3	38.0	36.2
Government Primary School Administrator	0	3.3	2.7
Non-government Primary School Teacher	0	1.9	1.6
Non-government Primary School Administrator	0	0.9	0.8
<i>NOT included in 2014 EMIS primary school database</i>	72.7	55.9	58.8
Graduates (Total %)	100%	100%	100%
TOTAL Number of Graduates	44	224	268

Table 13: Employment Status of *Cohort 2* of LTPP-Organized In-service C-Certificate Program Graduates

Category of Employment	% Female	% Male	% Total
Government Primary School Teacher	22.2	24.3	24.1
Government Primary School Administrator	3.7	6.3	6
Non-government Primary School Teacher	0	1.4	1.2
Non-government Primary School Administrator	0	0	0
<i>NOT included in 2014 EMIS primary school database</i>	74.1	68	68.7
Graduates (Total %)	100%	100%	100%
TOTAL Number of Graduates	35	257	292

In Table 13 one observes that that the vast majority of cohort 2 graduates of the LTPP-organized in-service program who are in the EMIS primary school database were working in government schools. And, similar to the overall pattern of employment among LTPP-organized in-service program graduates (see Table 11), almost a quarter (24.1%) of in-service cohort 2 graduates were employed as government primary school teachers and 6% were working as government primary school administrators (principals, vice principals, or registrars). With respect to gender, both male and female cohort 2 graduates were much

Tracer Study of C-Certificate Program Graduates

more likely to be teachers than administrators in government primary schools, though the percent difference is somewhat greater for males (24.3% and 6.3%) than for females (22.1% and 3.7%).

Additionally, among the cohort 2 graduates of the LTTP-organized in-service program, only a small percentage (1.2%) was employed in non-government primary schools as teachers and none as school administrators.

In Table 14 one observes that the vast majority of cohort 3 graduates of the LTTP-organized in-service program found in the EMIS primary school database were working in government schools as teachers (33.3%) while a very small proportion (2.6%) were working as administrators. The table also shows that more male graduates (2.6%) were employed as administrators in government primary schools than their female colleagues (0%). On the other hand, more female graduates (40%) were employed as teachers in government primary schools than their male colleagues (32.9%)

Again, it is worthwhile to state that only a small percentage (2.2%) of LTTP-organized in-service program cohort 3 graduates were working in non-governmental primary schools as teachers (2.3% of males and 0% of females), and no male or female graduates were employed as non-government primary school administrators.

Table 14: Employment Status of *Cohort 3 of LTTP-Organized In-service C-Certificate Program Graduates*

Category of Employment	% Female	% Male	% Total
Government Primary School Teacher	40	32.9	33.3
Government Primary School Administrator	0	2.7	2.6
Non-government Primary School Teacher	0	2.3	2.2
Non-government Primary School Administrator	0	0	0
<i>NOT included in 2014 EMIS primary school database</i>	60	62	61.9
Graduates (Total %)	100%	100%	100%
TOTAL Number of Graduates	41	274	315

Table 15 indicates that only male graduates from cohort 4 of the LTTP-supported in-service were employed in primary schools. More specifically, none of the female graduates of this cohort were found in the 2014 EMIS primary school database, while 23.7% of the male graduates were employed as government primary school teachers and 6.6% were working

Tracer Study of C-Certificate Program Graduates

as government primary school administrators (principals, vice principals, or registrars). A small percentage (3.8%) of the male graduates of cohort 4 of the LTTP-supported in-service C-Certificate program were working non-government primary schools as teachers, and none were working as administrators in non-government primary schools.

Table 15: Employment Status of Cohort 4 of *LTTP-Organized In-service C-Certificate Program Graduates*

Category of Employment	% Female	% Male	% Total
Government Primary School Teacher	0	23.7	22.5
Government Primary School Administrator	0	6.6	6.3
Non-government Primary School Teacher	0	3.9	3.8
Non-government Primary School Administrator	0	0	0
<i>NOT included in 2014 EMIS primary school database</i>	100	65.8	67.5
Graduates (Total %)	100%	100%	100%
TOTAL Number of Graduates	56	206	262

Table 16 shows that a smaller proportion of LTTP-supported in-service cohort 5 graduates were employment in the education sector than the previous cohorts (in-service cohorts 1-4). Specifically, less than a quarter (14.5%) of this cohort were employed as teachers in government primary schools, while a small proportion (2.3%) were working as administrators.

With respect to gender, one notes that more female cohort 5 in-service graduates were employed as teachers than administrators in primary schools.

Again, it is worth mentioning that only a small percentage of LTTP-organized in-service program cohort 5 graduates were working in non-governmental primary schools as teachers (0.9%) or as administrators (0.5%).

