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Performance Evaluation of Public Works Construction Activities to Increase Access to Education in Ghana

APRIL 2015

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PERFORMANCE EVALUATION OF PUBLIC WORKS CONSTRUCTION ACTIVITIES TO INCREASE ACCESS TO EDUCATION IN GHANA

APRIL 1, 2015

Public Works Construction (PWC) Contract No. AID-RAN-I-00-09-00019
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CONTENTS

ACRONYMS

AMA	Accra Metropolitan Assembly
DEO	District Education Office
EMIS	Education Monitoring Information System
FARA	Fixed Amount Reimbursement Agreement
FGD	Focus Group Discussion
FPMU	Funds and Procurement Management Unit
G2G	Government to Government
GES	Ghana Education Service
GoG	Government of Ghana
IBC	International Building Code
IP	Implementing Partner
JHS	Junior High School
KG	Kindergarten
KII	Key Informant Interview
KVIP	Kumasi Ventilated Improved Pit
MiDA	Millennium Development Authority
MoE	Ministry of Education
MoFEP	Ministry of Finance and Economic Planning
PTA	Parents and Teachers Association
PWC	Public Works Construction
SMC	School Management Committee
SOW	Statement of Work
TAP	Transition and Assistance Program
TB	Toilet Block
USAID	U.S. Agency for International Development

EXECUTIVE SUMMARY

PROJECT BACKGROUND

In working to address issues related to the lack of schools available to ensure access to education for all of Ghana's youth, between 2010 and 2015, the United States Agency for International Development (USAID) used three Fixed Amount Reimbursement Agreements (FARAs) to provide funding to the Government of Ghana (GoG) to build schools and educational facilities through Public Works Construction (PWC) activities. USAID also provided funding to Plan International/Ghana (Plan Ghana) through a cooperative agreement under the Transition and Assistance Program (TAP) between July 2010 and November 2013. PWC activities consisted of the construction, furnishing, and maintenance of: 159 educational structures by the Funds and Procurement Management Unit (FPMU) within the Ministry of Education (MoE), 4 junior high schools (JHSs) by the Accra Metropolitan Assembly (AMA), 24 latrines by the Ministry of Finance and Economic Planning (MoFEP) in cooperation with the Millennium Development Authority (MiDA), and 7 JHSs by Plan Ghana. The goals of the PWC activities, according to USAID, were to: 1) increase access to basic education; 2) increase enrollment in basic education; 3) improve the availability of basic education management infrastructure, and; 4) ensure schools have good sanitation and an environmentally friendly environment for pupils.

EVALUATION PURPOSE, QUESTIONS, AND METHODS

USAID contracted Social Impact (SI) in November 2014 to conduct a performance evaluation of the PWC activities. The evaluation purpose was to provide USAID/Ghana and other stakeholders with information about the effectiveness of the PWC activities, and to highlight lesson learned that can inform future projects. The evaluation questions included the following: 1) To what extent did the four PWC activities achieve the project purpose, outcomes, and expected outputs? 2) How were government officials and local beneficiaries involved in the ongoing ownership and maintenance of the construction facilities? 3) How do target beneficiaries perceive the PWC activities? 4) How effective were the implementing mechanisms, supervision processes and quality control activities for achieving the expected results in a timely and cost-effective manner?

Evaluation Question 1: To what extent did the four PWC activities achieve the project purpose, outcomes, and expected outputs?

Without a viable comparison group, it is impossible to attribute increased access to education to the PWC intervention (or any other intervention). However, the construction of PWC kindergartens (KGs) coincided with an increase in students attending KG, and the evaluation team could not find any other likely cause for the increase. Thus, PWC activities likely contributed to increased access to education amongst KG-aged children. Despite this jump in KG enrollment, data from the MoE and teachers did not show a similar jump for JHSs, and DEO staff and teachers reported that they did not think the project's construction of JHS, DEOs, or latrines helped to increase access to education or overall enrollment. Teachers did say, though, that construction of JHSs increased relative enrollment (students moved from other schools to the new JHSs). The team found that DEOs improved the availability of basic education management infrastructure, even though they were constrained by overcrowded facilities and lack of electricity and equipment.

The aim of creating an environmentally friendly atmosphere for learning was somewhat achieved, although lack of running water and gender segregated toilets remained barriers for proper use.

Evaluation Question 2: How were government officials and local beneficiaries involved in the ongoing ownership and maintenance of the construction facilities?

Government officials' involvement in the maintenance of newly constructed facilities consisted of incorporating them into the District Assembly's list of facilities to maintain. However, no additional budget was generated to facilitate maintenance. With the exception of communities surrounding Plan Ghana-constructed schools, local beneficiaries said that they were only involved in PWC activities during the time of construction, by providing food, shelter, labor, and security for building materials. Except in the case of Plan Ghana, implementing partners did not facilitate community ownership over these facilities. No other type of support has been provided by the MoE, donors, or any other institution since the end of construction to maintain these facilities.

Evaluation Question 3: How do target beneficiaries perceive the PWC activities?

Although communities had a favorable perception of the fact that an education facility (JHS, KGs, and toilet blocks) had been provided to them, when probed about how much these addressed their needs, many stakeholders voiced issued about the structures, such as KGs were not big enough to absorb current demand, and toilet blocks were not practical for use by male and female students. Only the construction of JHS buildings was unequivocally approved. All DEO personnel interviewed were happy that new facilities were created, and DEO officials also suggested that with power, water, and better equipment, their work would be much more efficient.

Evaluation Question 4: How effective were the implementing mechanisms, supervision processes, and quality control activities for achieving the expected results in a timely and cost-effective manner?

The implementing mechanisms, supervision processes, and quality control activities were not effective enough to ensure project outcomes in a timely and cost-effectiveness manner, as the bulk of the PWC activities were not completed on time nor did they provide conclusive evidence of a structurally sustainable, friendly, and effective environment for the money spent. Many of the contracting mechanisms had imprecise language and parties did not follow through with oversight.

RECOMMENDATIONS

As a result of the evaluation findings, the team recommends: USAID test its development hypothesis through an impact evaluation of its next school construction project or a meta-analysis of other school construction projects in Sub-Saharan Africa; USAID and MoE agree upon a more holistic approach for school construction, with clear standards and guidelines; USAID consider contracts or more detailed FARAs to procure future construction activities; USAID require implementing partners to complete thorough technical, administrative, and financial qualification assessments of construction companies before contracting with them; USAID ensure that future school construction contracts or agreements include a participatory sensitization process; USAID conduct an assessment of existing educational facilities to determine whether it may be more cost-effective to renovate existing facilities rather than building new ones; USAID ensure architectural defects identified in this evaluation and the FAS consult reports are fixed; USAID require that future implementing partners ensure toilet projects are gender sensitive.

I. PROJECT BACKGROUND

Ghana has been making great efforts to increase school enrollment as part its Universal Access to Education Policy. According to USAID documents, between 2003 and 2010, enrollment in Ghanaian kindergartens (KGs) almost tripled, creating significant pressure for adequate construction to respond to this increasing demand. Enrollment in junior high schools (JHSs) increased by 41 percent during the same period and is expected to continue increasing. This situation led to the overcrowding of existing schools and to the creation of informal education spaces also known as "schools under the trees." According to government assessments, there were an estimated 4,000 "schools under the trees" as of January 2010. According to USAID and the Government of Ghana (GoG), as part of the increase in enrollment, the GoG created 46 new districts by subdividing older and bigger ones into smaller ones, increasing the total number of districts from 170 to 216. This created the need to build new district education offices (DEOs) in order to provide efficient administrative management in the new districts. However, according to MoE officials, many of these DEOs were not provided with separate buildings in which to operate. Finally, USAID identified that sanitary conditions in primary schools were still far from Ghanaian standards and international best practices as of 2010. Evaluation team site visits and conversations with head teachers revealed that children did not have buildings where they could go to relieve themselves. Girls in particular did not feel comfortable with the level of privacy and the sanitary conditions provided in school latrines, contributing to school desertion by girls.

In order to address the situation of "schools under the trees," overcrowding in KGs and JHSs, new DEOs without actual offices, and poor sanitary conditions in schools, USAID developed the Public Works Construction (PWC) activities, which used USAID-Forward Government to Government (G2G) Fixed Amount Reimbursement Agreements (FARAs) to construct, furnish, and maintain:

- 159 educational structures by the Funds and Procurement Management Unit (FPMU) within the Ministry of Education (MoE),
- 4 public schools by Accra Metropolitan Assembly (AMA),
- And 24 latrines in flood-affected areas in the northern region of the country by the Ministry of Finance and Economic Planning (MOFEP) in cooperation with the Millennium Development Authority (MiDA).

It also included funding through a cooperative agreement to Plan International/Ghana (Plan Ghana) to construct, furnish, and maintain 7 JHSs under the Transition and Assistance Program (TAP). In total, the PWC activities included construction of 194 structures between 2010 and 2015.

The purpose of the PWC activities was to increase access to basic education in Ghana. According to USAID, the construction activities were based on the development hypothesis that by constructing and maintaining school buildings and other support facilities, more students would gain access to basic education. Expected outcomes of this activity were: 1) increased access to basic education; 2) increased enrollment in basic education; 3) improved availability of basic education management infrastructure, and; 4) good sanitation and an environmentally friendly environment for pupils, especially girls (see Annex 1 for more details).

II. EVALUATION PURPOSE AND EVALUATION QUESTIONS

EVALUATION PURPOSE

USAID contracted with Social Impact in November 2014 to complete a final performance evaluation of the PWC activities. The purpose of this evaluation was to provide USAID/Ghana and other stakeholders (FPMU, MoE, AMA, MiDA, MoFEP, and Plan Ghana) with information about the effectiveness of the PWC activities, and to highlight lesson learned which can inform similar projects in the future. The objectives of the evaluation were to determine the following:

1. To learn to what extent the project's objectives and goals have been achieved;
2. To explore how effectively the program has developed plans and structures to encourage ongoing maintenance and sustainability;
3. To understand how the activities were perceived and valued by beneficiaries;
4. To ascertain the effectiveness of the project's management processes, including the implementation mechanism, supervision capacity and quality control; and
5. To identify lessons and best practices that can inform the design of future education construction and government-to-government projects in relation to enhancing access to basic education, both in Ghana and elsewhere.

EVALUATION QUESTIONS

USAID developed the following evaluation questions:

1. To what extent did the four PWC activities achieve the project purpose, outcomes and expected outputs?
2. How were government officials and local beneficiaries involved in the ongoing ownership and maintenance of the construction facilities?
3. How do target beneficiaries perceive the PWC activities?
4. How effective were the implementing mechanisms, supervision processes, and quality control activities for achieving the expected results in a timely and cost-effective manner.

III. METHODS AND LIMITATIONS

The team employed a mixed-methods approach, using both primary and secondary data.

DESK REVIEW

The team reviewed the following secondary documents prior to fieldwork: FARA and cooperative agreements, the site design documentation that was available, agreement amendments, activity technical and financial progress reports, and other reports on Ghanaian schools and construction. A full list of documents reviewed is provided in Annex 4.

KEY INFORMANT INTERVIEWS IN ACCRA

The team spent the first week of fieldwork gathering information through 17 KIIs in with MoE officials from FPMU, AMA, MiDA, and Ghana Education Services (GES),[1] and USAID officials. However, nobody from Plan Ghana was available to meet with the team until the end of the field visits. The semi-structured interview instruments used for the KIIs are included in Annex 3.

SITE VISITS

The evaluation team randomly sampled 50 percent of PWC sites in each of the ten regions of Ghana – for a total of 58 sites and a confidence level of 90 percent with a confidence interval of plus or minus ten.[2] The sample included 30 percent of all 194 PWC construction sites, including 4 DEOs, 13 KGs, 20 JHSs, and 20 toilet blocks and Kumasi Ventilated Improved Pits (KVIPs)—this last category is referred to as latrines/toilets throughout the rest of this report. Please see the Table 1 in Annex 2 for a breakdown of the type of site visited by implementing partner. For each site visited, regardless of the type of construction undertaken, the team completed two major tasks: 1) a thorough evaluation of the planning, design, and constructions aspects of the building; choice of location, finishing details, connection to water and electricity networks, and adequacy of the building[3] and 2) a group discussion with head-teachers, Parent Teachers Association (PTA) members, School Management Committee (SMC) members, and traditional chiefs. Group discussion participants were selected by school head teachers in advance of the team's arrival to ensure efficient visits. The facilities evaluation was done alongside the Clerk of Works that worked at each particular site. Additionally, for sites where a latrine was built, the team also completed two focus group discussions (FGDs) with beneficiary students from all grades (one for each sex, led by a FGD facilitator of the same sex). Finally, for the DEO sites, the team completed a group discussion with field-based GES representatives and DEO staff at the new DEO site. In total, 563 individuals participated in group discussions during site visits. Please see Annex 2 for a breakdown of group discussion participants and more details on methodology and limitations.

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[1] GES is the sector of the MoE in charge of managing schools, teachers and curricula.

[2] Over the course of the evaluation, the team successfully visited 57 of the 58 planned sites. Due to the lack of response from the implementing partner, the team was unable to locate and visit one of the Plan Ghana sites.

[3] Although the evaluation was not primarily aimed at determining the structural integrity and quality of the facilities, understanding the extent to which the constructed facilities were designed and built according to plan and in accordance with Ghanaian Law and International Building Codes, is an essential prerequisite for understanding why the project may or may not have achieved its higher-level goals of improving access to education.

IV. FINDINGS

EVALUATION QUESTION 1: TO WHAT EXTENT DID THE FOUR PWC ACTIVITIES ACHIEVE THE PROJECT PURPOSE, OUTCOMES, AND EXPECTED OUTPUTS?

The purpose of the PWC activities was again to: 1) increase access to basic education; 2) increase enrollment in basic education; 3) improve the availability of basic education management infrastructure, and; 4) ensure good sanitation and an environmentally friendly environment provided for pupils, especially girls. The evaluation team addresses each of these objectives below.

Access to Education

"Access to education" is defined as the increase in the percentage of youth who are able to attend school—in this case, due to the new construction of facilities under PWC agreements. Getting at true "access" requires information on the number of out-of-school (OOS) youth. And, unfortunately, the MoE does not track this information, and the team could not find data on this at the DEO level either. As such, the best that the team could do was look at enrollment data to determine if enrollments were increasing, and if so, if they were increasing in PWC beneficiary areas at a rate greater than they were in non-beneficiary areas.

The evaluation team found that KGs had the greatest impact of all sites types on access and increased enrollment. For all the newly constructed KGs the team visited (all 13 of them), there were previously either no KGs or classes had operated under trees with a reduced number of children. As such, it was pretty clear that the introduction of KGs in these areas helped to increase access to education amongst children in Ghana. Furthermore, head teachers from each of these schools reported that enrollment increased from an average of 60 children before construction to 200 in the new building. Teachers reported the increase was possible because the old KGs only had one teacher that could not handle more than 60 children outside. In the new buildings, which each have two classrooms, a teacher, and a head teacher, it is possible to accommodate 200 students. However, not all students who want to attend a KG are able to. In fact, evaluators observed waitlists in all of the new KGs visited with an average of 200 to 300 children on them. In cases such as Tolon and Asuogyaman, this meant that head teachers decided to use the dining space as an additional classroom to accommodate as many children as possible, meaning they were able to increase access by more than the typical 233 percent.

The evaluation team attempted to validate the KG access findings through analysis of MoE Education Management Information System (EMIS) data. However, this proved impossible, as the team found that KG enrollment had increased steadily between 2008 (when the government passed its KG policy) and 2012 (the latest year for which data are available) across the country—not just in PWC beneficiary areas (See Table 1 below for more information). As such, using data alone, it was impossible for the team to attribute the rapid increase in enrollment at the KG level to PWC activities.

Table 1. Kindergarten Enrollment in Ghana, by School Year

Year	Number of Students Enrolled	Percent of Youth Enrolled (Public or Private)	Percent of Students Enrolled in Private Schools
2003-04	687,643	54.6	31.2
2004-05	778,109	60.1	36.8
2005-06	1,065,963	85.3	29.4
2006-07	1,142,784	89	18.9
2007-08	1,262,264	89.9	17.1
2008-09	1,338,454	92.9	19.4
2009-10	1,440,732	97.3	19.5
2010-11	1,491,450	98.4	20.8
2011-12	1,543,314	99.4	22.2

Source: (MOE-EMIS, 2012)

According to head teacher interviews, JHSs did not have an impact on access to education. They reported that JHSs built by PWC implementers were either to accommodate students receiving classes under a tree or students who were already receiving classes in older buildings. Head teachers interviewed reported that the construction of JHSs through PWC mechanisms did not increase access for junior high students at all. On the contrary, it simply caused students enrolled in other schools in the same districts to move from old schools to the newly constructed schools because of the physical attractiveness of the structures. It was impossible for the team to gather data to validate this claim at the schools, as the head teachers were unable to find files for enrollment figures prior to PWC activities. The team attempted to gain access to this information through the MoE's EMIS database. However, that database did not have information by school. Information comparing beneficiary and comparison districts are presented in Table 2 below (for districts where data was available for both 2009 and 2013). While these tables show that enrollment increased on average in the 12 beneficiary districts for which data was available and decreased on average in non-beneficiary districts, changes in enrollment cannot be attributed to PWC activities because: 1) not all of the schools in the beneficiary districts received new buildings; 2) some of the districts split, making it impossible to figure out enrollment figures before the PWC activities in these districts; 3) there are natural differences between districts that prevent the team from being able to directly compare districts. Also, the changes were relatively small in nature.

DEO staff said they did not believe the introduction of the new DEOs made any specific contribution to access or enrollment. Due to the fact that they were operating without power, their EMIS was not able to operate efficiently. For that reason they were only able to conduct day-to-day routine operations such as school visits. But, they were unable to make updates to EMIS or process or analyze the results of the introduction of new facilities on children's access in their districts.

Table 2: JHS Enrollment Rates by District

Beneficiary Districts	JHS Enrollment					
	2009	2010	2011	2012	2013	% Change
Akatsi	5,411	5,201	5,548	5,504	5,734	6%
Upper Manya Krobo	8,007	8,007	2,874	2,785	2,820	-65%
Yilo Krobo	5,404	5,442	4,935	4,750	4,776	-12%
Asuogyaman	5,838	6,384	6,326	6,207	4,731	-19%
Cape Coast	8,068	6,384	7,664	7,474	7,825	-3%
Wassa Amenfi East	6,461	6,454	6,726	5,186	7,329	13%
Aowin Suaman	5,603	6,004	5,807	6,207	6,078	8%
Ejura Sekyedumase	4,211	4,413	4,949	5,223	5,463	30%
Atebubu Amantin	4,040	4,082	3,944	4,401	4,441	10%
Tamale	22,456	25,361	26,098	27,122	28,898	29%
Tolon-Kumbungu	5,200	4,994	5,302	5,425	6,439	24%
Zabzugu-Tatale	3,132	3,246	3,564	3,935	4,294	37%
Karaga	1,350	951	1,374	1,719	1,965	46%
Garu Tempane	5,328	6,403	7,339	8,364	7,953	49%
Nadowli	5,580	5,626	5,824	5,813	5,819	4%
Total Beneficiary Districts	**96,089**	**98,952**	**98,274**	**100,115**	**104,565**	**9%**
Non-Beneficiary Districts						
Adansi-North	5,838	6,384	6,326	6,207	6,645	14%
Asikuma-Odoben-Brakwa	7,248	7,146	6,825	6,746	6,768	-7%
Adansi-North	5,838	6,384	6,326	6,207	6,645	14%
Sekyere East	7,682	7,962	4,093	4,412	4,469	-42%
Total Non-Beneficiary Districts	**26,606**	**27,876**	**23,570**	**23,572**	**24,527**	**-8%**

Source: (MOE-EMIS, 2013)

Enrollment[4]

Enrollment is a bit easier to define, as it is basically the number of children or youth who have signed up to attend a particular school. As described in the access-to-education section above, all newly constructed KGs the team visited (all 13 of them), experienced an increase in enrollment. Head teachers reported that this dramatic increase was due to the construction of an attractive building and the addition of a second teacher to these KGs.

While access to education did not increase due to the introduction of the new JHS facilities, head teachers from the new JHSs did report increased enrollment at their schools due to the fact that students from other older schools wanted to move over to the newer schools. The DEOs visited could not confirm any of this due to the fact that they had no power to operate their computers. Further, as mentioned above, the team could not validate these findings through analysis of EMIS data because that data did not contain information by school.

[4] The MoE's EMIS database does not contain enrollment figures broken down by school. The DEOs visited by the team only had enrollment data for the current year, not longitudinal records.

In terms of the effects of the new latrines on girls' retention rates, FGDs with students from PWC construction sites suggested that the construction of the latrines had no bearing whatsoever on whether or not girls chose to attend or stay in school. In fact, girls from all 20 of the sites visited with a new latrine of some sort reported that the new latrines did not cause them to change their school attendance habits at all. Despite the obvious benefits of adding new toilet facilities at the schools, students (especially girls) had a difficult time looking at the positive with the toilets because they still saw many issues. Specifically, students cited lack of access to the toilets (at all of the schools the team visited, the toilets were not in use and were locked due to a lack of running water), inadequacy of the toilets, and lack of privacy, as well as inadequate hygienic conditions as factors that limited their use of toilets and a reason why they did not feel the toilets made girls more likely to attend school regularly, especially during their menstrual cycle. Moreover, at the time the team visited, none of the toilets had water. All of these challenges meant that at nearly all of the schools visited, students who participated in FGDs—including 100 percent of girls interviewed—said they did not use the new toilets and were instead going to the bushes to relieve themselves.

Availability of Basic Education Management Infrastructure

Despite the clear benefits of the new DEO facilities—the introduction of a new building where formally no building existed—DEO staff members reported many challenges with the facilities, and the evaluation team observed the same during their structured site observations of the four visited DEOs. Specifically, DEO staff reported, and SI staff confirmed through direct observations, that none of the new offices were completed or connected to water and electricity, hampering the DEO's capacity to provide efficient education management services to its constituency as they could not operate their electronic office equipment. This prevented them from accessing EMIS, which limited their ability to upload new data or provide analysis of current data. It also meant that they could not use the toilet facilities provided in the building, and they had no way of ensuring health and sanitation of the staff since they could not wash their hands. Additionally, the new buildings were built to provide accommodation for 50 staff members. However, the actual number of staff in all DEOs visited was far greater than that number. On average, the DEOs housed a staff of about 60 people, suggesting an occupancy level of 120 percent. Further, DEO staff reports, implementing partner interviews, and evaluation team observations suggested that no provisions had been made to extend the buildings to accommodate these overruns—an endeavor that would be quite difficult given the design of the structures. The effect of this was that people had to share offices and desks (on average, the team found that four staff members were sharing one office at each of the sites), go on school visits not to overcrowd the premises, or take turns at using a non-electrical office equipment.

Next, according to DEO staff, the implementing partners made no provision to evaluate the state of office equipment and address any issues in that regard. While office equipment was not a specific part of the PWC activities, it would be difficult to conclude on the level of DEO management structure improvement without considering the equipment. Two of the four DEOs visited were completed and in use. The staff of these two DEOs reported that the equipment in their new offices had been transferred from an old office and was in disrepair and unusable. Staff from one of these DEO sites awaited the evaluation team with a list of equipment required to be

able to do proper work. The list included desktops, a photocopier, a printer, and a scanner, among other essential office equipment.

Good Sanitation and an Environmentally Friendly Environment for Pupils

Environmentally Friendly Environment: This objective was achieved to some degree. From documents reviewed and the 57 sample sites visited, the evaluation team found that 93 percent of the facilities visited were completed and in use. All of the incomplete sites were FPMU sites; two of the four DEOs visited were not completed, one of the FPMU JHSs was not completed, and one of the FPMU latrines was not completed. Only four sampled FPMU sites (7 percent of FPMU sites visited) were still under construction—one was still in the very initial stages of construction, two others were about 50 percent complete, and one was 95 percent complete (one of the DEOs). Similarly, quarterly reports reviewed showed that 100 percent of AMA and TAP/Plan Ghana construction sites and furnishings were completed. The team confirmed this completion rate during their visits to two sites of each type (AMA and Plan Ghana), all of which were completed as planned. Finally, the team visited 7 of the 24 latrines in the flood-affected areas where MiDA PWC activities were implemented, and they found that the structures were 100 percent complete in terms of construction but not operating due to damages created by users in structures that were not built solid enough to stand any type of manipulation. Basically, the plastic pipes were all broken.

However, and in spite of the increase in the number of facilities, people interviewed on site (parents, teachers, community leaders) reported that inadequate structures and amenities made the school environment less friendly than it could have been.

Adequacy of Structures: A total of 80 percent of all informants interviewed during site visits said that the structures built were inadequate to meet the school or community's real needs. Findings showed that with the exception of some of the JHSs, the great majority of new facilities were not adequate for use in terms of the student and staff ratio to the facility capacity level. For instance, according to a World Bank report called, "School Construction Activities for Universal Primary Education in Africa" and a similar United Nations Educational, Scientific, and Cultural Organization (UNESCO) report, primary school classrooms in Africa should hold approximately 40 students. Yet, the PWC KGs visited by the team had on average 100 students per classroom. Added to this, the student-to-toilet ratio was on average 100 pupils to 1 toilet, according to data provided by head teachers. In one school, the ratio was 10 teachers to 2 toilets and about 600 students to 1 toilet for both boys and girls. The team developed a list of criteria for determining the adequacy of structures based on international best practices (see Annex 7). Finally, DEOs were too small for the number of occupants, as described above.

Next, 56 of the 57 sites visited (98 percent), lacked water and electricity. In all cases, the toilet facilities were closed because of this. Nonetheless, the team was allowed into the toilet facilities, and they found that all but one of the facilities (19 out of the 20 toilets visited) smelled horribly, were not clean, and did not contain waste baskets. Only one of the schools visited had a clean toilet, and teachers and students from that school who were observed cleaning the toilet said the reason it was clean is because the DEO had called them the day before to tell them to clean it for the team's visit. Further, the facilities were built with rough cement floors and plaster rather than tiled walls, which meant that even once water was turned on, the newly constructed facilities would quickly become unusable and a serious source of contamination for students.

While the KGs, JHSs, and DEOs were nice, it is worth noting that in some cases the new facility built replaced an existing facility that could have been repaired with a fraction of the cost of the facility the PWC built. The evaluation team's architectural expert estimates the cost to renovate the old facilities would have been roughly 25 percent of the cost to build the new facilities. Nonetheless, the "older" facilities remain unused on the site and are now considered a nuisance by many teachers on the school campus.

Finally, the team found that despite the construction of two classrooms at the KGs and three classrooms and a small administrative area at the JHSs, the PWC implementers did not construct science or computer labs, libraries, or physical educations facilities, all of which are considered best practice in school construction. The implementing partners said the reason for this is that these facilities were not specifically required in their agreements with USAID.

Provision of Amenities: Additionally, the FARAs and the cooperative agreement with Plan Ghana all required the provision of furniture in the buildings. In 30 out of 33 of the JHSs and KGs (90 percent) visited, furniture had been supplied for students. However, the sites varied in the quality and quantity of the student furniture received. The team found that 15 out of the 33 JHSs and KGs sampled (45 percent) received adequate furniture for students; 15 out of 33 schools (45 percent) had some furniture, but it was inadequate; and 3 out of the 33 (9 percent) had not yet received furniture at all. Additionally, only 6 out of 33 sampled schools (18 percent) had received any furniture for teachers. However, AMA provided furniture for teachers in all the schools they built (see Annex 6 for more details)

Good sanitation environment provided, especially for girls: With few exceptions, site visit observations revealed that schools and DEO compounds were clean (without trash on the compound). However, as described above, the restrooms were not properly maintained—all exhibited a pungent smell and had very poor ventilation. Urinals did not have proper rinsing of the wall and floors. Toilet paper holders or waste baskets with a lid were not provided. The hand washing facilities were already broken or unusable. None of the toilets visited was equipped for students or teachers with disabilities, in clear violation of Ghana law. In all but two schools (90 percent or 18 out of 20), there were no waste bins, soap or water for use after using the restroom. Toilets were not gender-segregated and both boys and girls shared the same waiting area. Girls who participated in FGDs complained of not having necessary elements such as bins to dispose of their sanitary napkins, towels, and other menstrual items. They said that, as such, they often resorted to throwing their feminine products out on the ground outside of the latrines in plastic bags, which contributed to the contamination of the school site. All the girls interviewed at the various schools (an average of eight girls per site) expressed their discomfort in sharing a common waiting space with boys and teachers. Girls reported being picked on, bullied, and harassed by boys while waiting in line. In addition to that, the girls participating in the FDGs reported, and the evaluation team observed that, in many cases, toilets were not clearly marked (boys or girls); so, boys had the tendency to use both toilets. The design of both boys and girls toilets were the same, and girls expressed that they did not find conditions adapted to their specific needs, including things such as the provision of water and waste bins.

EVALUATION QUESTION 2: HOW WERE GOVERNMENT OFFICIALS AND LOCAL BENEFICIARIES INVOLVED IN THE ONGOING OWNERSHIP AND MAINTENANCE OF THE CONSTRUCTION FACILITIES?

Needs Assessment Participation

In 48 out of 50 group discussions[5] (96 percent) conducted, teachers and community members indicated that community members were not aware of whether USAID or the implementing partners had performed a needs assessment prior to PWC activities beginning. Furthermore, respondents in only 4 out of the 50 sites (8 percent) indicated that the community had some level of involvement in the needs assessment. Community members explained that the "needs assessment" consisted of a meeting conducted by the designated contractor with the goal of communicating to the community what was going to be built. In 49 out of the 50 sites (98 percent), respondents noted that community members were not involved in deciding what type of structure would be built. According to community members and head teachers interviewed, some head teachers played a small role in determining what the schools' needs were through an annual MoE school census. However, the evaluation team could not determine a single case where the needs identified in the annual school census matched what a site or community received through PWC activities. As such, even though the structures constructed responded to some needs, community members interviewed said that they had other preferred needs that were not taken into account. For example, a community would have preferred that an existing school be refurbished, but instead was given a toilet block. Other preferred needs cited included housing for teachers and expanding the current schools for labs, an information and communications technology (ICT) lab, and other educational facilities.

Ownership During and After the Construction of Facilities

In general, community members interviewed through group discussions expressed that the community had some participation in the implementation process. Community members said that in some cases they provided food and/or lodging for construction workers, security for the storage of building materials, and/or some labor. However, beneficiaries were not aware of any information flow between community members, the DEOs, and various stakeholders, which hampered community involvement and the feeling of ownership in PWC activities. Although this limited community engagement is promising, the evaluation team could not find evidence of a planned community engagement strategy, as three out of the four implementing partners did not do anything to specifically try to engage communities. The exception is Plan Ghana, which was contractually obligated to conduct a community sensitization and training of PTAs/SMCs, which they did successfully. Beneficiaries from all other sites expressed during group discussions that they had only received information from contractors about the PWC activities when the construction was about to take place—so, there were limited possibilities for their involvement. In fact, one local chief said he was so surprised when a contractor began to build on his land without his consent that he thought he had to physically defend himself against the contractor. As such, in general, participation largely emerged as a show of the community's appreciation for what was

[5] The evaluation team was unable to arrange group discussion with stakeholders at the 7 MiDA sites, bringing the total number of responses to 50.

given to them, instead of as a result of an empowerment and buy-in process, which might have created a sense ownership over the facilities built.

Ownership in the Maintenance Process

In addition to their limited involvement during the implementation process, community members also said they were not engaged in the maintenance process for the new facilities. None of the participants from the group discussions were able to articulate a clear maintenance strategy for the new PWC facilities, although parents interviewed expressed that they believed that head teachers would alert community leaders about any maintenance issues in order to communicate these issues to their District Assembly (the local planning and implementing institution created by the Decentralization Law). Head teachers confirmed that this was the case. Some respondents also knew that schools could use funds from capitation grants to fix minor damages. This process follows the school maintenance process that existed prior to PWC implementation. According to the National GES office budget, GES has allotted $80,000/year for maintenance under capitation grants prior to 2013, which comes to approximately $4/year per school. However, head teachers interviewed reported that capacitation grants have not come since 2013. Furthermore, major repairs remain the responsibility of District Assemblies with support from communities, according to USAID. Given that each of the implementing partner agreements included provisions for maintenance plans, evidence suggests that these provisions were largely not met. In a few rare cases, a handful of concerned parents who participated in group discussions said they had engaged in minor maintenance activities, such a cleaning occasionally or making small repairs to the facility without getting paid and on their own accord (not in line with any over-arching maintenance plan).

While most communities were not engaged in maintenance activities and did not have guidelines to develop a sense of ownership to ensure maintenance, the evaluation team found that communities surrounding PWC sites constructed by Plan Ghana were more likely to be engaged than were communities surrounding PWC sites developed by other implementing partners. The TAP communities expressed that this was due to the fact that Plan Ghana led the community sensitization and training of PTAs/SMCs in order to engage and capacitate communities to play a key role in education improvement in their area.

According to GES high ranking officers, government institutions such as the DEOs, the GES, and the District Assemblies do not have a clear strategy to address maintenance of their facilities. USAID officials reported that they have developed or are developing maintenance agreements for each of the implementing partners and the MoE in the immediate future. In cases where such agreements had already been made at report writing in March 2015, results from these new plans were not provided to the team for analysis.

EVALUATION QUESTION 3: HOW DO TARGET BENEFICIARIES PERCEIVE THE PWC ACTIVITIES?

Beneficiary Satisfaction

The team assessed target beneficiary perceptions of the PWC project via group discussions with community members and teachers, group discussions with DEO staff, and FGDs with students. Overall, the team found that all beneficiaries interviewed felt the PWC project was an improvement over the previous situation, particularly in areas where pupils had to walk long

distances in order to get to school. In one case, the head teacher, PTA, and school patron of a school the team visited in the Volta Region were very pleased with the new KG block, which was an immense improvement from the thatched shelter where the children used to have KG classes. The new KG was visible from the road, and the head teacher said that passers-by have noticed it and brought their children to be enrolled. In this case, the enrollment tripled from about 12 to 36 (a 200 percent increase), according to teacher enrollment records. In another example, a mayor expressed that the USAID-funded schools help him to abolish the shift system in his area.

In other instances, communities were less satisfied with different aspects of the construction. One common complaint by community members interviewed was that the new PWC structures were too small to accommodate current students and staff. For example, head teachers and community members from the 20 KGs the team visited said the buildings were designed too small for the existing enrollment pressures in the communities. The exception to this finding was the new JHS blocks that were built to replace old ones, while maintaining the same number of students. Similarly, all DEO staff interviewed were concerned that the new DEO buildings were not big enough to accommodate the required number of DEO staff.

Another source of dissatisfaction in most schools was the fact that the facilities provided under PWC did not meet with the needs of the schools, as described above. Some head teachers said that the lack of teacher's desks and furniture for the head teachers' offices was a serious issue. Other head teachers said that while it was nice to have three new JHS classrooms, there were other existing classrooms in the beneficiary schools that were in serious disrepair, with problems ranging from holes in the roof to missing doors. The head teachers said that they were frustrated that their schools' needs had not been evaluated holistically and addressed in an appropriate manner. One said that it was like having a beaten-up old car: "One day someone comes to repaint it, install new seats and tires but neglects the faulty brakes, the oil leaks, and engine problems." With regards to toilets, student FGD participants from all latrine sites visited expressed their dissatisfaction with the fact that urinals were difficult to use, toilet blocks were not gender sensitive, and there was normally no running water. Also as described above, while some head teachers reported that they requested classrooms for KGs or JHSs, most had identified teacher housing, equipped ICT labs, library books and text books to be higher priorities rather than toilets. The request for teachers and teacher's housing was especially true of schools the team visited in isolated communities where it is harder to attract teachers. In one case, the head teacher at a school in an isolated community in Volta region that was receiving a KVIP said that he never found out why his school was not informed about the DEO decision to install the KVIP despite the community's requests for teacher's housing. The toilet in his school is still under construction.

With the exception of the recipients of the latrine sites, all beneficiaries interviewed expressed overall satisfaction with the PWC activities even if the structure received did not always meet their full expectations. As one respondent expressed, "We are happy with the facility and we believe there will be more to come in the near future." The vast majority of respondents asked the evaluation team whether PWC construction would continue, saying they were hopeful that something else would be built in their community more in line with their priorities.

EVALUATION QUESTION 4: HOW EFFECTIVE WERE THE IMPLEMENTING MECHANISMS, SUPERVISION PROCESSES AND QUALITY CONTROL ACTIVITIES FOR ACHIEVING THE EXPECTED RESULTS IN A TIMELY AND COST-EFFECTIVE MANNER?

Implementing Mechanisms with Implementing Partners

The PWC activities were implemented through the collaboration of four implementing partners with varying scopes of work, geographical coverage, and contracting mechanisms. FPMU, AMA, and MiDA all had FARAs, whereas Plan Ghana had a cooperative agreement. According to a presentation given by a United States' government contracts expert to staff at the Regional Development Mission in Asia (RDMA), the following are requirements of the FARA, among other things:

- ***Length and Complexity of Project:*** Because of financial burden that the use of reimbursement financing places on the host government, FARAs are best for low-cost, short-term projects that are divisible into elements or units small enough to be completed within 9 to 12 months or less before receiving reimbursement from USAID.
- ***Reimbursement for Self-Sustaining Units:*** Elements or units must be self-sustaining, useful, cost-effective, and desirable in their own right, regardless of whether other elements or units are completed – e.g. buildings or facilities of uniform size or capacity utilizing standard plans and specifications for design and implementation, such as a series of 100 similar or identical three-room school buildings. FARAs should not be used for large or complex activities with discrete elements or units that are dependent on the completion of other elements or units in order to be self-sustaining, useful, and cost-effective.
- ***Definable Criteria for Completion:*** USAID and the host country government must be able to agree, at the outset, on criteria to be used to determine achievement of the end product (and any intervening benchmarks on which USAID will base disbursements).
- ***Mission Resources:*** USAID Mission must also have available to it the necessary expertise, through its own or regional USAID staff or through contract, to ensure periodic inspections of the activity and to certify that elements or units to be reimbursed have been completed in accordance with agreed-to plans and specifications – for FARA arrangements involving construction or renovation of physical facilities, Mission must have available to it engineers with expertise to estimate the cost of the activity, to evaluate the progress of construction, and to concur in satisfactory completion of the end product.
- ***Benchmarks and Indicators:*** Benchmarks must be narrow enough that they are readily and objectively verifiable.

However, the evaluation team's review of these agreements revealed that they did not specify the kind and quality of the end products that USAID expected. Also, there was no clear indication that the PWC activities were meant to increase access to education and enrollment. As such, no criteria or benchmarks were created to measure these "key activity outcomes." See Annex 8 for a complete analysis of these agreements. Furthermore, in meetings with both the GoG and USAID, the evaluation team learned that USAID and the implementing partners had not agreed on clearly defined criteria for completion of the construction sites, nor did USAID produce a detailed project plan necessary for supervision and quality control independently of the contracting mechanism used to secure their participation. The lack of clear criteria for completion meant that it was impossible to hold implementers accountable for the key intended project outcomes of increased

access and enrollment. The complexity of this project and the assumption that the new buildings would lead to increased access and education was a bit of a stretch for a FARA mechanism, according to the above criteria, and that may have been the reason USAID did not include these outcomes in the FARAs. However, this effectively prevented proper targeting of facilities and tracking to achieve these outcomes.

Despite these challenges, USAID did complete periodic inspections of PWC activities (through FAS Consult Limited), as required according to the above. However, given the lack of clear criteria for deliverables, FAS Consult did not have much to compare construction quality against. Next, high ranking stakeholders also said that USAID failed to clearly define expectations for the quality, cost, and timing of PWC activities. According to interviews with implementing partners' staff, the partners worked independently without a formal process of collaboration or exchange of information that could have benefited each of them, as well as the project as a whole. As such, there is evidence that USAID and GoG could have done more to adjust their administrative and technical structures to provide better oversight of the project.