Tracer Study of C-Certificate Program Graduates

Table 16: Employment Status of *Cohort 5 of LTTP-Organized In-service C-Certificate Program Graduates*

Category of Employment	% Female	% Male	% Total
Government Primary School Teacher	15	14.4	14.5
Government Primary School Administrator	5	2.1	2.3
Non-government Primary School Teacher	0	1	0.9
Non-government Primary School Administrator	0	0.5	0.5
<i>NOT included in 2014 EMIS primary school database</i>	80	82	81.8
Graduates (Total %)	100%	100%	100%
TOTAL Number of Graduates	72	398	470

Employment Status of CFL-Organized In-service C-Certificate Graduates

We move now to examining the employment categories for in-service C-Certificate programs organized by groups other than LTTP. To begin this discussion, Table 17 presents findings on graduates of the in-service program organized by the Christian Foundation for Liberia (CFL). We observe that the majority (35.2%) of the graduates of the CFL-organized in-service program who are in the 2014 EMIS primary school database were working in government primary schools as teachers. A small proportion (3.6%) of these graduates were employed as teachers in non-government primary schools. One also observes that some graduates of the CFL-organized in-service program were employed as administrators in government (7.8%) and few as administrators in non-government primary schools (0.5%).

With respect to gender, one can see in Table 17 that more females than their male colleagues from the CFL-organized program were teachers, in both government primary and non-government primary schools.

Tracer Study of C-Certificate Program Graduates

Table 17: Employment Status of *CFL-Organized C-Certificate Program Graduates*

Category of Employment	% Female	% Male	% Total
Government Primary School Teacher	45.2	34	35.2
Government Primary School Administrator	1.6	8.6	7.8
Non-government Primary School Teacher	6.5	3.3	3.6
Non-government Primary School Administrator	0	0.6	0.5
<i>NOT included in 2014 EMIS primary school database</i>	46.8	53.5	52.7
Graduates (Total %)	100%	100%	100%
TOTAL Number of Graduates	185	530	715

Employment Status of ECSEL-Organized In-service C-Certificate Graduates

Turning now to Table 18, which presents findings on graduates of the in-service program organized by the European Commission Support to Education in Liberia (ECSEL), we note that a little over a quarter (28.1%) of the graduates were working in government primary schools as teachers and 4.3% were working as government primary schools administrators. Additionally, 7.3% of the graduates were working in non-government schools as teachers and none of them were employed as administrators in non-government primary schools.

Table 18: Employment Status of *ECSEL-Organized C-Certificate Program Graduates*

Category of Employment	% Female	% Male	% Total
Government Primary School Teacher	9.7	29.7	28.1
Government Primary School Administrator	3.2	4.4	4.3
Non-government Primary School Teacher	3.2	7.6	7.3
Non-government Primary School Administrator	0	0	0
<i>NOT included in 2014 EMIS primary school database</i>	83.9	58.3	60.3
Graduates (Total %)	100%	100%	100%
TOTAL Number of Graduates	32	369	401

Tracer Study of C-Certificate Program Graduates

Regarding gender, more male graduates (29.7%) of the ECSEL-organized in-service program were employed as teachers than their female colleagues (9.7%). There are almost equal percentages of female and male graduates who were employed as administrators in government primary schools (3.2% and 4.4%). Additionally, more male graduates were employed as teachers in non-government primary schools than their female counterparts (7.6% versus 3.2%).

Employment Status of NTAL-Organized In-service C-Certificate Graduates

Looking now at Table 19, which presents findings for the in-service program organized by the National Teachers Association of Liberia (NTAL), we observe that, of the graduates found in the 2014 EMIS primary school database, the majority were working in government primary schools as teachers. Specifically, almost quarter (22.8%) of all graduates of the NTAL in-service program were employed as teachers in government primary schools and a small proportion (2.5%) were employed as administrators in government primary schools. Also, a small percentage (5.1%) of these graduates were employed in non-government primary schools as teachers (5.1%) and as administrators (1.3%).

Note as well that somewhat a small percentage (5.1%) of NTAL-organized in-service program graduates were working in non-government schools as teachers and only the female graduates managed to gain employment as administrators (3.6%).

Table 19: Employment Status of *NTAL-Organized C-Certificate Program Graduates*

Category of Employment	% Female	% Male	% Total
Government Primary School Teacher	21.4	23.5	22.8
Government Primary School Administrator	0	3.9	2.5
Non-government Primary School Teacher	3.6	5.9	5.1
Non-government Primary School Administrator	3.6	0	1.3
<i>NOT included in 2014 EMIS primary school database</i>	71.4	66.7	68.4
Graduates (Total %)	100%	100%	100%
TOTAL Number of Graduates	25	64	89

Employment Status of UNICEF-Organized In-service C-Certificate Graduates

Finally, Table 20 presents findings for the UNICEF-organized in-service program. We observe that the majority of the relatively few graduates of this program who are in the 2014 EMIS primary school database were working in government primary schools. Specifically, 11.2% of the UNICEF-organized in-service graduates were working as government primary schools teachers and a small proportion (1.0%), working as administrators.

Looking at gender, one can see in Table 20 that more female graduates were employed as primary school teachers than their male colleagues. However, a slightly higher proportion of male graduates than female graduates were employed as administrators in government primary schools.