The evaluation team observed that USAID's cooperative agreement with Plan Ghana, on the other hand, included several key deliverables and benchmarks, which, theoretically, would have made it easier for USAID to hold Plan Ghana accountable. However, the clearer expectations under the cooperative agreement were not due to the type of procurement mechanism but simply due to the way the agreements were written.

Moreover, even though it was a requirement under both the FARAs and cooperative agreements, USAID reported that Plan Ghana was the only implementing partner that successfully presented a performance management plan (PMP) due to it being under contract or agreement with USAID to carry out a larger series of educational development projects, not just construction. The lack of PMPs for the other implementing partners meant that USAID did not have the tools it needed to be able to effectively monitor activity benchmarks, milestones, and performance. Despite the fact that Plan Ghana submitted a PMP, they did not meet their targets for most of the PWC indicators, and because they were contracted through a cooperative agreement rather than a contract, USAID was unable to hold them accountable for these outcomes.

Capacity of Implementing Partners and Quality Control Mechanisms

Another requirement of the FARAs according to the same RDMA presentation discussed above, is that they have the capacity to receive a FARA—in terms of both the technical expertise and the financial capabilities. As such, prior to accepting FPMU and AMA as implementing partners, USAID commissioned Price Waterhouse Cooper to assess the capacity of these organizations to receive a FARA. The Price Waterhouse report concluded that the procurement processes of FPMU and AMA were acceptable based on previous successful projects they had carried out. However, the Price Waterhouse report did not make any assessment of the planning, design, or other technical capabilities of FPMU or AMA. Despite this quality control mechanism, the team found during site visits that the readiness of these organizations in term of procurement to receive funds through a FARA did not translate into quality implementation, as many of the buildings the team observed presented evidence of decay (see Annex 9). To the knowledge of the evaluation team, there was no prior assessment of the capacity of MiDA or Plan Ghana.

The evaluation team found evidence that implementing partners engaged in quality control procedures in order to accomplish the project objective. For example, FPMU did not have the authority to change the MoE project designs, thus limiting its role to overseeing and coordinating the construction done by private construction companies. In response, FPMU created a construction supervision strategy whereby Clerk of Works were charged with supervising 2-3 construction sites at the time. AMA also obtained acceptable construction results, although the evaluation team was not able to obtain any information on the processes followed by this organization.

In comparing background documents to the structures at the sites visited, the evaluation team observed that important issues contained in the agreements (i.e. "All the schools, toilets, and DEO buildings financed by USAID will be constructed to a safe standard following the Ghana Building Code, Ghana Standards, and the Uniform Building Code of 1997, or the International Building Code—IBC—2006 or 2009" and "Standards for educational infrastructure planning, design, construction and operation shall include: 1—verification of environmentally appropriate site selection; 2—verification of basic good environmental management practices for construction; 3—provision of adequate potable water; 4—provision of adequate sanitation, including hand-washing facilities; and 5—provision of suitable facilities for solid waste management."), were not reflected on the ground in terms of construction quality (see Annex 9).

Once the technical team of USAID started noticing the first problems concerning quality, USAID requested and FPMU subsequently developed a Quality Control Plan. This document is a very comprehensive description of "what should be done" to ensure quality of construction. Unfortunately, resources were not allocated for its implementation, and neither the construction companies nor the Clerks of Work were trained to use it in their daily activities.

Project Timeliness

The team's review of background documents, and subsequent interview with implementing partners, show that many of the PWC activities were not completed in the planned timeframe. The last available FAS Consult report (Oct 2014) reviewing the PWC activities indicated that 86 structures had been handed over to the District Assemblies and were in use at the time of report finalization. Some had been supplied with furniture and others are yet to be supplied. It also indicated that 20 structures were substantially completed but had remedial work to be done on them. Additionally, it reported that 51 structures were yet to be completed, out of which 11 had been abandoned for the two months prior to the report; no progress was noted on 4 structures, and 24 structures were reported to have experienced slow progress. Finally, two toilet blocks in the Northern Region had not been started.

Although MiDA successfully completed its structures within a month of its planned completion date, both FPMU and AMA received FARA extensions due to challenges which delayed implementation. A large challenge for FPMU was the coordination and supervision of 63 construction companies that started working in several sites around the same time. After a while, each project started having its own timing depending on its size, location, and the performance of the construction company. Originally, construction schedule for all construction companies ranged between 28 to 40 weeks. Almost all construction projects were scheduled to start in June of 2012,

which would have meant that they should have wrapped up by the end of 2012. However, as of January 2015, out of 156 projects started by FPMU, only 109 had been completed and handed over; 22 received practical completion but had not yet been handed over, and 25 were due to be completed between January and February of 2015, suggesting that at least 30 percent of all FPMU sites were completed late.

Funding delays also impacted implementation timeliness. The FARAs call for regular monthly advances of money from USAID to the implementing partners. However, documents reviewed, such as quarterly reports, with regards to FPMU finances showed that the monthly advances were regular at the beginning of the construction process, but eventually these advances became erratic. As such, according to a FARA modification, in May of 2013, USAID eventually changed their strategy and decided to pay against evidence of work completed. FPMU staff reported that this new payment method proved very burdensome to them, as it required that they consolidate requests for payment from more than 60 construction contractors before submitting a reimbursement request for funds to USAID. Payments were a combination of advances and reimbursements with average turnaround times of 60 days or longer. FPMU staff reported that these lags in funding were difficult for them, as they did not have excess government funds to spend to continue project activities during these delays. As a result, FPMU staff said that sometimes small construction companies had to pull their staff from construction sites during funding delays, which meant that job sites were abandoned and construction was not completed in a timely manner.

Beyond delays created as a result of funding, the evaluation team's discussions with some of the contractors disclosed that bad weather conditions delayed implementation by making roads inaccessible for parts of the year. Another factor mentioned by contractors was the unavailability of certain construction components in rural and isolated communities. These arguments are only partially valid since with adequate construction and resource planning, these constraints could have been foreseen and handled more efficiently.

Project Cost-Effectiveness

Based on a review of background documents and observations of the PWC activities in the field, the evaluation team found that the FARA implementing mechanisms, supervision and quality control strategies did not ensure cost-effectiveness. For instance, as described above, cost savings would have been possible if existing buildings had been renovated rather than constructing new buildings. Next, one of the benefits of the FARAs is that they eliminate the need for implementing partners to seek out three quotes for development activities (according to the RDMA FARA presentation). This means that costs for the same activity and same quality can vary quite widely. For instance, the four-seat toilet blocks built by MiDA in the Northern regions cost approximately $13,400 each, (compared to the $20,000 spent by FPMU on similar toilet blocks) even though both were built by the same construction company with a sole source contracting modality. This price variance could have been eliminated had USAID ensured its independent government cost estimate was conservative (in line with competitive ranges) and limited the FARA amount to the amount identified through this assessment (USAID did limit the FARAs; however, the amounts allowed for the type of differences shown above). According to the RDMA presentation, FARAs allow for such limits, with excess costs being the responsibility of the implementing partner. The cooperative agreement with Plan Ghana, however, required competitive cost comparisons.

V. CONCLUSIONS

EVALUATION QUESTION 1: TO WHAT EXTENT DID THE FOUR PWC ACTIVITIES ACHIEVE THE PROJECT PURPOSE, OUTCOMES, AND EXPECTED OUTPUTS?

- The construction of KGs coincided with increased student enrollment, and is likely to have contributed to increased access to education amongst children. However, there is no evidence that PWC construction of JHS, DEOs, or latrines helped to increase access to education. Also, at least for KGs, more capacity is needed to address access needs.
- Although it was impossible to attribute enrollment outcomes to PWC activities, the construction of KGs and JHSs appear to have increased enrollment in Ghanaian education facilities. KGs increased overall enrollment, whereas JHSs increased enrollment just in the new JHS facilities (likely reducing enrollment in other JHS facilities). Again, DEOs and latrines did not appear to have any effect on the enrollment or retention of students.
- The creation of new DEOs improved the availability of basic education management infrastructure, as it meant more district-level education workers were available nearby to assist the schools in administrative tasks. However, the work of DEO officials was constrained by overcrowded facilities, lack of electricity and office equipment, and overall, lack of completion (in a few cases).
- The objective of creating an environmentally friendly atmosphere for learning, especially for girls, was somewhat achieved, although locked toilet facilities, lack of running water and sanitary facilities, and no clear segregation of toilets for girls and boys remained barriers for proper use. PWC activities were successful in completing most of the planned construction, although issues remain with the capacity and sustainability of the structures.

EVALUATION QUESTION 2: HOW WERE GOVERNMENT OFFICIALS AND LOCAL BENEFICIARIES INVOLVED IN THE ONGOING OWNERSHIP AND MAINTENANCE OF THE CONSTRUCTION FACILITIES?

- Government and community officials' feeling of ownership over and involvement in the maintenance of newly constructed facilities was limited.
- Government officials were incorporated to some degree through the District Assembly's list of facilities to address in their maintenance plan. However, no additional budget was generated to facilitate maintenance.
- Local beneficiaries of FPMU, AMA, and MiDA activities were only involved in the PWC process during the time of construction, at which time they provided food, shelter, labor, and security for building materials. With a few rare exceptions, they were not involved in the maintenance of school facilities, and even when they were, there was no plan to ensure their involvement.
- Plan Ghana's construction of seven JHS facilities were an exception to this rule, as the organization facilitated community ownership over these facilities.

EVALUATION QUESTION 3: HOW DO TARGET BENEFICIARIES PERCEIVE THE PWC ACTIVITIES?

- Although communities had a favorable perception of the fact that an education facility (JHS, KGs, and toilet blocks) had been provided to them, when probed about how much these addressed their needs, many stakeholders voiced concerns about the structures, such as that KGs were not big enough to absorb current demand, and toilet blocks were not practical for use by male and female students.
- Only the construction of JHS buildings was unequivocally approved.
- All DEO personnel interviewed were happy that new facilities were created. However, they complained about the lack of power, water, and better equipment, saying they could be much more efficient if they had these things.

EVALUATION QUESTION 4: HOW EFFECTIVE WERE THE IMPLEMENTING MECHANISMS, SUPERVISION PROCESSES, AND QUALITY CONTROL ACTIVITIES FOR ACHIEVING THE EXPECTED RESULTS IN A TIMELY AND COST-EFFECTIVE MANNER?

- There is not sufficient evidence on the implementing mechanisms to confidently conclude that the mechanisms themselves were effective or not effective.
- That said, the lack of specificity in the FARAs made it very difficult for USAID to hold the government implementing partners accountable for desired outcomes. Part of this was that the main intended outcomes of the PWC activities—increased access and enrollment in schools—were not even included as outcomes in the FARAs and were likely a bit complicated for enforcing under a FARA mechanism.
- Next, due to this lack of specificity, USAID was somewhat handicapped in ensuring quality control and effective supervision.
- As such, timelines for the PWC activities were all increased.
- The FARA procurement mechanism did not help to ensure cost-effective implementation, and while it was impossible to compare costs between Plana Ghana and the FARA implementing partners, it is likely that the cooperative agreement would perform better in this category given that it still requires partners to get competitive quotes.
- The implementing mechanisms, supervision processes, and quality control activities were not effective enough to ensure project outcomes in a timely and cost-effectiveness manner, as the bulk of the PWC activities were not completed on time or provided conclusive evidence of a structurally sustainable, friendly, and effective learning environment for the money spent.
- The use for FARAs as a G2G mechanism used has the potential for enormous impact on education. However, imprecise definitions on the "rules of engagement" in the PWC implementer FARA hindered project planning, supervision, and quality control. Many of the parties involved did not follow through with oversight mechanisms such as PMPs and Quality Control Plans. However, implementers such as FPMU did put into place supervision strategies which were commendable. Implementers and contractors cited financial management issues, bad weather, and material unavailability as challenges to timely implementation.

VI. LESSONS LEARNED

Contracting Mechanism

While both FARA mechanism could work well for procuring the construction of new school facilities, contracts would likely work better. Also, the FARAs for PWC activities did not include detailed criteria for ensuring completion of activities, nor did they include requirements that the implementing partners achieve key project outcomes. While the Plan Ghana cooperative agreement performed somewhat better for ensuring PWC outcomes, it lacks the teeth of a contract, and, thus, limits USAID's ability to hold the implementing partner accountable for key outcomes.

Development Hypothesis Needs to be Tested

Due to all the complications in the timely completion of construction of PWC sites and the interacting effects introduced by the MoE's new KG policy, this evaluation really did not work to test the development hypothesis that building new educational structures in Ghana would lead to increased access and enrollment. And, given the evidence in this report that access and absolute enrollment really did not increase that much (in isolation of the KG policy), the hypothesis may be faulty. As such, it would be wise for USAID to test this hypothesis through a future impact evaluation or a meta-analysis of other school construction projects throughout Sub-Saharan Africa.

Needs Assessment

It is imperative that future PWC projects are conducted based on current community level needs assessments in deciding exactly what to build. Needs assessments should be conducted just a few months before construction as part of the planning stage. Additionally, the needs assessment should be site-specific and comprehensive. In effect this would have high impact on the beneficiaries and increase the likelihood of beneficiaries achieving the project purpose.

Community Participation and Engagement

The PWC activities could have benefited from more community participation and engagement, especially concerning the maintenance of facilities. Plan Ghana's community sensitization activities offer valuable insight into how these activities might work well with PTAs and SMCs. For the other sites, the absence of community participation and engagement led to a lack of ownership of the PWC project because communities were not engaged in the process and did not feel empowered to own the facilities.

Maintenance

Necessary guidelines, facility operation criteria, and management process should be given to beneficiaries and key users of the facilities to empowerment them to contribute to facility maintenance. Additionally, areas with scarcity of water problems should not be given facilities that demand high use of water particularly toilet blocks. Such facilities become unusable after just a short period of time. Communities and local government entities also need access to funds to pay for routine and preventative maintenance.

VII. RECOMMENDATIONS

Based on the observations and conclusions of the implementation process, the evaluation team recommends the following for future projects:

1. USAID should work to test its development hypothesis through an impact evaluation of its next school construction project or a meta-analysis of other school construction projects in Sub-Saharan Africa. It could be that USAID is missing a step in its results' framework that is preventing it from reaching its intended goals of increased access and enrollment, and before the Mission spends too much more money on such activities, it should feel confident in this hypothesis.
2. Prior to rolling out future educational construction activities, USAID and MoE should agree upon a more holistic approach for school construction, with clear standards and guidelines to be followed in deciding on what to do and where, preparing site plans and floor plans, and selecting construction materials and techniques. These planning and design processes have to be in constant evolution, learning from projects done in the past as well as from international best practices.
3. USAID should seek to determine if contracts may be appropriate for constructing educational facilities in the future to ensure both that costs are efficient (through the requirement for three price quotes) and that deliverable timelines and indicator targets are met. Or, should it wish to continue working with the GoG to ensure their buy-in, they should ensure the FARAs contain more detailed, concrete deliverables and criteria for meeting those deliverables. They can also limit the price USAID is willing to pay for a particular deliverable in line with competitive ranges, and if the GoG spends more than that, they would not be required to cover it.
4. For future projects and/or project renovations, USAID should require implementing partners complete thorough technical, administrative, and financial qualification assessments of construction companies before contracting with them to ensure that they complete the task done in line with Ghanaian law, international building codes, and project specifications. An effective system of periodic site visits and reports should be implemented as well.
5. USAID should ensure that future school construction contracts or agreements include a participatory sensitization process and a deliverable for a plan for meaningful involvement of community leaders in choosing what should be built and where it should be located.
6. Prior to building new facilities in the future, USAID should contract for an assessment of existing educational facilities to determine whether it may be more cost-effective to renovate and/or repair existing facilities rather than building new structures and abandoning existing ones.
7. USAID should issue a contract or agreement to ensure architectural defects identified in this evaluation and the FAS consult reports are fixed immediately to prevent further damage and ensure sustainability of PWC buildings. The evaluation team recommends that all sites should be re-visited and construction/repairs completed, including by ensuring the connection of water and electricity.
8. USAID should require that future implementing partners ensure toilet projects are gender sensitive and fully equipped to meet the safety and hygiene needs of users.

Annex 1: Evaluation Statement of Work

SECTION C – DESCRIPTION / SPECIFICATIONS/STATEMENT OF WORK

C.1 BACKGROUND/PURPOSE

The purpose of this Task Order is to acquire the services of a contractor to conduct a performance evaluation of a set of Public Works Construction (PWC) activities in USAID/Ghana's Education Office which were implemented between 2010 and 2014 through different procurement modalities with a total estimated cost of $22.8 million. In total, the PWC activities aim to construct and equip schools, toilets and District Education Offices (DEO) in all ten regions of Ghana.

Over the past decade, Ghana has made great strides to increase school enrollment. Since the 2003/2004 school year, enrollment in kindergarten has more than doubled, from 637,115 children to 1,440,732, which has sent a wave of increasing class sizes throughout the education system. Over the same period, enrollment in junior high school increased by 41% and is expected to continue increasing. The rapid gains in enrollment have led to severe overcrowding in the existing schools. There are now approximately 4,000 schools which operate "under trees" due to lack of available school buildings. The Government of Ghana (GOG) recently increased the number of local districts from 170 to 216 to strengthen decentralization. Many of the newly created districts are in highly populated areas that lack adequate services and have limited existing office space.

C.2 OBJECTIVES

The PWC evaluation encompasses four activities that will be evaluated under the Task Order as summarized below:

a. The construction, furnishing and maintenance of 159 educational structures through a Modified Fixed Amount Reimbursement Agreement (FARA) with the Funds Procurement Management Unit (FPMU) within the Ministry of Education (MOE);
b. The construction, furnishing and maintenance of four public schools through a FARA with Accra Metropolitan Assembly (AMA);
c. The construction of 24 toilets in flood-affected areas in Northern Region through a FARA with Ministry of Finance and Economic Planning (MOFEP), in collaboration with the Millennium Development Authority (MiDA); and
d. The construction of seven Junior High Schools (JHS) under the Transition and Assistance Program (TAP), which was implemented through a Cooperative Agreement with Plan Ghana.

C.3 STATEMENT OF WORK

a. Basic Project Data

The PWC project comprises four activities, three of which were implemented through FARAs and one which was implemented using a Cooperative Agreement. Overall, the FPMU activity accounts for 82 percent of the structures built, while MiDA, TAP and AMA account for 12 percent, 4 percent and 2 percent respectively. The basic project data of each of the activities is outlined below.

	FPMU	*AMA*	*MiDA*	*TAP*
Agreement Type	Modified FARA	Modified FARA	Modified FARA	Cooperative Agreement
Project Title	The Construction Equipping of Schools, Toilets and District Education Offices and for Conducting Substantial Completion Inspection of School Facilities Constructed through the USAID Transition and Assistance Program (TAP)	The Construction and Equipping of Schools	Design-build Sanitation Facilities and other Minor Works – Phase IB	Transition and Assistance Program
Project Number	FY11-641-IL-008-009	FY11-641-SOIL-008-009	FY12-641-IL-008-011	641-A-00-10-00026-00
Project Dates	February 10, 2011 - February 9, 2013 (Extended to February 9, 2014 & re-extended to February 9, 2015)	March 24, 2011 – October 8, 2012 (Extended to March 8, 2013, re-extended to December 31, 2013 & re-extended to September 30, 2015)	October 16, 2012 – April 30, 2013 (Extended to November 30, 2013 & re-extended to December 31, 2013)	July 1, 2010 – August 31, 2013 (Extended to November 30, 2013)
Project Funding	USD 19,671,000	USD 2,300,000	USD 330,569	USD 9,619,200
Implementing Organization	Funds Procurement and Management Unit, Ministry of Education	Accra Metropolitan Assembly	Ministry of Finance and Economic Planning	Plan Ghana
Contracting Officer's Representative	Nana Osei Akumia Jnr.	Nana Osei Akumia Jnr.	Nana Osei Akumia Jnr.	Nana Osei Akumia Jnr.

b. Project Intent

The overarching purpose of the PWC project is to **increase access to basic education in Ghana**. The construction activities are based on the development hypothesis: If school buildings and other support facilities are constructed and maintained, then more students will gain access to basic education.

The expected outcomes of the collective efforts were:

- Access to basic education increased
- Enrollment in basic education increased
- Availability of basic education management infrastructure improved
- Good sanitation and environmentally friendly environment provided for pupils, especially girls

The table below outlines the expected outputs for each of the activities under the PWC project.

Activity	*Expected Outputs*
FPMU	1. One hundred and fifty-nine educational structures (50 new kindergartens, 49 new junior high schools (JHS), 45 toilet facilities to serve school compounds, and 15 new DEO facilities) designed, constructed, furnished and maintained for 4,000 school children and 500 DEO staff across all ten regions of Ghana. 2. Final inspections and Certificate of Completion produced for seven schools and 13 ICT centers constructed under the TAP program.
AMA	3. Four three-story, 18-classroom public schools for 3,000 school children constructed, furnished, inspected and on a schedule of regular maintenance 4. Digitalized records within AMA that comply with audit recommendations by PriceWaterHouse Coopers.
MiDA	5. Twenty-four toilet blocks constructed in schools in flood-affected areas of the Northern Intervention Zone for 8,066 pupils, particularly girls.
TAP	6. Seven new and fully-furnished Junior High Schools completed with disability ramps, girl-friendly latrines, hand washing facilities, electricity and water, catering to 840 pupils. 7. Major repairs to 19 Junior High Schools completed using construction contractors, and minor repairs to 130 sites completed using community micro-grants. (Note that Output 7 will not be included in this evaluation).

Initially developed under USAID/Ghana's Strategic Objective 8: *Improved Quality of, and Access to, Basic Education*, the construction activities are a complement to the new Development Objective 4: *Improved Reading Performance in Primary School*, under USAID/Ghana's Country Development Cooperation Strategy (CDCS) 2013-2017. Given that the implementing mechanisms included direct government to government funding, these activities link directly with USAID Forward objectives to strengthen partner country capacity and work through partner country systems.

The activities support the achievement of the goals and objectives in the Ghana Education Sector Plan 2010-2020, particularly the following: make available public and private child-friendly basic education for all through the District Assemblies, the private sector, community-based organizations, non-governmental organizations and faith-based organizations (Basic Education Goal 1); ensure equal basic education opportunities for all (Basic Education Goal 4); and ensure that all basic education schools meet national norms in health, sanitation and safety (Basic Education Goal 6).

c. Project Approach and Implementation

1. FPMU

The FPMU activity, signed in February 2011, was to be completed within 24 months. However, due to the late commencement of actual construction activities, the project deadline was extended to February 9, 2014 and then further extended to February 9, 2015. The postponement of construction resulted from: delays in allocating funding to environmental and technical site inspections, which had to be completed before finalizing the construction plans and designs; delayed submittal of disbursement vouchers to USAID; and delayed disbursement of monies by USAID. In response, USAID and MOE agreed to modify payment and financial reporting arrangements to enhance the timeliness of reimbursements to all contractors.

In April 2012, FPMU procured the services of 63 contractors who began construction one month later. Before starting construction, FPMU created environmental mitigation and management plans, conducted site-specific geotechnical and geomatic surveys, and developed construction designs for the 159 sites. They gave all of these documents to the contractors to undertake the work. FPMU now manages and oversees the construction activities, and ensures accordance with British and Ghana Building Codes.

To undertake the construction of kindergartens and JHS, MOE selected existing primary school compounds to assist with the provision of the complete range of basic education schooling – kindergarten, primary and JHS. MOE selected districts to receive new school buildings, furniture and toilets, based on demonstrated need for additional classrooms and evidence of good school governance. Specific criteria for selecting districts included: 1) Worse than average shortage of space for incoming students; 2) Worse than average ratio of primary to junior high schools; 3) Better than average primary completion rates, and 4) Better than average district-wide scores on student achievement tests. Specific school sites within these districts were selected by MOE and GES according to their demonstrated need for increased class space to accommodate the rising student population.

The FPMU activity also supported construction and furnishing of DEO facilities in selected newly-created districts to help the MOE and GES deliver needed education management services to these areas. MOE and GES selected specific sites for the DEO facilities based on the lack of adequate existing office space. Further, MOE and FPMU coordinated with Plan Ghana to conduct completion inspections of 39 JHS (including seven newly constructed schools, 19 schools with major rehabilitation and 13 schools with significant rehabilitation) and 20 library/ICT facilities constructed and/or rehabilitated under the USAID-funded TAP project. TAP, a $10.5 million project implemented by Plan Ghana that ended in August 2013, aimed to expand and improve available spaces for JHS pupils and reduce barriers to JHS enrollment for pupils and their families.

USAID/Ghana provided financial management and environmental compliance training to FPMU to manage resources efficiently and help construct quality schools and DEOs in a timely manner. In September 2013, USAID contracted a local engineering firm, FAS Consult Limited, for a period of eight months to provide inspection, monitoring, building certification, and capacity building services to support PWC activities. In April 2014, their contract was extended to December 31, 2014 in order to allow FAS Consult Limited to complete all inspections. With regards to maintenance, MOE signed a letter confirming their capacity to undertake ongoing maintenance of the school facilities.

Current status: In their progress presentation to USAID in May 2014, FAS Consult Limited found that 83 of the 159 structures had been substantially completed. They defined "substantially completed" as a structure that was constructed but still required small-scale refinements and repairs, such as replacement of warped timber, painting or repainting of walls, and securing chalk boards to walls. Seventy-one (71)

structures were still undergoing construction, and five (5) had not commenced construction. FPMU's quarterly report for March 2014 found that 94 structures had reached "practical completion", which defined a structure as complete if it was standing but still had some defects. The difference in numbers of FAS Consult's "substantial" and FPMU's "practical" completion resulted from slightly different thresholds in defining minor and major defects. It is anticipated that all structures will be completed by December 2014.

2. AMA

The AMA activity was signed in March 2011 and was to be completed within six months. However, due to the delays in actual construction activities, the activity was extended to March 2013 and again to December 2013. The first extension resulted from late receipt of permits from the Environmental Protection Agency, relocation of electrical cables on construction sites, and issues encountered in the tendering and contract award processes. The second extension resulted from delays in releasing money to contractors for completed work which slowed down subsequent construction, slow procurement processes for the digitization of records, and delays in procuring furniture due to lack of adequate and secured storage facilities.

AMA procured the services of four construction contractors using GOG procurement systems - Messrs Britnata Company Limited, Samaward Company Limited, High Trust Ghana Limited, and Thywill Business Investment and Consultancy Limited - to build four school compounds within the Accra Metropolitan Area. AMA was responsible for ensuring that the land for each school construction had a clear and good title. The original agreement included furnishing of classrooms with computers. However, given rising construction costs, AMA agreed to fund the computers while USAID funded the complete construction of the original four buildings. With regards to maintenance, MOE signed a letter confirming their capacity to undertake ongoing maintenance of the school facilities.

Current status: All four AMA-constructed schools have been completed. Two additional schools were added to the FARA on June 17, 2014. To accommodate the construction of these extra schools, the FARA was extended for a third time to September 30, 2015.

3. MiDA

Under the Rural Services Development Project of the Millennium Challenge Account Ghana Program, MiDA implemented the Phase 1B Schools Rehabilitation Project in three Northern Intervention Zones in 2008-2009. The educational facilities were made up of two, three and six-unit classroom blocks, kindergartens, teachers' accommodation, among other things.

The five-year program included the provision of toilets to schools rehabilitated in the Northern Agricultural Zone, using innovative biofil technology. However, due to budgetary constraints, the rehabilitated Phase 1B Schools that were commissioned in 2010 did not receive the toilet facilities. Although a contract had been signed with Messrs Biofil Technologies Limited for the construction of biofil toilets in these schools, the contractor had to demobilize on November 30, 2012.

USAID/Ghana provided USD 330,568.76 to MiDA, through the Millennium Challenge Corporation, in June 2013 to provide appropriate sanitation facilities for 24 schools in flood affected areas of the Northern Intervention Zone. This activity, referred to as Design-Build Sanitation Facilities and other Minor Works – Phase 1B, involved the construction of 17 four-seater toilets/two-urinals, and seven two-urinal facilities for five Northern Districts.

Messrs Biofil Technologies Ltd was commissioned to execute and complete the activity. Work

commenced on July 2, 2013, with an anticipated completion date of November 30, 2013. The Contractor employed 53 local artisans and hired three permanent workers (accountant, project officer and procurement officer) to undertake the work. They provided hands-on training in construction with ferro-cement and installation and plumbing of digesters to the local artisans.

Current status: All works were completed by December 31, 2013.

4. TAP

Unlike the other construction activities in this evaluation, the TAP school construction activities were a small part of the larger TAP project. This evaluation will only focus on the full construction of seven schools under TAP, not any of the other activities or outputs conducted by TAP. Implemented by Plan Ghana, TAP aimed to increase JHS enrollment and completion rates in 156 junior high schools across 13 districts in four regions (Brong Ahafo, Central, Eastern, and Greater Accra). USAID and Plan Ghana shared the costs of TAP, with USAID providing USD 8,000,000 and Plan Ghana contributing USD 1,619,200. Final project expenditures totaled $9,494,239.97. Plan Ghana submitted a request for a no-cost extension on July 22, 2013. USAID granted the no-cost extension on August 26, 2013, extending TAP's completion date to November 30, 2013.

Plan Ghana implemented two main activity components to achieve TAP's objectives. The first component aimed to expand and improve classroom spaces for JHS pupils, while the second aimed to reduce barriers to JHS enrollment. The two components used community engagement as their core approach, and complemented each other in terms of getting poor Ghanaian children to enroll in and attend junior high school with the necessary infrastructure and quality pedagogy required at their schools.

The project allocated USD 463,225.60 to the construction of seven schools under Component 1(Expanded and Improved Space Available for JHS Pupils within TAP). Specifically, TAP expanded and improved infrastructure for the seven schools to meet USAID standards by walling-in and strengthening classrooms, providing girl-friendly latrines and hand washing stations, enabling access for students with disabilities, and improving access to water and electricity in project schools. They built these schools in communities that had extremely poor or temporary school buildings. TAP used a direct contractor-managed approach to build the school buildings to ensure uniformity, compliance to the GES design, and quality and timely completion of school buildings. The schools included three classrooms, a head teacher's office, a storage room, and a staff common room.

Upon selection of schools, the TAP project team facilitated an open-bidding process to select a private construction contracting firm for each site. Contractor selection was based on the proposal's technical quality and the value presented. The TAP project team oversaw construction of the new junior high schools and they supported and trained School Management Committees to support school management upon delivery of the building. The work included sub-structure work, masonry wall repair, plastering and painting of walls, replacement of roofing structural beams and aluminum roofing panels, replacement of doors and windows, and installation of new blackboards and posting boards.

Associates for Change, an external consulting firm, submitted a final performance evaluation of TAP in January 2014. The evaluation found that the TAP project increased learning spaces, improved physical infrastructure, and reduced socio-economic barriers to JHS enrollment and completion for pupils and their families across 156 TAP schools in 13 districts of Ghana. The evaluation includes information about the seven constructed schools, and will be provided to the contractor for reference.

Current status: All construction works were completed, and the project closed on November 30, 2013.

d. Target Areas

The PWC activities encompass the construction of 194 sites across all ten regions of Ghana, including 50 kindergartens, 56 junior high schools, 69 toilet facilities, 15 district education offices, and four combined primary/junior high school buildings. The table below provides a summary of the number of construction sites by region and activity. Attachment J.2 gives a detailed list of construction sites, and Attachment J.3 provides a map of the 159 FPMU construction locations.

Region	*FPMU*	*AMA*	*MiDA*	*TAP*	*Total Number of Sites*	*Percentage of Total*
Northern	68	-	24	-	92	47%
Upper East	22	-	-	-	22	11%
Western	17	-	-	-	17	9%
Volta	13	-	-	-	13	7%
Eastern	10	-	-	1	11	6%
Brong Ahafo	7	-	-	3	10	5%
Central	7	-	-	1	8	4%
Ashanti	7	-	-	-	7	4%
Upper West	7	-	-	-	7	4%
Greater Accra	1	4	-	2	7	4%
Total	*159*	*4*	*24*	*7*	*194*	*100%*

e. Sources of Information

The Contractor shall consult a broad range of background documents related to school construction efforts, both in Ghana and internationally. Quantitative data is also available, including enrollment rates, number of teachers and their qualifications, and annual Basic Education Certificate Examination results. USAID/Ghana can work with Ghana Education Service (GES) to obtain this data for target schools. District, regional and national level data is publically available online. See Attachment J.4 for a list of useful links for background research.

A range of stakeholders should be consulted for the purposes of the evaluation, including USAID, FPMU, AMA, MiDA, MOFEP, Plan Ghana, FAS Consult Ltd, local construction contractors, DEO staff, District Assembly staff, Head Teachers, teachers, students, parents, and local community leaders.

USAID will provide the Contractor with a package of briefing materials, including:

- Cooperative Agreement, FARAs, Implementation Letters and related attachments
- Modifications to Cooperative Agreement, FARAs and Implementation Letters
- Monthly and Quarterly Progress Reports, and Completion Reports
- Construction Quality Control Plans
- Evaluation reports for contractor selection processes
- Designs, specifications and contract documents for contractors
- Site specific Geotechnical/ Geomatic Reports

- Site specific EMMPs
- USAID reports on field trips to construction sites
- Reports of stakeholder meetings and consultations
- Pictures depicting work progress at construction sites
- FAS Consult Ltd's Initial Technical and Financial Audit Report on FPMU Activities, as well as Quarterly and Monthly Progress Reports
- Final Performance Evaluation of TAP Program
- Presentation on Engineering Support Services

C.4 EVALUATION RATIONALE AND QUESTIONS

a. Purpose and Audience

The evaluation is aimed to determine the following:

1. To learn to what extent the project's objectives and goals have been achieved;
2. To explore how effectively the program has developed plans and structures to encourage ongoing maintenance and sustainability;
3. To understand how the activities were perceived and valued by beneficiaries;
4. To ascertain the effectiveness of the project's management processes, including the implementation mechanism, supervision capacity and quality control; and
5. To identify lessons and best practices that can inform the design of future education construction and government-to-government projects in relation to enhancing access to basic education, both in Ghana and elsewhere.

This evaluation is not aimed at determining the structural integrity and quality of the facilities constructed. FAS Consult Limited, a local engineering firm, will provide quality control data on FPMU sites to the Contractor as an additional data point that should be incorporated into the evaluation. However, the Contractor will not need to conduct these quality checks themselves. That being said, an engineering perspective will be useful for interpreting the construction documentation, and as such the Contractor should include such expertise in their staffing composition.

The audience of the evaluation report will be the USAID/Ghana Mission, USAID/Ghana Education Office, FPMU, MOE, AMA, MiDA, MOFEP, and Plan Ghana. USAID and other stakeholders, especially GOG institutions, will use the report to strategize with regards to future construction projects. For example, the evaluation provides the opportunity to explore the effectiveness of both FARAs and Cooperative Agreements as implementing mechanisms for undertaking construction projects in collaboration with GOG. It is expected that implementing partners will have the opportunity to discuss the benefits, challenges and lessons learnt of the education construction activities.

b. Evaluation Questions

The questions for this evaluation, which should be considered of equal importance, are:

1. **To what extent did the four PWC activities achieve the project purpose, outcomes and expected outputs as outlined in Section II.c?**

   This normative question focuses on the overall progress of the project over its years of implementation, particularly with regards to students' access to basic education. To answer this

question, the Contractor should synthesize the project achievements and highlight areas that fell short of expected targets. Given that USAID received various reports from FPMU, AMA, MiDA, Plan Ghana and FAS Consult Limited, the Contractor shall analyze trends, explore differences, and describe linkages between target schools and enrollment rates sourced from GES' Education Information Management System. The Contractor should seek to provide initial findings and analysis on whether the project has achieved its purpose, bearing in mind that some construction sites may have only recently been constructed. As such, the Contractor may wish to focus on sites that were constructed in the early stages of the project to ascertain whether any longer-term benefits have eventuated.

2. **How are government officials and local beneficiaries involved in the ongoing ownership and maintenance of the constructed facilities?**

   This descriptive question focuses on the sustainability of the project within the local community with a particular focus on: a) strategies to ensure quality maintenance of the structures, and b) ongoing environmental compliance based on USAID and GOG standards. The Contractor should seek to take into account the views and activities of a broad range of stakeholders, including DA staff, DEO staff, head teachers, teachers, parents and students. Data collection should go beyond methods that focus on self-reporting in order to ascertain a realistic picture of current school maintenance plans, guidelines, activities and processes.

3. **How do target beneficiaries perceive the PWC activities?**

   This descriptive question focuses on client satisfaction and perceived benefits and/or challenges with the PWC activities before, during and after project implementation. This includes beneficiaries' perceptions of and involvement in selecting the location and structure type of building sites with respect to satisfying the needs of the community. Target beneficiaries include DA staff, DEO staff, teachers, parents, students, and community leaders.

4. **How effective were the implementing mechanisms, supervision processes, and quality control activities for achieving the expected results in a timely and cost-effective manner?**

   USAID/Ghana decided to use FARAs and Cooperative Agreements, rather than contracts, as implementing mechanisms for the PWC activities. USAID/Ghana experienced start-up delays as it negotiated the construction activities with GOG, and engaged an external consulting firm to assist with quality inspections of the FPMU activity. Given these realities, this descriptive question aims to ascertain the effectiveness of the project's management processes with a specific focus on: (a) the utility of FARAs and Cooperative Agreements for financial and project management; (b) the capacity of GOG, particularly FPMU, AMA and MOFEP, to supervise building contractors; and (c) efforts to enhance quality control of the construction sites.

Having answered these questions, the Contractor must identify innovative ideas that worked well within the project, challenges that limited its effectiveness and, importantly, lessons learnt and recommendations for future projects, particularly construction and government-to-government work.

c. Gender Considerations

Gender should be carefully considered when answering each of the evaluation questions. The USAID Education Strategy (2011) notes that educational programs "should promote gender parity, gender equity, and focus on improving education quality for both boys and girls." USAID expects all evaluations to consider differences in the ways in which women and men participate in activities, as well as the number

and percentage of each sex that are actively involved. Although the activities evaluated were not designed under the new strategic focus, they should adhere to Agency gender guidance and policies.

For the purposes of this evaluation, the Contractor must highlight gender specific approaches, outcomes, participation and engagement to better understand successes and challenges of the PWC activities in enhancing equal access to education. For example, it would be useful to explore whether the toilet blocks constructed at schools are girl-friendly and used by girls. The Contractor may wish to use a gender analysis matrix, such as USAID's Six Domains of Gender Analysis Framework, or other relevant frameworks to identify any gender-based gaps between males and females.

C.5 EVALUATION DESIGN AND METHODOLOGY

The PWC performance evaluation focuses on answering descriptive and normative questions. Descriptive questions seek to understand a program or process or attitudes towards it, and normative questions seek to measure progress against previously established criteria or norms. To answer the evaluation questions, USAID/Ghana the Contractor shall visit, assess activities, and collect information from stakeholders in 50 - 60 construction sites.

The contractor shall have a robust sampling strategy that will allow them to effectively answer the evaluation questions, while taking into account the diversity of construction locations. The selected construction sites should vary by region, district and level of isolation. The Contractor must also take into account the diversity of languages spoken across the districts and include evaluation staff with the requisite language skills and/or use translators and interpreters.