Note also that relatively few (2.7%) UNICEF-organized in-service program graduates were working in non-government primary schools as teachers and that none of the graduates were employed as administrators.

Table 20: Employment Status of *UNICEF-Organized* C-Certificate Program Graduates

Category of Employment	% Female	% Male	% Total
Government Primary School Teacher	8.8	11.8	11.2
Government Primary School Administrator	0.4	1.2	1.0
Non-government Primary School Teacher	1.4	3.1	2.7
Non-government Primary School Administrator	0	0	0
<i>NOT included in 2014 EMIS primary school database</i>	88.7	83.8	84.9
Graduates (Total %)	100%	100%	100%
TOTAL Number of Graduates	267	1103	1370

Conclusion

This document highlights findings of an updated study conducted by the LTTP Monitoring, Evaluation, and Research team. The purpose of the study was to assess the extent to which graduates of LTTP supported pre-service and in-service C-Certificate programs as well as other C-Certificate programs were employed in 2014 as teachers or administrators in government or non-government primary schools. The study analyzed the Ministry of

Tracer Study of C-Certificate Program Graduates

Education's 2014 EMIS primary school database, augmented by inserting information from lists of graduates from the five cohorts of LTTP-supported pre-service program, the five cohorts of the LTTP-organized in-service C-Certificate program as well as the in-service C-Certificate programs organized by other organizations (Christian Foundation for Liberia, European Commission Support for Education in Liberia, the National Teachers Association of Liberia, and UNICEF).

The study provides information on the percentages of male and female graduates who were working in 2014 in various employment categories within the education sector. More specifically, the study reports the percentages of graduates who are employed as teachers and administrators (principals, vice principals, and registrars) in government primary schools, and those employed in such positions in non-government primary school.

The study also presents the percentages of graduates of the various C-Certificate programs who were not found in the 2014 EMIS primary database. Indeed, of the 6,710 individuals who earned a C-Certificate from one of these programs during the 2000 to 2013 period, 3,925 (63%) of them were not found in the 2014 EMIS primary school database. Undoubtedly, because of the limitations of this study, some of these graduates were in fact employed in the education sector.⁵ That is, some of the graduates may have been working in the schools whose principals participated in the EMIS trainings but did not return the annual school census questionnaire or they may be working in early childhood programs or secondary schools. Furthermore, some of the graduates may have been working in the education sector but under different names than they used when participating in the C-Certificate program.

However, it is very likely that some of the 3,925 graduates who were not found in the 2014 EMIS primary school database either had never been employed in the education sector or left the profession after completing the C-Certificate program. This likely constitutes a sizeable group of professionally "qualified" individuals who could be employed or re-employed as teachers or administrators in government or non-government primary schools.

Depending on the size of this group of professionally qualified individuals who – at least in 2014 – were not employed in the education sector, the Ministry of Education may be in a position to increase the proportion of primary school teachers who have at least the minimum qualification (i.e., a C-Certificate). Although, a number of C-Certificate program initiatives have been undertaken by partners to enhance the qualifications of Liberia's teaching force, the government must take concrete actions to hire and retain "qualified"

⁵ That at least some of the C-Certificate program graduates not in the 2014 EMIS primary school data base may be employed in the education sector is signaled by the results from another, more limited tracer study previously conducted. Based on direct telephone contact with 76 of 509 graduates of cohort 3 of the LTTP-supported pre-service program and information they reported about their colleagues, Tuowal (2012) indicates that 404 (i.e., 79.4%) were working – and on the payroll – in schools.

Tracer Study of C-Certificate Program Graduates

teachers. However, this may require that the Ministry establish special packages of financial incentives, organize better living conditions, and/or improve working conditions to attract and hold “qualified” teachers in some settings (see also Goyee et al., 2014).

With respect to the employment categories of graduates who were found in the EMIS database, there are some interesting differences across the C-Certificate programs supported or organized by different partners. For the LTTP-supported pre-service program and the LTTP-organized in-service program the vast majority of graduates who were located in the 2014 EMIS primary school database were found to be working in government primary schools, as teachers or administrators. A very small percentages of these programs’ graduates were working in non-government primary schools. Similarly, graduates of the other organizations’ C-Certificate programs were also more likely to be employed in government primary schools than in non-government primary schools.

One issue which would benefit from policy dialogue relates to the number of graduates of C-Certificate programs, particularly those organized by ECSEL and NTAL, who were working as teachers or administrators in non-government primary schools. On the one hand, one may view this as a leakage of qualified primary school teachers from the government to the non-government subsector of education – representing a loss of investment designed to improve the quality of education at the primary level. On the other hand, given that the pupils attending non-government schools are for the most part Liberian citizens, this could be seen as a valuable, if unintended, contribution to improving the country’s education system. Moreover, since some children and youth likely move back and forth between government and non-government schools, having teachers and administrators with C-Certificate qualifications working in non-government schools may in fact contribute to improve learning outcomes for at least some pupils in government schools.

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