The contractor shall employ new, creative suggestions regarding this evaluation. The contractor's methodology will be comprised of a mix of tools appropriate to the evaluation's research questions. These tools may include, but are not limited to:

1. Review documentation
2. Analyze available quantitative data on target schools and districts
3. Organize focus group discussions with key stakeholders
4. Conduct stakeholder interviews
5. Undertake site visits and school/DEO observations
6. Develop case studies of one or more construction sites

Prior to the start of data collection, the Contractor will develop and present, for USAID review and approval, a data analysis plan (as a part of their work plan) that details how qualitative data will be transcribed and analyzed; what procedures will be used to analyze qualitative data from key informant and other stakeholder interviews; and how the evaluation will triangulate qualitative and quantitative data to reach conclusions about the effectiveness and efficiency of PWC activities. The Contractor must also share data collection tools with USAID for review, feedback and/or discussion with sufficient time for USAID's review before they are applied in the field.

The data collected will be analyzed by the Contractor to identify correlations and establish what are the major trends and issues. Data will be disaggregated by sex to identify whether program inputs are benefiting men and women equally. USAID/Ghana will submit the final evaluation report within three months to the Development Experience Clearinghouse at http://dec.usaid.gov.

All raw evaluation data sets must be provided to USAID upon completion of the final report. According to the USAID Evaluation Policy (2011), "All quantitative data collected by USAID or one of the

Agency's contractors or grantees for the purposes of an evaluation must be uploaded and stored in a central database…. The data should be organized and fully documented for use by those not fully familiar with the project or the evaluation."

It is important to keep in mind possible limitations of this evaluation. Although the evaluation should explore causal links where possible, USAID/Ghana understands that it will not authoritatively ascribe a direct causal relationship between observed outcomes and PWC activities. It will, however, be possible to access enrollment data for schools over a number of years to assist in comparing enrollment rates before and after construction.

C.6 EVALUATION MANAGEMENT

a. Logistics

USAID/Ghana will provide extensive overall direction and advice to the Contractor, identify key documents and stakeholders, and provide input on the work plan, draft reports and final report. The Contractor will be responsible for its own logistical support, including scheduling appointments with key stakeholders, and arranging (with prior approval from USAID/Ghana) other meetings identified during the course of the evaluation. The Contractor will be responsible for arranging vehicle rental, drivers and flights; making their own accommodation arrangements; and procuring translation and interpretation services, administrative assistance, office space, computers, internet access, printing and photocopying.

b. Scheduling

The evaluation work, including analysis, reporting, USAID/Ghana feedback, and submission of final reports and data sets, is to be carried out over a period of 17 weeks. **It is, however, important to note that four of the 17 weeks are allocated to USAID/Ghana's internal feedback processes in Phase 3 and should therefore not be counted as work undertaken by the Contractor. Thus, the Contractor must seek to complete their work within the period of 13 weeks.** A six-day work week will be authorized per Section F.5 below.

Phase	*Timeframe*	*Description*
1. Planning	No longer than 2 weeks	Phase 1 work will be done through email and telephone. The team will set as many meetings and interviews as possible prior to arrival in Ghana. <u>Key activities</u> • Obtain and read major background documents • Prepare and submit draft work plan • Revise and submit final work plan based on USAID/Ghana feedback • Develop list of contacts and a preliminary interview schedule
2. Field work	No longer than 7 weeks	During Phase 2, the Contractor will fly into Ghana to conduct their field work. Information gathering and pre-testing of data collection instruments should take no longer than one week. The majority of the time must be dedicated to collecting data in the field. <u>Key activities</u> • Conduct in-brief with USAID/Ghana

		• Gather and review additional secondary data • Finalize interview and site visit schedule • Pre-test data collection instruments • Conduct data collection in field • Conduct debrief with USAID/Ghana • Conduct debrief with USAID/Ghana's partners
3. Analysis and Reporting	No longer than 8 weeks	Phase 3 includes both the Contractor's analysis and reports, and USAID/Ghana's feedback on those reports. The first draft evaluation report must be submitted before the Contractor leaves Ghana. The Contractor has four work weeks to complete their work as outlined below, with the additional four weeks being dedicated to allowing USAID/Ghana time to provide comments and feedback on the first draft evaluation report (1 week), second draft evaluation report (2 weeks), and final evaluation report (1 week). <u>Key activities</u> • Undertake analysis and submit first draft evaluation report • Incorporate feedback and submit second draft evaluation report • Respond to TEAMS comments in statement of difference or by incorporating feedback into the final report • Submit raw data sets to USAID/Ghana

C. 7. IMPLEMENTATION AND MANAGEMENT PLAN

The Contractor shall provide contract management necessary to fulfill all the requirements of this Task Order. This includes cost and quality control under this contract.

END OF SECTION C

Annex 2: Evaluation Design and Methods

EVALUATION METHODS

The team employed a mixed-methods evaluation approach, using both primary and secondary data collection methods for this performance evaluation. Specifically, prior to mobilizing to the field, the evaluation team completed a desk review of secondary sources, including FARA and cooperative agreements, the design documentation available, agreement amendments, activity technical and financial progress reports, and other background documents.[1] A full list of documents reviewed is provided in Annex 4. The evaluation team conducted primary data collection for this evaluation over a period of eight weeks from December 26, 2014 to February 10, 2015, incorporating the following methods: direct observation through site visits, key informant interviews (KIIs), and focus group discussions.

Desk Review

The secondary data was collected from documentation provided to the team by the implementing partners and USAID. The team collected follow-up documentation from individual meetings with the implementing partners and USAID.

Key Informant Interviews in Accra

The team spent the first week of fieldwork gathering information through 17 KIIs in Accra with MoE officials from FPMU, AMA, and MiDA; USAID officials; and other stakeholders. However, the team was unable to meet with a representative of the TAP/Plan Ghana until the end of the field visits. Additionally the team met with the USAID education office coordinator for the PWC activity and staff in charge of the project monitoring. Finally, the team also met with officials from Ghana Education Services (GES) and the MoE in order to better understand the government's broad vision and impetus for carrying out the PWC activities. The team developed semi-structured interview instruments for these KIIs, and these are included in Annex 3.

Site Visits

The sample included 30 percent of all 194 PWC construction sites, including 4 DEOs, 13 KGs, 20 JHSs, and 20 toilet blocks and KVIPs. Please see the Table 1 below for a breakdown of the type of site visited by implementing partner. For each site visited, regardless of the type of construction undertaken, the team completed two major tasks: 1) a thorough evaluation of the planning, design, and constructions aspects of the building; choice of location, finishing details, connection to water and electricity networks, and adequacy of the building[2] and 2) a group discussion with head-teachers, Parent Teachers Association (PTA) members, School Management Committee (SMC) members, traditional chiefs, and Clerks of Work who supervised the construction of the various sites. Group discussion participants were selected by school head teachers in advance of the team's arrival to ensure efficient visits by the teams. The facilities evaluation was done alongside the Clerk of Works that worked at each particular site. Additionally, for sites where a latrine was

[2] Although the evaluation was not primarily aimed at determining the structural integrity and quality of the facilities, understanding the extent to which the constructed facilities were designed and built according to plan and in accordance with Ghanaian Law and International Building Codes, is an essential prerequisite for understanding why the project may or may not have achieved its higher-level goals of improving access to education.

built, the team also completed two qualitative focus group discussions (FGDs) with beneficiary students from all grades (one for each sex, led by a FGD facilitator of the same sex to ensure a safe space for participants to be candid about their experiences). Finally, for the DEO sites, the team completed a group discussion with field-based GES representatives and DEO staff at the new DEO site (none of which were yet completed or occupied). In total, 563 individuals participated in group discussions during site visits. Please see Table 2 below for a breakdown of group discussion participants.

Table 1: Percent of Sites Visited by Type and Implementing Partner

Implementing Partner	DEOs Visited	Total DEOs Built	KGs Visited	Total KGs Built	JHSs Visited	Total JHSs Built	Latrines Visited	Total Latrines Built	Total Sites Visited	Total Sites Built	% of Sites Visited
FPMU	4	15	13	50	16	48	13	43	46	156	**29%**
AMA	0	0	0	0	2	4	0	0	2	4	**50%**
MiDA	0	0	0	0	0	0	7	24	7	24	**29%**
Plan Ghana	0	0	0	0	2	7	0	0	2	7	**29%**
Total	**4**	**15**	**13**	**50**	**20**	**59**	**20**	**67**	**57**	**191**	**30%**

Table 2: Number and Type of Group Discussion Respondents During Site Visits

Group Discussion Respondent Type			No.	% of Total Interviews
Head Teachers			25	4%
Field-based Implementing Partner Staff			4	1%
Contractors			1	0%
Assemblymen			3	1%
Teachers			177	31%
SMC Members			71	13%
PTA Members/Parents			37	7%
Community Members*			47	8%
DEO Staff			43	8%
Students (Focus Group Discussions)			125	22%
	No.	*%*		
Male	70	56%		
Female	55	44%		
Type Unknown			30	5%
Total Respondents			**563**	**100%**

*Community Members include Chiefs, Elders, and School Patrons

The team developed standardized data collection instruments for structured site observations and protocols with key questions for the group discussions and KIIs (see Annexes 3 and 7 for these protocols). Additionally, in order to comply with best practices in evaluation ethics, Social Impact's Internal Review Board (IRB) reviewed all instruments prior to use. Additionally, the team required that all respondents provide their

informed consent before participating in the evaluation. Following the site visits, the team analyzed the data and quantified and tabulated individual responses into charts in order to demonstrate the recurrence of themes and/or the presence of key indicators.

EVALUATION LIMITATIONS

Selection Bias

Given the limited sample frame, it is quite possible that the team ended up with a bias sample. Additionally, since the sample size for many of the disaggregated groups is very small (at times less than five—there were only four DEOs—for example), results should not be taken to be internally valid or representative of all PWC construction sites in Ghana. The project types were not equally represented given the challenges of simultaneously ensuring regional parity, project type parity, and implementer parity. Next, in most instances the evaluation team had little influence over participant selection during site visits for the community/school stakeholder group discussion, the student FGDs, and DEO staff group discussions. This is because the head teachers relayed information about the team's visit prior to the team's arrival at each site in order to maximize time by having all stakeholders ready for the discussions. Thus, despite instructions to keep the number of community group discussion participants to 6 to 10, the number of participants ranged from as few as 2 individuals to more than 30. The same was true for the group discussions with the DEO staff. The evaluation team found that with a group of more than 6 or 7, it was difficult to ensure all participants' voices were heard.

Response Bias

Despite requests that the team be allowed to interview head teachers privately, this was often impossible because there were so many people in the school eager to participate that the head teacher did not allow privacy for these type of interviews. Also, the team's time was very limited at each school given the number of sites they needed to cover per the SOW. As such, instead of interviewing head teachers separately, the head teachers joined the group discussion with community members. These group settings may have biased the responses of the head teachers or other stakeholders. However, since the trends in responses from head teachers appeared the same whether others were present or not (the team was able to interview two head teachers separately from the larger community group), the evaluation team is not too concerned about this bias. Next, the group discussions held at DEOs, sometimes included too many staff members for a balanced and participatory FGD to take place.

Time Issues

The evaluation suffered from two types of time limitations. First, the team visited a total of 57 school sites in remote areas over a three-week period.[3] In order to adhere to this schedule, the team was limited to approximately 45 minutes at any given location. This meant that KIIs, group discussions, and site inspections had to be completed quickly, with limited probing and time for follow-up questions. Second, the fact that most of the structures visited were only very recently constructed meant that there was not enough time for the PWC activities to demonstrate their full effect. Many school studies suggest that it takes several years before the benefits of new construction are fully realized. As such, it was difficult for the evaluation team to identify meaningful comparisons of changes in enrollment (and attendance), resulting from the construction. In order to assess their impact on enrollment, *end-of-year* enrollment and attendance data would be needed for three (or at very least, *two*) school years. The fact that the KGs visited had mostly opened in 2014 -15 and in a few case in 2012-13, meant that there were not enough longitudinal data to develop meaningful and credible conclusions about their impact on overall enrollments in the district educational system (as there are often anomaly years in school enrollment and attendance figures, and it is impossible to rule out the

[3] The evaluation team had planned to visit 58 sites but was unable locate one Plan Ghana site due to the fact that the implementing partner was not available to give directions. The total number of sites successfully visited is 57.

possibility that results are not due to some external factor that may not exist in later years).

Attribution Issues

Although a comparison of enrollment rates to the timing and extent of PWC activities illustrates some trends in enrollment rates, it is impossible for the team to make a final determination of the causal linkages between PWC activities and this particular outcome. The reason for this is that there was no comparison group for this evaluation. As such, it could be that the trends the team identifies would have occurred with or without the PWC interventions.

Secondary Data Issues

Another major limitation for this study was its heavy reliance on secondary data, for which it is impossible to know what level of rigor, consistency, and care was taken during data collection. And, there is evidence to show that some of the data contain serious measurement issues. For instance, the evaluation team found that the JHS blocks essentially redistributed existing enrollments in the school system to make enrollment figures seem higher in PWC school sites, without adding any new students to the overall system. The only structures that were intake-points for new enrollments, and, thus, able to be assessed in the short-term, are the KGs.

Availability of Partners

The core Plan Ghana and MiDA activities were completed about one year ago, and most of the PWC implementing partner teams (including those for FPMU and AMA) were already dissolved at the time of the evaluation. As such, key informants who were involved in the process were in many cases no longer available to assist in providing first-hand information. Although AMA provided generic drawings, they did not supply project specifications, contractual documents, scheduling documents, or full cost information. MiDA provided complete technical information but limited contractual and financial information. The greatest challenge came with evaluating Plan Ghana's work. The team was unable to visit some of the Plan Ghana's sites due to the lack of response from the organization prior to fieldwork (again adding to selection bias). As such, the team had to complete some of the evaluation of Plan Ghana's work through a desk review of documents provided by USAID, rather than interviews with the implementing partner. The evaluation team's assessment of Plan Ghana's work may, therefore, not be as robust as its assessment of the other organizations' sites. The team did not encounter any challenges in acquiring information from USAID representatives, as these individuals generously shared their time and knowledge. USAID attempted to put the team in contact with the implementing partners throughout the evaluation, but were not successful in doing so for Plan Ghana until after fieldwork.

Annex 3a: Data Collection Instrument – Interview Themes for Group Discussions and KIIs by Stakeholder

Site ID:	Date Visited:	Region:
District/Municipality:		Site/Town:
Structure/Type:		Category:
Status of Work:		Interviewer(s):

Parents, community and/or key leaders

1. How did you find out about the construction planned for your site?
2. Were you approached prior to the decision being made or were you informed after the fact?
3. In what ways did you participate/collaborate with the project (if you did)?
4. Did any local authority/stakeholder from the community (e.g. politician, influential community leader) have any intervention/participation in the choice of the site and/or the type of construction?
5. What did you do to help maintenance last year? What will you do in the future?

School teachers and head teacher

1. How did the project come to be? Please describe the process (e.g. was there a letter from a head teacher?).
2. If someone sent a letter, can you describe any relationship the letter and the decision about the type of construction carried out? What did the letter say (e.g. stated a list of needs, only asked for help, mentioned a specific construction needs at this particular site)?
3. Please describe the construction decision making process. Did GES carry out a needs assessment? Was there a meeting at MOE with stakeholders to decide what to do and where?
4. What has changed in your school after receiving the construction (e.g. any tangible/measurable impact, or effect of receiving something new)? How did the construction (TB, JHS building, KG) solve the identified problem to be addressed such as access, overcrowding?
5. Have any books and/or textbooks been delivered to a library?
6. Was new furniture delivered? Is it in working condition?

Female students (for Toilet Blocks):

1. Are these new toilets adequate to be used by girls? Please explain.
2. Do they provide enough privacy to be used comfortably? Please explain.
3. Do they provide all elements for personal hygiene (e.g. water, disposal of used products, etc.)?
4. Is it there toilet paper?
5. Is it there a latch to close door from the inside?

Male students (for Toilet Blocks):

1. What is “plan B” for urination in case the toilet is busy and there is a long waiting line?
2. Do you feel comfortable being seen by girls while waiting for the toilet? Please explain.
3. Is it there toilet paper?

4. Is it there a latch to close the door from the inside?

All stakeholders (for KGs and JHSs)

1. What is the impact of the KG/JHS constructions on access to education?
2. How has teacher's work changed as a result of the new KGs/JHSs?
3. How well is equipment holding-up to "wear and tear" (e.g. quality, durability, maintenance)?
4. Are feeding facilities and other non-classroom facilities used? If so, how are they used?
5. Is toilet access appropriate? When are the toilets locked/unlocked? Do students/teachers have an alternative plan to relieve themselves if the toilets are locked?
6. Is the location of the KG/JHS adequate (e.g. up on a hill or other hindering factors)? Who chose the location of the KG/JHS?

DEO Officials

1. Does the space fit the staff in the DEO?
2. Is there access for people with disabilities?
3. How and where do you store documents in the new facility?
4. Internet/equipment/furniture issues. Is it there central AC or window units? Why the latter?
5. How do you manage the relationship with schools? Is the relationship improved and/or more efficient?

Annex 4a: Information Sources - List of Group Discussion and KII Respondents

Accra-Based KIIs		
Respondent #	**Respondent Type**	**Organization**
Respondent 1	Implementing Partner	AMA
Respondent 2	Implementing Partner	AMA
Respondent 3	Implementing Partner	AMA
Respondent 4	Implementing Partner	AMA
Respondent 5	Implementing Partner	AMA
Respondent 6	Implementing Partner	FPMU
Respondent 7	Implementing Partner	FPMU
Respondent 8	Implementing Partner	FPMU
Respondent 9	Implementing Partner	FPMU
Respondent 10	Implementing Partner	FPMU
Respondent 11	Implementing Partner	MiDA
Respondent 12	GOG	MOE
Respondent 13	GOG	MOE
Respondent 14	Implementing Partner	Plan Ghana
Respondent 15	Donor	USAID
Respondent 16	Donor	USAID
Respondent 17	Donor	USAID

Group Discussions During Site Visits				
Respondent #	**Respondent Type**	**Site**	**District**	**Region**
Respondent 1	Deputy for Finance	DEO Dzodze	Ketu North	Volta
Respondent 2	Supervisor	DEO Dzodze	Ketu North	Volta
Respondent 3	Human Resources	DEO Dzodze	Ketu North	Volta
Respondent 4	Planning	DEO Dzodze	Ketu North	Volta
Respondent 5	DEO staff	DEO Dzodze	Ketu North	Volta
Respondent 6	DEO staff	DEO Dzodze	Ketu North	Volta

Respondent 7	DEO staff	DEO Dzodze	Ketu North	Volta
Respondent 8	DEO staff	DEO Dzodze	Ketu North	Volta
Respondent 9	DEO staff	DEO Dzodze	Ketu North	Volta
Respondent 10	DEO staff	DEO Dzodze	Ketu North	Volta
Respondent 11	DEO staff	DEO Dzodze	Ketu North	Volta
Respondent 12	DEO staff	DEO Dzodze	Ketu North	Volta
Respondent 13	DEO staff	DEO Dzodze	Ketu North	Volta
Respondent 14	DEO staff	DEO Dzodze	Ketu North	Volta
Respondent 15	DEO staff	DEO Dzodze	Ketu North	Volta
Respondent 16	DEO staff	DEO Dzodze	Ketu North	Volta
Respondent 17	DEO staff	DEO Dzodze	Ketu North	Volta
Respondent 18	DEO staff	DEO Dzodze	Ketu North	Volta
Respondent 19	DEO staff	DEO Dzodze	Ketu North	Volta
Respondent 20	DEO staff	DEO Dzodze	Ketu North	Volta
Respondent 21	DEO staff	DEO Dzodze	Ketu North	Volta
Respondent 22	DEO staff	DEO Dzodze	Ketu North	Volta
Respondent 23	DEO staff	DEO Dzodze	Ketu North	Volta
Respondent 24	DEO staff	DEO Dzodze	Ketu North	Volta
Respondent 25	DEO staff	DEO Dzodze	Ketu North	Volta
Respondent 26	DEO staff	DEO Dzodze	Ketu North	Volta
Respondent 27	DEO staff	DEO Dzodze	Ketu North	Volta
Respondent 28	DEO staff	DEO Dzodze	Ketu North	Volta
Respondent 29	DEO staff	DEO Dzodze	Ketu North	Volta
Respondent 30	PTA member	Sremanu D/A KG	Akatsi District	Volta
Respondent 31	PTA membe	Sremanu D/A KG	Akatsi District	Volta
Respondent 32	PTA membe	Sremanu D/A KG	Akatsi District	Volta
Respondent 33	PTA membe	Sremanu D/A KG	Akatsi District	Volta
Respondent 34	PTA membe	Sremanu D/A KG	Akatsi District	Volta
Respondent 35	PTA membe	Sremanu D/A KG	Akatsi District	Volta
Respondent 36	PTA membe	Sremanu D/A KG	Akatsi District	Volta
Respondent 37	School patron	Sremanu D/A KG	Akatsi District	Volta
No respondents	No respondents	Sremanu D/A KVIP	Akatsi District	Volta
Respondent 38	Unknown	Bormase-Hweyna D/A JHS	Upper Manya Krobo	Eastern
Respondent 39	Chief	Bormase-Hweyna D/A JHS	Upper Manya Krobo	Eastern
Respondent 40	SMC Chair	Bormase-Hweyna D/A JHS	Upper Manya Krobo	Eastern
Respondent 41	PTA	Bormase-Hweyna D/A JHS	Upper Manya Krobo	Eastern
Respondent 42	Elder	Bormase-Hweyna D/A JHS	Upper Manya Krobo	Eastern
Respondent 43	Secretary	Bormase-Hweyna D/A JHS	Upper Manya Krobo	Eastern

Respondent 44	Elder	Bormase-Hweyna D/A JHS	Upper Manya Krobo	Eastern
Respondent 45	Elder	Bormase-Hweyna D/A JHS	Upper Manya Krobo	Eastern
Respondent 46	Elder	Bormase-Hweyna D/A JHS	Upper Manya Krobo	Eastern
Respondent 47	Member	Bormase-Hweyna D/A JHS	Upper Manya Krobo	Eastern
Respondent 48	Elder	Bormase-Hweyna D/A JHS	Upper Manya Krobo	Eastern
Respondent 49	Elder	Bormase-Hweyna D/A JHS	Upper Manya Krobo	Eastern
Respondent 50	Member	Bormase-Hweyna D/A JHS	Upper Manya Krobo	Eastern
Respondent 51	Elder	Bormase-Hweyna D/A JHS	Upper Manya Krobo	Eastern
Respondent 52	Treasurer	Bormase-Hweyna D/A JHS	Upper Manya Krobo	Eastern
Respondent 53	Teacher	Bormase-Hweyna D/A JHS	Upper Manya Krobo	Eastern
Respondent 54	Unknown	Bormase-Hweyna D/A JHS	Upper Manya Krobo	Eastern
Respondent 55	Vice PTA	Bormase-Hweyna D/A JHS	Upper Manya Krobo	Eastern
Respondent 56	Community	Bormase-Hweyna D/A JHS	Upper Manya Krobo	Eastern
Respondent 57	Community	Bormase-Hweyna D/A JHS	Upper Manya Krobo	Eastern
Respondent 58	Community	Bormase-Hweyna D/A JHS	Upper Manya Krobo	Eastern
Respondent 59	Community	Bormase-Hweyna D/A JHS	Upper Manya Krobo	Eastern
Respondent 60	Community	Bormase-Hweyna D/A JHS	Upper Manya Krobo	Eastern
Respondent 61	Teacher	Bormase-Hweyna D/A JHS	Upper Manya Krobo	Eastern
Respondent 62	Community	Bormase-Hweyna D/A JHS	Upper Manya Krobo	Eastern
Respondent 63	Community	Bormase-Hweyna D/A JHS	Upper Manya Krobo	Eastern
Respondent 64	Community	Bormase-Hweyna D/A JHS	Upper Manya Krobo	Eastern
Respondent 65	Teacher	Bormase-Hweyna D/A JHS	Upper Manya Krobo	Eastern
Respondent 66	Community	Bormase-Hweyna D/A JHS	Upper Manya Krobo	Eastern
Respondent 67	Elder	Bormase-Hweyna D/A JHS	Upper Manya Krobo	Eastern
Respondent 68	Elder	Bormase-Hweyna D/A JHS	Upper Manya Krobo	Eastern
Respondent 69	Elder	Bormase-Hweyna	Upper Manya	Eastern

		D/A JHS	Krobo	
Respondent 70	Elder	Bormase-Hweyna D/A JHS	Upper Manya Krobo	Eastern
Respondent 71	Elder	Bormase-Hweyna D/A JHS	Upper Manya Krobo	Eastern
Respondent 72	D/D Educ	Bormase-Hweyna D/A JHS	Upper Manya Krobo	Eastern
Respondent 73	D/D HRMD	Bormase-Hweyna D/A JHS	Upper Manya Krobo	Eastern
Respondent 74	D/D F&A	Bormase-Hweyna D/A JHS	Upper Manya Krobo	Eastern
Respondent 75	Head teacher	Korm D/A JHS	Yilo Krobo	Eastern
Respondent 76	Chief	Korm D/A JHS	Yilo Krobo	Eastern
Respondent 77	Chief	Korm D/A JHS	Yilo Krobo	Eastern
Respondent 78	Community Member	Korm D/A JHS	Yilo Krobo	Eastern
Respondent 79	Queen mother	Korm D/A JHS	Yilo Krobo	Eastern
Respondent 80	Teacher	Korm D/A JHS	Yilo Krobo	Eastern
Respondent 81	Teacher	Korm D/A JHS	Yilo Krobo	Eastern
Respondent 82	GES	Korm D/A JHS	Yilo Krobo	Eastern
Respondent 83	Teacher	Korm D/A JHS	Yilo Krobo	Eastern
Respondent 84	Community Member	Korm D/A JHS	Yilo Krobo	Eastern
Respondent 85	Teacher	Korm D/A JHS	Yilo Krobo	Eastern
Respondent 86	Teacher	Korm D/A JHS	Yilo Krobo	Eastern
Respondent 87	Teacher	Korm D/A JHS	Yilo Krobo	Eastern
Respondent 88	Teacher	Korm D/A JHS	Yilo Krobo	Eastern
Respondent 89	Community Member	Korm D/A JHS	Yilo Krobo	Eastern
Respondent 90	Community Member	Korm D/A JHS	Yilo Krobo	Eastern
Respondent 91	Community Member	Korm D/A JHS	Yilo Krobo	Eastern
Respondent 92	Teacher	Korm D/A JHS	Yilo Krobo	Eastern
Respondent 93	Teacher	Korm D/A JHS	Yilo Krobo	Eastern
Respondent 94	Teacher	Korm D/A JHS	Yilo Krobo	Eastern
Respondent 95	Community Member	Korm D/A JHS	Yilo Krobo	Eastern
Respondent 96	Community Member	Korm D/A JHS	Yilo Krobo	Eastern
Respondent 97	Community Member	Korm D/A JHS	Yilo Krobo	Eastern
Respondent 98	Teacher	Korm D/A JHS	Yilo Krobo	Eastern
Respondent 99	Community Member	Korm D/A JHS	Yilo Krobo	Eastern
Respondent 100	Community Member	Korm D/A JHS	Yilo Krobo	Eastern

Respondent 101	Community Member	Korm D/A JHS	Yilo Krobo	Eastern
Respondent 102	Male Student	Korm D/A JHS	Yilo Krobo	Eastern
Respondent 103	Male Student	Korm D/A JHS	Yilo Krobo	Eastern
Respondent 104	Male Student	Korm D/A JHS	Yilo Krobo	Eastern
Respondent 105	Male Student	Korm D/A JHS	Yilo Krobo	Eastern
Respondent 106	Male Student	Korm D/A JHS	Yilo Krobo	Eastern
Respondent 107	Female Student	Korm D/A JHS	Yilo Krobo	Eastern
Respondent 108	Female Student	Korm D/A JHS	Yilo Krobo	Eastern
Respondent 109	Female Student	Korm D/A JHS	Yilo Krobo	Eastern
Respondent 110	Female Student	Korm D/A JHS	Yilo Krobo	Eastern
Respondent 111	Female Student	Korm D/A JHS	Yilo Krobo	Eastern
Respondent 112	Vice Chair SMC	Survey Line Primary KVIP	Asuogyaman	Eastern
Respondent 113	Member SMC	Survey Line Primary KVIP	Asuogyaman	Eastern
Respondent 114	Village Head	Survey Line Primary KVIP	Asuogyaman	Eastern
Respondent 115	Pastor	Survey Line Primary KVIP	Asuogyaman	Eastern
Respondent 116	Head teacher	Survey Line Primary KVIP	Asuogyaman	Eastern
Respondent 117	Teacher	Survey Line Primary KVIP	Asuogyaman	Eastern
Respondent 118	District Director	Asempaneye L/A KG	Asuogyaman	Eastern
Respondent 119	Deputy Director	Asempaneye L/A KG	Asuogyaman	Eastern
Respondent 120	Deputy Director	Asempaneye L/A KG	Asuogyaman	Eastern
Respondent 121	Assistant Director	Asempaneye L/A KG	Asuogyaman	Eastern
Respondent 122	Head Teacher	Asempaneye L/A KG	Asuogyaman	Eastern
Respondent 123	Teacher	Asempaneye L/A KG	Asuogyaman	Eastern
Respondent 124	Teacher	Asempaneye L/A KG	Asuogyaman	Eastern
Respondent 125	Teacher	Asempaneye L/A KG	Asuogyaman	Eastern
Respondent 126	SMC Member	Asempaneye L/A KG	Asuogyaman	Eastern
Respondent 127	Chairman PTA	Asempaneye L/A KG	Asuogyaman	Eastern
Respondent 128	PTA Vice Chair	Asempaneye L/A KG	Asuogyaman	Eastern
Respondent 129	SMC Member	Asempaneye L/A KG	Asuogyaman	Eastern
Respondent 130	SMC Chairman	Asempaneye L/A KG	Asuogyaman	Eastern
Respondent 131	Unknown	Asempaneye L/A KG	Asuogyaman	Eastern
Respondent 132	Unknown	Asempaneye L/A KG	Asuogyaman	Eastern
Respondent 133	PTA Chairman	Asempaneye L/A KG	Asuogyaman	Eastern
Respondent 134	Unknown	Asempaneye L/A KG	Asuogyaman	Eastern
Respondent 135	Unknown	Asempaneye L/A KG	Asuogyaman	Eastern
Respondent 136	Unknown	Asempaneye L/A KG	Asuogyaman	Eastern
Respondent 137	Head teacher	Aboom Zion Cluster KVIP	Cape Coast	Central

Respondent 138	Teacher	Aboom Zion Cluster KVIP	Cape Coast	Central
Respondent 139	Teacher	Aboom Zion Cluster KVIP	Cape Coast	Central
Respondent 140	Teacher	Aboom Zion Cluster KVIP	Cape Coast	Central
Respondent 141	Teacher	Aboom Zion Cluster KVIP	Cape Coast	Central
Respondent 142	Teacher	Aboom Zion Cluster KVIP	Cape Coast	Central
Respondent 143	Teacher	Aboom Zion Cluster KVIP	Cape Coast	Central
Respondent 144	Teacher	Aboom Zion Cluster KVIP	Cape Coast	Central
Respondent 145	Teacher	Aboom Zion Cluster KVIP	Cape Coast	Central
Respondent 146	Teacher	Aboom Zion Cluster KVIP	Cape Coast	Central
Respondent 147	Teacher	Aboom Zion Cluster KVIP	Cape Coast	Central
Respondent 148	Teacher	Aboom Zion Cluster KVIP	Cape Coast	Central
Respondent 149	Teacher	Aboom Zion Cluster KVIP	Cape Coast	Central
Respondent 150	Teacher	Aboom Zion Cluster KVIP	Cape Coast	Central
Respondent 151	Teacher	Aboom Zion Cluster KVIP	Cape Coast	Central
Respondent 152	Female Student	Aboom Zion Cluster KVIP	Cape Coast	Central
Respondent 153	Female Student	Aboom Zion Cluster KVIP	Cape Coast	Central
Respondent 154	Female Student	Aboom Zion Cluster KVIP	Cape Coast	Central
Respondent 155	Female Student	Aboom Zion Cluster KVIP	Cape Coast	Central
Respondent 156	Female Student	Aboom Zion Cluster KVIP	Cape Coast	Central
Respondent 157	Female Student	Aboom Zion Cluster KVIP	Cape Coast	Central
Respondent 158	Female Student	Aboom Zion Cluster KVIP	Cape Coast	Central
Respondent 159	Female Student	Aboom Zion Cluster KVIP	Cape Coast	Central
Respondent 160	Female Student	Aboom Zion Cluster KVIP	Cape Coast	Central
Respondent 161	Female Student	Aboom Zion Cluster KVIP	Cape Coast	Central
Respondent 162	Male Student	Aboom Zion Cluster KVIP	Cape Coast	Central
Respondent 163	Male Student	Aboom Zion Cluster	Cape Coast	Central

		KVIP		
Respondent 164	Male Student	Aboom Zion Cluster KVIP	Cape Coast	Central
Respondent 165	Male Student	Aboom Zion Cluster KVIP	Cape Coast	Central
Respondent 166	Male Student	Aboom Zion Cluster KVIP	Cape Coast	Central
Respondent 167	Male Student	Aboom Zion Cluster KVIP	Cape Coast	Central
Respondent 168	Male Student	Aboom Zion Cluster KVIP	Cape Coast	Central
Respondent 169	Male Student	Aboom Zion Cluster KVIP	Cape Coast	Central
Respondent 170	Male Student	Aboom Zion Cluster KVIP	Cape Coast	Central
Respondent 171	Male Student	Aboom Zion Cluster KVIP	Cape Coast	Central
Respondent 172	Male Student	Aboom Zion Cluster KVIP	Cape Coast	Central
Respondent 173	Male Student	Aboom Zion Cluster KVIP	Cape Coast	Central
Respondent 174	Male Student	Aboom Zion Cluster KVIP	Cape Coast	Central
Respondent 175	Male Student	Aboom Zion Cluster KVIP	Cape Coast	Central
Respondent 176	Male Student	Aboom Zion Cluster KVIP	Cape Coast	Central
Respondent 177	Head teacher	O.L.A. Presby Primary KG	Cape Coast	Central
Respondent 178	Teacher	O.L.A. Presby Primary KG	Cape Coast	Central
Respondent 179	Teacher	O.L.A. Presby Primary KG	Cape Coast	Central
Respondent 180	Teacher	O.L.A. Presby Primary KG	Cape Coast	Central
Respondent 181	Teacher	O.L.A. Presby Primary KG	Cape Coast	Central
Respondent 182	Teacher	O.L.A. Presby Primary KG	Cape Coast	Central
Respondent 183	Parent	O.L.A. Presby Primary KG	Cape Coast	Central
Respondent 184	Dist. Coord. Dir.	Awutu Beraku DEO	Gomoa East	Central
Respondent 185	Asst. Works Eng.	Awutu Beraku DEO	Gomoa East	Central
Respondent 186	Public Relations	Awutu Beraku DEO	Gomoa East	Central
Respondent 187	Asst. Dir.	Awutu Beraku DEO	Gomoa East	Central
Respondent 188	GES	Awutu Beraku DEO	Gomoa East	Central
Respondent 189	GES	Achiase/Bedzeadze JHS	Gomoa East	Central
Respondent 190	GES	Achiase/Bedzeadze JHS	Gomoa East	Central

Respondent 191	GES	Achiase/Bedzeadze JHS	Gomoa East	Central
Respondent 192	GES	Achiase/Bedzeadze JHS	Gomoa East	Central
Respondent 193	Plan Ghana	Achiase/Bedzeadze JHS	Gomoa East	Central
Respondent 194	GES	Achiase/Bedzeadze JHS	Gomoa East	Central
Respondent 195	Teacher	Achiase/Bedzeadze JHS	Gomoa East	Central
Respondent 196	Teacher	Achiase/Bedzeadze JHS	Gomoa East	Central
Respondent 197	Teacher	Achiase/Bedzeadze JHS	Gomoa East	Central
Respondent 198	Teacher	Achiase/Bedzeadze JHS	Gomoa East	Central
Respondent 199	Teacher	Achiase/Bedzeadze JHS	Gomoa East	Central
Respondent 200	Teacher	Achiase/Bedzeadze JHS	Gomoa East	Central
Respondent 201	SMC Chair	Achiase/Bedzeadze JHS	Gomoa East	Central
Respondent 202	PTA Chair	Achiase/Bedzeadze JHS	Gomoa East	Central
Respondent 203	PTA Vice Chair	Achiase/Bedzeadze JHS	Gomoa East	Central
Respondent 204	PTA Member	Achiase/Bedzeadze JHS	Gomoa East	Central
Respondent 205	SMC member	Achiase/Bedzeadze JHS	Gomoa East	Central
Respondent 206	PTA Member	Achiase/Bedzeadze JHS	Gomoa East	Central
Respondent 207	PTA Member	Achiase/Bedzeadze JHS	Gomoa East	Central
Respondent 208	SMC Member	Achiase/Bedzeadze JHS	Gomoa East	Central
Respondent 209	SMC Member	Achiase/Bedzeadze JHS	Gomoa East	Central
Respondent 210	SMC member	Achiase/Bedzeadze JHS	Gomoa East	Central
Respondent 211	Chief's Rep.	Achiase/Bedzeadze JHS	Gomoa East	Central
Respondent 212	Female Student	Achiase/Bedzeadze JHS	Gomoa East	Central
Respondent 213	Female Student	Achiase/Bedzeadze JHS	Gomoa East	Central
Respondent 214	Female Student	Achiase/Bedzeadze JHS	Gomoa East	Central
Respondent 215	Female Student	Achiase/Bedzeadze JHS	Gomoa East	Central
Respondent 216	Female Student	Achiase/Bedzeadze	Gomoa East	Central

		JHS		
Respondent 217	Male Student	Achiase/Bedzeadze JHS	Gomoa East	Central
Respondent 218	Male Student	Achiase/Bedzeadze JHS	Gomoa East	Central
Respondent 219	Male Student	Achiase/Bedzeadze JHS	Gomoa East	Central
Respondent 220	Male Student	Achiase/Bedzeadze JHS	Gomoa East	Central
Respondent 221	Head Teacher	Aniamote Methodist JHS	Wassa Amenfi E.	Western
Respondent 222	Teacher	Aniamote Methodist JHS	Wassa Amenfi E.	Western
Respondent 223	Teacher	Aniamote Methodist JHS	Wassa Amenfi E.	Western
Respondent 224	Teacher	Aniamote Methodist JHS	Wassa Amenfi E.	Western
Respondent 225	Teacher	Aniamote Methodist JHS	Wassa Amenfi E.	Western
Respondent 226	Teacher	Aniamote Methodist JHS	Wassa Amenfi E.	Western
Respondent 227	SMC Chair	Aniamote Methodist JHS	Wassa Amenfi E.	Western
Respondent 228	SMC Member	Aniamote Methodist JHS	Wassa Amenfi E.	Western
Respondent 229	SMC Member	Aniamote Methodist JHS	Wassa Amenfi E.	Western
Respondent 230	SMC Member	Aniamote Methodist JHS	Wassa Amenfi E.	Western
Respondent 231	SMC Member	Aniamote Methodist JHS	Wassa Amenfi E.	Western
Respondent 232	SMC Member	Aniamote Methodist JHS	Wassa Amenfi E.	Western
Respondent 233	SMC Member	Aniamote Methodist JHS	Wassa Amenfi E.	Western
Respondent 234	SMC Member	Aniamote Methodist JHS	Wassa Amenfi E.	Western
Respondent 235	SMC Member	Aniamote Methodist JHS	Wassa Amenfi E.	Western
Respondent 236	SMC Member	Aniamote Methodist JHS	Wassa Amenfi E.	Western
Respondent 237	SMC Member	Aniamote Methodist JHS	Wassa Amenfi E.	Western
Respondent 238	SMC Member	Aniamote Methodist JHS	Wassa Amenfi E.	Western
Respondent 239	SMC Member	Aniamote Methodist JHS	Wassa Amenfi E.	Western
Respondent 240	SMC Member	Aniamote Methodist JHS	Wassa Amenfi E.	Western
Respondent 241	SMC Member	Aniamote Methodist JHS	Wassa Amenfi E.	Western

Respondent 242	SMC Member	Aniamote Methodist JHS	Wassa Amenfi E.	Western
Respondent 243	SMC Member	Aniamote Methodist JHS	Wassa Amenfi E.	Western
Respondent 244	SMC Member	Aniamote Methodist JHS	Wassa Amenfi E.	Western
Respondent 245	SMC Member	Aniamote Methodist JHS	Wassa Amenfi E.	Western
Respondent 246	Unknown	Aniamote Methodist JHS	Wassa Amenfi E.	Western
Respondent 247	Unknown	Aniamote Methodist JHS	Wassa Amenfi E.	Western
Respondent 248	Female Student	Mansiso D/A Primary TB	Wassa Amenfi East	Western
Respondent 249	Female Student	Mansiso D/A Primary TB	Wassa Amenfi East	Western
Respondent 250	Female Student	Mansiso D/A Primary TB	Wassa Amenfi East	Western
Respondent 251	Female Student	Mansiso D/A Primary TB	Wassa Amenfi East	Western
Respondent 252	Female Student	Mansiso D/A Primary TB	Wassa Amenfi East	Western
Respondent 253	Female Student	Mansiso D/A Primary TB	Wassa Amenfi East	Western
Respondent 254	Female Student	Mansiso D/A Primary TB	Wassa Amenfi East	Western
Respondent 255	Female Student	Mansiso D/A Primary TB	Wassa Amenfi East	Western
Respondent 256	Female Student	Mansiso D/A Primary TB	Wassa Amenfi East	Western
Respondent 257	Male Student	Mansiso D/A Primary TB	Wassa Amenfi East	Western
Respondent 258	Male Student	Mansiso D/A Primary TB	Wassa Amenfi East	Western
Respondent 259	Male Student	Mansiso D/A Primary TB	Wassa Amenfi East	Western
Respondent 260	Male Student	Mansiso D/A Primary TB	Wassa Amenfi East	Western
Respondent 261	Male Student	Mansiso D/A Primary TB	Wassa Amenfi East	Western
Respondent 262	Male Student	Mansiso D/A Primary TB	Wassa Amenfi East	Western
Respondent 263	Male Student	Mansiso D/A Primary TB	Wassa Amenfi East	Western
Respondent 264	Male Student	Mansiso D/A Primary TB	Wassa Amenfi East	Western
Respondent 265	Male Student	Mansiso D/A Primary TB	Wassa Amenfi East	Western
Respondent 266	Male Student	Mansiso D/A Primary TB	Wassa Amenfi East	Western
Respondent 267	Male Student	Mansiso D/A Primary	Wassa Amenfi	Western

		TB	East	
Respondent 268	Unknown	Suhyenso KG	Wassa Amenfi East	Western
Respondent 269	Unknown	Suhyenso KG	Wassa Amenfi East	Western
Respondent 270	Assemblyman	Suhyenso KG	Wassa Amenfi East	Western
Respondent 271	Head teacher	Suhyenso KG	Wassa Amenfi East	Western
Respondent 272	Headmaster JHS	Suhyenso KG	Wassa Amenfi East	Western
Respondent 273	Teacher	Suhyenso KG	Wassa Amenfi East	Western
Respondent 274	Female Student	Adjakaa D/A Primary TB	Aowuin Suaman	Western
Respondent 275	Female Student	Adjakaa D/A Primary TB	Aowuin Suaman	Western
Respondent 276	Female Student	Adjakaa D/A Primary TB	Aowuin Suaman	Western
Respondent 277	Female Student	Adjakaa D/A Primary TB	Aowuin Suaman	Western
Respondent 278	Female Student	Adjakaa D/A Primary TB	Aowuin Suaman	Western
Respondent 279	Female Student	Adjakaa D/A Primary TB	Aowuin Suaman	Western
Respondent 280	Female Student	Adjakaa D/A Primary TB	Aowuin Suaman	Western
Respondent 281	Male Student	Adjakaa D/A Primary TB	Aowuin Suaman	Western
Respondent 282	Male Student	Adjakaa D/A Primary TB	Aowuin Suaman	Western
Respondent 283	Male Student	Adjakaa D/A Primary TB	Aowuin Suaman	Western
Respondent 284	Male Student	Adjakaa D/A Primary TB	Aowuin Suaman	Western
Respondent 285	Male Student	Adjakaa D/A Primary TB	Aowuin Suaman	Western
Respondent 286	Male Student	Adjakaa D/A Primary TB	Aowuin Suaman	Western
Respondent 287	Male Student	Adjakaa D/A Primary TB	Aowuin Suaman	Western
Respondent 288	Chief of Boinso	Boinso Presbyt. KG	Aowuin Suaman	Western
Respondent 289	Unknown	Boinso Presbyt. KG	Aowuin Suaman	Western
Respondent 290	Youth leader	Boinso Presbyt. KG	Aowuin Suaman	Western
Respondent 291	Unknown	Boinso Presbyt. KG	Aowuin Suaman	Western
Respondent 292	Unknown	Boinso Presbyt. KG	Aowuin Suaman	Western

Respondent 293	Unknown	Boinso Presbyt. KG	Aowuin Suaman	Western
Respondent 294	Unknown	Boinso Presbyt. KG	Aowuin Suaman	Western
Respondent 295	Assemblyman	Boinso Presbyt. KG	Aowuin Suaman	Western
Respondent 296	Unknown	Boinso Presbyt. KG	Aowuin Suaman	Western
Respondent 297	Headmistress	Boinso Presbyt. KG	Aowuin Suaman	Western
Respondent 298	District Office	Dadieso SDA JHS	Aowuin Suaman	Western
Respondent 299	Circuit Supervisor	Dadieso SDA JHS	Aowuin Suaman	Western
Respondent 300	District Pastor	Dadieso SDA JHS	Aowuin Suaman	Western
Respondent 301	Headmaster	Dadieso SDA JHS	Aowuin Suaman	Western
Respondent 302	Asst. Head	Dadieso SDA JHS	Aowuin Suaman	Western
Respondent 303	PTA Chairman	Dadieso SDA JHS	Aowuin Suaman	Western
Respondent 304	Staff Secretary	Dadieso SDA JHS	Aowuin Suaman	Western
Respondent 305	Teacher	Dadieso SDA JHS	Aowuin Suaman	Western
Respondent 306	Teacher	Dadieso SDA JHS	Aowuin Suaman	Western
Respondent 307	Teacher	Dadieso SDA JHS	Aowuin Suaman	Western
Respondent 308	Teacher	Dadieso SDA JHS	Aowuin Suaman	Western
Respondent 309	Teacher	Dadieso SDA JHS	Aowuin Suaman	Western
Respondent 310	Teacher	Dadieso SDA JHS	Aowuin Suaman	Western
Respondent 311	Teacher	Dadieso SDA JHS	Aowuin Suaman	Western
Respondent 312	Teacher	Dadieso SDA JHS	Aowuin Suaman	Western
Respondent 313	Teacher	Dadieso SDA JHS	Aowuin Suaman	Western
Respondent 314	Teacher	Dadieso SDA JHS	Aowuin Suaman	Western
Respondent 315	Teacher	Dadieso SDA JHS	Aowuin Suaman	Western
Respondent 316	Teacher	Dadieso SDA JHS	Aowuin Suaman	Western
Respondent 317	Teacher	Dadieso SDA JHS	Aowuin Suaman	Western
Respondent 318	Teacher	Dadieso SDA JHS	Aowuin	Western

			Suaman	
Respondent 319	Teacher	Dadieso SDA JHS	Aowuin Suaman	Western
Respondent 320	Teacher	Dadieso SDA JHS	Aowuin Suaman	Western
Respondent 321	Teacher	Dadieso SDA JHS	Aowuin Suaman	Western
Respondent 322	Teacher	Dadieso SDA JHS	Aowuin Suaman	Western
Respondent 323	Teacher	Dadieso SDA JHS	Aowuin Suaman	Western
Respondent 324	Teacher	Dadieso SDA JHS	Aowuin Suaman	Western
Respondent 325	Teacher	Dadieso SDA JHS	Aowuin Suaman	Western
Respondent 326	Assemblyman	Atebubu Anglican JHS	Atebubu Amantin	Brong Ahafo
Respondent 327	Teacher	Atebubu Anglican JHS	Atebubu Amantin	Brong Ahafo
Respondent 328	Teacher	Atebubu Anglican JHS	Atebubu Amantin	Brong Ahafo
Respondent 329	Teacher	Atebubu Anglican JHS	Atebubu Amantin	Brong Ahafo
Respondent 330	Teacher	Atebubu Anglican JHS	Atebubu Amantin	Brong Ahafo
Respondent 331	Teacher	Atebubu Anglican JHS	Atebubu Amantin	Brong Ahafo
Respondent 332	Teacher	Atebubu Anglican JHS	Atebubu Amantin	Brong Ahafo
Respondent 333	Teacher	Atebubu Anglican JHS	Atebubu Amantin	Brong Ahafo
Respondent 334	Teacher	Atebubu Anglican JHS	Atebubu Amantin	Brong Ahafo
Respondent 335	Teacher	Atebubu Anglican JHS	Atebubu Amantin	Brong Ahafo
Respondent 336	Teacher	Atebubu Anglican JHS	Atebubu Amantin	Brong Ahafo
Respondent 337	Head teacher	Yawbraso JHS	Ejura Sekyedumasi	Ashanti
Respondent 338	Teacher	Yawbraso JHS	Ejura Sekyedumasi	Ashanti
Respondent 339	Teacher	Yawbraso JHS	Ejura Sekyedumasi	Ashanti
Respondent 340	Teacher	Yawbraso JHS	Ejura Sekyedumasi	Ashanti
Respondent 341	Teacher	Yawbraso JHS	Ejura Sekyedumasi	Ashanti
Respondent 342	Teacher	Yawbraso JHS	Ejura Sekyedumasi	Ashanti
Respondent 343	Teacher	Yawbraso JHS	Ejura Sekyedumasi	Ashanti

Respondent 344	Teacher	Yawbraso JHS	Ejura Sekyedumasi	Ashanti
Respondent 345	Teacher	Yawbraso JHS	Ejura Sekyedumasi	Ashanti
Respondent 346	Teacher	Yawbraso JHS	Ejura Sekyedumasi	Ashanti
Respondent 347	Teacher	Yawbraso JHS	Ejura Sekyedumasi	Ashanti
Respondent 348	Teacher	Yawbraso JHS	Ejura Sekyedumasi	Ashanti
Respondent 349	Teacher	Yawbraso JHS	Ejura Sekyedumasi	Ashanti
Respondent 350	Teacher	Yawbraso JHS	Ejura Sekyedumasi	Ashanti
Respondent 351	Teacher	Yawbraso JHS	Ejura Sekyedumasi	Ashanti
Respondent 352	Teacher	Yawbraso JHS	Ejura Sekyedumasi	Ashanti
Respondent 353	SMC Member	Yawbraso JHS	Ejura Sekyedumasi	Ashanti
Respondent 354	SMC Member	Yawbraso JHS	Ejura Sekyedumasi	Ashanti
Respondent 355	SMC Member	Yawbraso JHS	Ejura Sekyedumasi	Ashanti
Respondent 356	SMC Member	Yawbraso JHS	Ejura Sekyedumasi	Ashanti
Respondent 357	SMC Member	Yawbraso JHS	Ejura Sekyedumasi	Ashanti
Respondent 358	SMC Chairman	Yawbraso JHS	Ejura Sekyedumasi	Ashanti
Respondent 359	SMC Member	Yawbraso JHS	Ejura Sekyedumasi	Ashanti
Respondent 360	SMC Member	Yawbraso JHS	Ejura Sekyedumasi	Ashanti
Respondent 361	Head teacher	Amantin SDA KG	Atebubu Amantin	Brong Ahafo
Respondent 362	Teacher	Amantin SDA KG	Atebubu Amantin	Brong Ahafo
Respondent 363	Teacher	Amantin SDA KG	Atebubu Amantin	Brong Ahafo
Respondent 364	PTA member	Amantin SDA KG	Atebubu Amantin	Brong Ahafo
Respondent 365	PTA member	Amantin SDA KG	Atebubu Amantin	Brong Ahafo
Respondent 366	PTA member	Amantin SDA KG	Atebubu Amantin	Brong Ahafo
Respondent 367	PTA member	Amantin SDA KG	Atebubu Amantin	Brong Ahafo
Respondent 368	PTA member	Amantin SDA KG	Atebubu Amantin	Brong Ahafo
Respondent 369	PTA member	Amantin SDA KG	Atebubu	Brong

			Amantin	Ahafo
Respondent 370	Parent	Amantin SDA KG	Atebubu Amantin	Brong Ahafo
Respondent 371	Parent	Amantin SDA KG	Atebubu Amantin	Brong Ahafo
Respondent 372	Parent	Amantin SDA KG	Atebubu Amantin	Brong Ahafo
Respondent 373	Parent	Amantin SDA KG	Atebubu Amantin	Brong Ahafo
Respondent 374	Male Student	Ejura R/C Prim. TB	Ejura Sekyedumase	Ashanti
Respondent 375	Male Student	Ejura R/C Prim. TB	Ejura Sekyedumase	Ashanti
Respondent 376	Male Student	Ejura R/C Prim. TB	Ejura Sekyedumase	Ashanti
Respondent 377	Male Student	Ejura R/C Prim. TB	Ejura Sekyedumase	Ashanti
Respondent 378	Male Student	Ejura R/C Prim. TB	Ejura Sekyedumase	Ashanti
Respondent 379	Male Student	Ejura R/C Prim. TB	Ejura Sekyedumase	Ashanti
Respondent 380	Male Student	Ejura R/C Prim. TB	Ejura Sekyedumase	Ashanti
Respondent 381	Male Student	Ejura R/C Prim. TB	Ejura Sekyedumase	Ashanti
Respondent 382	Male Student	Ejura R/C Prim. TB	Ejura Sekyedumase	Ashanti
Respondent 383	Female Student	Ejura R/C Prim. TB	Ejura Sekyedumase	Ashanti
Respondent 384	Female Student	Ejura R/C Prim. TB	Ejura Sekyedumase	Ashanti
Respondent 385	Female Student	Ejura R/C Prim. TB	Ejura Sekyedumase	Ashanti
Respondent 386	Female Student	Ejura R/C Prim. TB	Ejura Sekyedumase	Ashanti
Respondent 387	Female Student	Ejura R/C Prim. TB	Ejura Sekyedumase	Ashanti
Respondent 388	Female Student	Ejura R/C Prim. TB	Ejura Sekyedumase	Ashanti
Respondent 389	Female Student	Ejura R/C Prim. TB	Ejura Sekyedumase	Ashanti
Respondent 390	Unknown	Kabiriti KG	Ejura Sekyedumase	Ashanti
Respondent 391	Unknown	Kabiriti KG	Ejura Sekyedumase	Ashanti
Respondent 392	Unknown	Kabiriti KG	Ejura Sekyedumase	Ashanti
Respondent 393	Unknown	Kabiriti KG	Ejura Sekyedumase	Ashanti
Respondent 394	Unknown	Kabiriti KG	Ejura Sekyedumase	Ashanti

Respondent 395	Unknown	Kabiriti KG	Ejura Sekyedumase	Ashanti
Respondent 396	Unknown	Kabiriti KG	Ejura Sekyedumase	Ashanti
Respondent 397	Unknown	Kabiriti KG	Ejura Sekyedumase	Ashanti
Respondent 398	Church Elder	Amantin SGA KG	Ejura Sekyedumase	Ashanti
Respondent 399	Parent	Amantin SGA KG	Ejura Sekyedumase	Ashanti
Respondent 400	Parent	Amantin SGA KG	Ejura Sekyedumase	Ashanti
Respondent 401	SMC Chairman	Amantin SGA KG	Ejura Sekyedumase	Ashanti
Respondent 402	PTA Chairman	Amantin SGA KG	Ejura Sekyedumase	Ashanti
Respondent 403	Parent	Amantin SGA KG	Ejura Sekyedumase	Ashanti
Respondent 404	Parent	Amantin SGA KG	Ejura Sekyedumase	Ashanti
Respondent 405	Unknown	Amantin SGA KG	Ejura Sekyedumase	Ashanti
Respondent 406	Unknown	Bechem Model Girls JHS	Tano South	Brong Ahafo
Respondent 407	Unknown	Bechem Model Girls JHS	Tano South	Brong Ahafo
Respondent 408	Unknown	Bechem Model Girls JHS	Tano South	Brong Ahafo
Respondent 409	Unknown	Bechem Model Girls JHS	Tano South	Brong Ahafo
Respondent 410	Unknown	Bechem Model Girls JHS	Tano South	Brong Ahafo
Respondent 411	Unknown	Bechem Model Girls JHS	Tano South	Brong Ahafo
Respondent 412	Unknown	Bechem Model Girls JHS	Tano South	Brong Ahafo
Respondent 413	Unknown	Bechem Model Girls JHS	Tano South	Brong Ahafo
Respondent 414	Female Student	Bechem Model Girls JHS	Tano South	Brong Ahafo
Respondent 415	Female Student	Bechem Model Girls JHS	Tano South	Brong Ahafo
Respondent 416	Female Student	Bechem Model Girls JHS	Tano South	Brong Ahafo
Respondent 417	Female Student	Bechem Model Girls JHS	Tano South	Brong Ahafo
Respondent 418	Female Student	Bechem Model Girls JHS	Tano South	Brong Ahafo
Respondent 419	Female Student	Bechem Model Girls JHS	Tano South	Brong Ahafo
Respondent 420	Female Student	Kanvili Tuunayili	Tamale	Northern

		M/A Primary TB		
Respondent 421	Female Student	Kanvili Tuunayili M/A Primary TB	Tamale	Northern
Respondent 422	Female Student	Kanvili Tuunayili M/A Primary TB	Tamale	Northern
Respondent 423	Female Student	Kanvili Tuunayili M/A Primary TB	Tamale	Northern
Respondent 424	Female Student	Kanvili Tuunayili M/A Primary TB	Tamale	Northern
Respondent 425	Female Student	Kanvili Tuunayili M/A Primary TB	Tamale	Northern
Respondent 426	Male Student	Kanvili Tuunayili M/A Primary TB	Tamale	Northern
Respondent 427	Male Student	Kanvili Tuunayili M/A Primary TB	Tamale	Northern
Respondent 428	Male Student	Kanvili Tuunayili M/A Primary TB	Tamale	Northern
Respondent 429	Male Student	Kanvili Tuunayili M/A Primary TB	Tamale	Northern
Respondent 430	Male Student	Kanvili Tuunayili M/A Primary TB	Tamale	Northern
Respondent 431	Male Student	Kanvili Tuunayili M/A Primary TB	Tamale	Northern
Respondent 432	Head Teacher	Bagabaga Demonstration JHS	Tamale	Northern
Respondent 433	SMC member	Bagabaga Demonstration JHS	Tamale	Northern
Respondent 434	SMC member	Bagabaga Demonstration JHS	Tamale	Northern
Respondent 435	PTA Chairman	Bagabaga Demonstration JHS	Tamale	Northern
Respondent 436	Teacher	Bagabaga Demonstration JHS	Tamale	Northern
Respondent 437	Teacher	Bagabaga Demonstration JHS	Tamale	Northern
Respondent 438	Teacher	Bagabaga Demonstration JHS	Tamale	Northern
Respondent 439	Teacher	Bagabaga Demonstration JHS	Tamale	Northern
Respondent 440	Head Teacher KG	Kalegu DA KG	Zabzugu Tatale	Northern
Respondent 441	Head Teacher JHS	Kalegu DA KG	Zabzugu Tatale	Northern
Respondent 442	Teacher JHS	Kalegu DA KG	Zabzugu Tatale	Northern
Respondent 443	Teacher JHS	Kalegu DA KG	Zabzugu Tatale	Northern
Respondent 444	Teacher JHS	Kalegu DA KG	Zabzugu Tatale	Northern
Respondent 445	Teacher Kalegu Primary	Kalegu DA KG	Zabzugu Tatale	Northern
Respondent 446	Teacher JHS	Kalegu DA KG	Zabzugu Tatale	Northern
Respondent 447	Teacher Kalegu Primary	Kalegu DA KG	Zabzugu Tatale	Northern

Respondent 448	PTA Chairman	Kalegu DA KG	Zabzugu Tatale	Northern
Respondent 449	SMC Chairman	Kalegu DA KG	Zabzugu Tatale	Northern
Respondent 450	Teacher	Kalegu DA KG	Zabzugu Tatale	Northern
Respondent 451	Teacher	Kalegu DA KG	Zabzugu Tatale	Northern
Respondent 452	Head teacher	Gor-Kukani D/A JHS	Zabzugu Tatale	Northern
Respondent 453	Assistant Head teacher	Gor-Kukani D/A JHS	Zabzugu Tatale	Northern
Respondent 454	Teacher	Gor-Kukani D/A JHS	Zabzugu Tatale	Northern
Respondent 455	Teacher	Gor-Kukani D/A JHS	Zabzugu Tatale	Northern
Respondent 456	Teacher	Gor-Kukani D/A JHS	Zabzugu Tatale	Northern
Respondent 457	Teacher	Gor-Kukani D/A JHS	Zabzugu Tatale	Northern
Respondent 458	Teacher	Gor-Kukani D/A JHS	Zabzugu Tatale	Northern
Respondent 459	Head teacher	Nwodua JHS	Tolon Kumbungu	Northern
Respondent 460	Teacher	Nwodua JHS	Tolon Kumbungu	Northern
Respondent 461	Teacher	Nwodua JHS	Tolon Kumbungu	Northern
Respondent 462	PTA Chairman	Nwodua JHS	Tolon Kumbungu	Northern
Respondent 463	PTA Member	Nwodua JHS	Tolon Kumbungu	Northern
Respondent 464	PTA Member	Nwodua JHS	Tolon Kumbungu	Northern
Respondent 465	PTA Member	Nwodua JHS	Tolon Kumbungu	Northern
Respondent 466	Head teacher	Ngani RC JHS	Yendi	Northern
Respondent 467	Assistant Head teacher	Ngani RC JHS	Yendi	Northern
Respondent 468	SMC Chairman	Ngani RC JHS	Yendi	Northern
Respondent 469	SMC Secretary	Ngani RC JHS	Yendi	Northern
Respondent 470	Head teacher - primary sch.	Ngani RC JHS	Yendi	Northern
Respondent 471	PTA chairman	Ngani RC JHS	Yendi	Northern
Respondent 472	PTA member	Ngani RC JHS	Yendi	Northern
Respondent 473	PTA secretary	Ngani RC JHS	Yendi	Northern
Respondent 474	PTA member	Ngani RC JHS	Yendi	Northern
Respondent 475	PTA member	Ngani RC JHS	Yendi	Northern
Respondent 476	SMC member	Ngani RC JHS	Yendi	Northern
Respondent 477	Chief's representative	Ngani RC JHS	Yendi	Northern
Respondent 478	Chief's palace	Ngani RC JHS	Yendi	Northern
Respondent 479	Teacher	Ngani RC JHS	Yendi	Northern
Respondent 480	Teacher	Ngani RC JHS	Yendi	Northern
Respondent 481	Teacher	Ngani RC JHS	Yendi	Northern
Respondent 482	Head teacher &	Sang Islamic KG	Yendi	Northern

	Assemblyman			
Respondent 483	Teacher	Sang Islamic KG	Yendi	Northern
Respondent 484	Teacher	Sang Islamic KG	Yendi	Northern
Respondent 485	Arabic teacher	Sang Islamic KG	Yendi	Northern
Respondent 486	SMC & PTA chairman	Sang Islamic KG	Yendi	Northern
Respondent 487	Teacher	Sang Islamic KG	Yendi	Northern
Respondent 488	Teacher	Sang Islamic KG	Yendi	Northern
Respondent 489	Teacher	Sang Islamic KG	Yendi	Northern
Respondent 490	Head teacher	Gbungbaliga JHS	Yendi	Northern
Respondent 491	Teacher	Gbungbaliga JHS	Yendi	Northern
Respondent 492	Teacher	Gbungbaliga JHS	Yendi	Northern
Respondent 493	Teacher	Gbungbaliga JHS	Yendi	Northern
Respondent 494	Teacher	Gbungbaliga JHS	Yendi	Northern
Respondent 495	Teacher	Gbungbaliga JHS	Yendi	Northern
Respondent 496	Teacher	Gbungbaliga JHS	Yendi	Northern
Respondent 497	Teacher	Tolon-Kumbungu KG	Tolon-Kumbungu	Northern
Respondent 498	Teacher	Tolon-Kumbungu KG	Tolon-Kumbungu	Northern
Respondent 499	Teacher	Bediboade D/A JHS	Zabzugu-Tatale	Northern
Respondent 500	Teacher	Bediboade D/A JHS	Zabzugu-Tatale	Northern
Respondent 501	Teacher	Bediboade D/A JHS	Zabzugu-Tatale	Northern
Respondent 502	Teacher	Bediboade D/A JHS	Zabzugu-Tatale	Northern
Respondent 503	Male Student	Bediboade D/A Prim TB	Zabzugu-Tatale	Northern
Respondent 504	Male Student	Bediboade D/A Prim TB	Zabzugu-Tatale	Northern
Respondent 505	Male Student	Bediboade D/A Prim TB	Zabzugu-Tatale	Northern
Respondent 506	Male Student	Bediboade D/A Prim TB	Zabzugu-Tatale	Northern
Respondent 507	Male Student	Bediboade D/A Prim TB	Zabzugu-Tatale	Northern
Respondent 508	Male Student	Bediboade D/A Prim TB	Zabzugu-Tatale	Northern
Respondent 509	Head teacher	Fumbisi JHS	Builsa	Upper East
Respondent 510	Asst. Head teacher	Fumbisi JHS	Builsa	Upper East
Respondent 511	Teacher	Fumbisi JHS	Builsa	Upper East
Respondent 512	Teacher	Fumbisi JHS	Builsa	Upper East
Respondent 513	Teacher	Fumbisi JHS	Builsa	Upper East
Respondent 514	Head teacher	Fumbisi Primary/KG	Builsa	Upper

				East
Respondent 515	Teacher	Fumbisi Primary/KG	Builsa	Upper East
Respondent 516	Teacher	Fumbisi Primary/KG	Builsa	Upper East
Respondent 517	Head teacher	Christ the King KG/Primary TB	Builsa	Upper East
Respondent 518	KG Teacher	Christ the King KG/Primary TB	Builsa	Upper East
Respondent 519	KG Teacher	Christ the King KG/Primary TB	Builsa	Upper East
Respondent 520	Male Student	Kariyata TB	Garu Tempane	Upper East
Respondent 521	Male Student	Kariyata TB	Garu Tempane	Upper East
Respondent 522	Male Student	Kariyata TB	Garu Tempane	Upper East
Respondent 523	Male Student	Kariyata TB	Garu Tempane	Upper East
Respondent 524	Male Student	Kariyata TB	Garu Tempane	Upper East
Respondent 525	Male Student	Kariyata TB	Garu Tempane	Upper East
Respondent 526	Male Student	Kariyata TB	Garu Tempane	Upper East
Respondent 527	Head Teacher	Kugrago JHS	Garu Tempane	Upper East
Respondent 528	Asst. Head Teacher	Kugrago JHS	Garu Tempane	Upper East
Respondent 529	Teacher	Kugrago JHS	Garu Tempane	Upper East
Respondent 530	Teacher	Kugrago JHS	Garu Tempane	Upper East
Respondent 531	Teacher	Kugrago JHS	Garu Tempane	Upper East
Respondent 532	PTA chairman	Kugrago JHS	Garu Tempane	Upper East
Respondent 533	Teacher	Kugrago JHS	Garu Tempane	Upper East
Respondent 534	SMC chair & Sub-chief	Kugrago JHS	Garu Tempane	Upper East
Respondent 535	Sub-chief	Kugrago JHS	Garu Tempane	Upper East
Respondent 536	A.M.A.	Zamrama Cluster (Dansoman) JHS	Accra	Accra
Respondent 537	Project Officer A.M.A.	Zamrama Cluster (Dansoman) JHS	Accra	Accra
Respondent 538	A.M.A.	Zamrama Cluster (Dansoman) JHS	Accra	Accra
Respondent 539	GES	Zamrama Cluster (Dansoman) JHS	Accra	Accra

Respondent 540	GES	Zamrama Cluster (Dansoman) JHS	Accra	Accra
Respondent 541	GES	Zamrama Cluster (Dansoman) JHS	Accra	Accra
Respondent 542	GES	Zamrama Cluster (Dansoman) JHS	Accra	Accra
Respondent 543	GES	Zamrama Cluster (Dansoman) JHS	Accra	Accra
Respondent 544	GES	Zamrama Cluster (Dansoman) JHS	Accra	Accra
Respondent 545	GES	Zamrama Cluster (Dansoman) JHS	Accra	Accra
Respondent 546	GES	Zamrama Cluster (Dansoman) JHS	Accra	Accra
Respondent 547	GES	Zamrama Cluster (Dansoman) JHS	Accra	Accra
Respondent 548	GES	Zamrama Cluster (Dansoman) JHS	Accra	Accra
Respondent 549	GES	Zamrama Cluster (Dansoman) JHS	Accra	Accra
Respondent 550	GES	Zamrama Cluster (Dansoman) JHS	Accra	Accra
Respondent 551	GES	Zaari JHS	Gary Tempane	Upper East
Respondent 552	GES	Zaari JHS	Gary Tempane	Upper East
Respondent 553	GES	Zaari JHS	Gary Tempane	Upper East
Respondent 554	GES	Zaari JHS	Gary Tempane	Upper East
Respondent 555	GES	Zaari JHS	Gary Tempane	Upper East
Respondent 556	SMC member	Kamahegu/Dafiama KG	Nadowli	Upper West
Respondent 557	Chairman SMC	Kamahegu/Dafiama KG	Nadowli	Upper West
Respondent 558	SMC member	Kamahegu/Dafiama KG	Nadowli	Upper West
Respondent 559	SMC member	Kamahegu/Dafiama KG	Nadowli	Upper West
Respondent 560	SMC member	Kamahegu/Dafiama KG	Nadowli	Upper West
Respondent 561	GES (Headmaster)	Gyilli D/A JHS	Nadowli	Upper West
Respondent 562	GES (Teacher)	Gyilli D/A JHS	Nadowli	Upper West
Respondent 563	Contractor, building TB	Bussie D/A Primary TB	Nadowli	Upper West

Annex 4b: Information Sources - Sites Visited by Geographic Region

Greater Accra Region	
1	Ga West[4]
2	Teshie-Nungua DEO
3	Kotobabi Cluster of Schools
4	Zamrama Line Cluster of Schools
Volta Region	
5	Dzodze DEO
6	Sremanu D/A
7	Sremanu D/A
Eastern Region	
8	Bormase Hwyena D/A Primary
9	Korm D/A JHS
10	Survey line L/A Primary
11	Asempaneye L/A
Central	
12	Aboom Zion Cluster of Schools
13	O. L. A Presby Primary
14	Awutu Beraku DEO
15	Achiase/Bedzeadze
Western	
16	Aniamote
17	Mansiso D/A Primary
18	Suhyenso
19	Adjakaa D/A Primary
20	Boinso
21	Dadieso SDA JHS
Upper West	
22	Gyili D/A
23	Kamahegu / Dafiama
24	Bussie D/A
Ashanti	
25	Nsuta
26	Yawbraso JHS
27	Ejura Roman Catholic Primary Anyinasu

[4] The evaluation team had planned but was unable to visit Ga West JHS as the implementer was unavailable to help the team locate the site.

28	Kabriti

Brong Ahafo	
29	Atebubu Anglican JHS
30	Ahotor Primary
31	Amantin SDA
32	Girls Model JHS, Bechem
Northern Region	
33	Kanvilli Tuunayili M/A Primary
34	Bagabaga Demonstration Sagnerigu JHS
35	Central Nuriya JHS
36	Fuo Mutariya
37	Gbanjogla
38	Garishegu
39	Nwodua JHS
40	Kpendua
41	Ngnani RC
42	Sang Islamic
43	Gbungbaliga RC
44	Gbungbaliga RC
45	Gor-Kukani JHS
46	Kworli D/A
47	Bediboabe D/A Primary
48	Kalegu D/A
49	Molishegu
50	Bagli
51	Bagkuli
52	Tamaligu
Upper East	
53	Fumbisi JHS
54	Fumbisi
55	Christ The King Primary
56	Zaari
57	Kugrago JHS
58	Kariyata

Annex 4c: Information Sources - Annotated Bibliography of Documents Reviewed

Anderson, C. (2011). *Action Memorandum to the Regional Assistant Administrator*. Ghana: USAID/Ghana.

Associates for Change. (2014). *Final Evaluation of Ghana Transition and Persistence Project: 2010-2013.* Accra, Ghana: Author.

The project's Final Evaluation, conducted by an external consultant, *Associates for Change* (AfC), found that the TAP project recorded enormous improvements by increasing learning spaces, improving physical infrastructure, and reducing socio–economic barriers to JHS enrollment as well as completion for pupils and their families across 156 TAP schools in 13 districts of Ghana.

Bennett, A. (2013). *FARA/FPMU Monitoring Report.* Accra, Ghana: USAID.

Bennett, A. (2013). *Summary of Findings: MOE/FPMU Construction of 159 Facilities.* Accra, Ghana: USAID.

Bennett, A. (2013). *Trip Report: Brong Ahafo, Ashanti, Eastern, and Volta Regions (April 24-May 3, 2014).* Accra, Ghana: USAID.

Bennett, A. (2013). *Trip Report: May 29, 2014.* Accra, Ghana: USAID.

Aaron Bennett Engineer USAID/Ghana, made a series of field visits to assess progress in the construction of FPMU buildings. His findings, including these two, echo those of the PWC evaluation mission:

- COWs are not inspecting forms prior to concrete pours; honeycombing, exposed rebar, wrong dimensions, multiple pours causing weak joints, forms not level and plumb, and insufficient rebar overlap are very common issues.
- Many facilities used nails adjacent to screws that were too small to secure hardware.

Biofilcom. (n.d.) *The Biofil Toilet System.* Retrieved from

https://www.biofilcom.org/static/pdf/how-biofil-toilet-system-works.pdf

The Biofil Digester is a simple compact on-site organic waste treatment system that uniquely combines the benefits of the flush toilet system and those of the composting toilets and eliminates the disadvantages and drawbacks of both systems. It is the model used for the KVIP toilets in the PWC program.

FAS Consult, Ltd. (2013). *Monthly Interim Report (November).* Accra, Ghana: Author.

FAS Consult, Ltd. (2014). *Monthly Interim Report (July).* Accra, Ghana: Author.

FAS Consult, Ltd. (2014). *Monthly Interim Report (March).* Accra, Ghana: Author.

FAS Consult, Ltd. (2014). *Monthly Interim Report (May).* Accra, Ghana: Author.

FAS Consult, Ltd. (2014). *Monthly Interim Report (October).* Accra, Ghana: Author.

FAS Consult, Ltd. (2014). *Monthly Interim Report (September).* Accra, Ghana: Author.

FAS Consult, Ltd. (2014). *Report on Furniture Supply.* Accra, Ghana: Author.

FPMU. (2013). *USAID Construction Project: Quarterly Progress Report (December).* Accra, Ghana: Author.

FPMU. (2013). *USAID Construction Project: Quarterly Progress Report (June).* Accra, Ghana: Author.

FPMU. (2014). *USAID Construction Project: Quarterly Progress Report (June).* Accra, Ghana: Author.

FPMU. (2013). *USAID Construction Project: Quarterly Progress Report (March).* Accra, Ghana: Author.

FPMU. (2013). *USAID Construction Project: Quarterly Progress Report (September).* Accra, Ghana: Author.

FPMU. (2014). *USAID Construction Project: Quarterly Progress Report (September).* Accra,

Ghana: Author.

FPMU. (n.d.). *USAID Construction Project: Quarterly Progress Report*. Accra, Ghana: Author.

FAS Consult was hired by USAID/Ghana to manage the PWC project and to ensure the project objectives were met. Many of the observations made by FAS Consult in one month were repeated in the following months. It seems that not much attention was given to its observations and recommendations by USAID.

Millennium Development Authority. (2014). *Design-Build Sanitation Facilities and other Minor Works – Phase 1B Project: Completion Report.* Accra, Ghana: Author.

The KVIP toilet was chosen as a model for areas, particularly in the North, where flooding and overflowing of cesspits pose a risk to the environment and public health. Logistical challenges in reaching remote locations and the need to train local artisans caused delays in this component of the PWC.

Plan International USA, Inc. (2010). *USAID/Ghana Transition and Persistence Program: Environmental Mitigation and Monitoring Plan.* Washington, DC: Author.

Plan International USA, Inc. (2014). *Ghana Transition and Persistence Project: Ghana TAP Final Narrative Report: 2010-2013.* Washington, DC: Author.

Plan International USA, Inc. (2010). *USAID/Ghana Transition and Persistence Program (TAP) Performance Monitoring Plan.* Washington, DC: Author.

The results of the Ghana Transition and Persistence Project (TAP) are summarized in the Associates for Change study of the project (above).

PricewaterhouseCoopers (Ghana), Ltd. (2010). *Final Report on the Pre-Award Assessment of the Accra Metropolitan Assembly (AMA).* Accra, Ghana: Author.

PricewaterhouseCoopers (Ghana), Ltd. (2010). *Final Report on the Pre-Award Assessment of the Funds and Procurement Unit (FPMU) of the Ministry of Education.* Accra, Ghana: Author.

In 2010, USAID contracted PricewaterhouseCoopers to assess the capacity of the FPMU to manage the largest component of the PWC project. During the assessment, PricewaterhouseCoopers noted the following exceptions to the overall capacity of the FPMU:

- Inadequate staffing to manage the USAID project;

- Lack of training on USAID funded projects;
- FPMU not included in annual audit plan;
- No documented human resource management plan

DSSEP. (n.d.) Part One: General Introduction to Maintenance Management Issues. *School Maintenance Manual for Senior High Schools*, pp. 1-104.

This document defines the responsibilities of the main partners in school maintenance. The District Assemblies have overall responsibility for the process, which is implemented through school maintenance plans. Schools are encouraged to seek maintenance funds from government sources, external funding from NGOs or charities, and internal sources such as durbars and jumble sales. The PWC team did not find maintenance plans at the JHS and KG levels during the field research.

Blueprints

FPMU. (n.d.). *Details: Proposed District Education Office.* Accra, Ghana: Author.

FPMU. (2012). *One Stream Kindergarten Block.* Accra, Ghana: Author.

FPMU. (2012). *Proposed 3-Unit Classroom Block for Junior High School.* Accra, Ghana: Author.

FPMU. (n.d.). *Proposed District Education Office.* Accra, Ghana: Author.

FPMU. (2011). *Proposed One Stream Kindergarten Block : Furniture Arrangement*. Accra, Ghana: Author.

FPMU. (2011). *Proposed Seater KVIP Toilet Block & Urinal.* Accra, Ghana: Author.

FPMU. (2011). *Seater WC Toilet Block & Urinal.* Accra, Ghana: Author.

Contract Documents

Amendment No. 1 to Contract for Design-Build of Sanitation Facilities and other Minor Works Phase 1B. Millennium Development Authority-Biofil Technologies Ltd. (2013). Contract No. 3201202/1

Amendment No. 2 to Contract for Design-Build of Sanitation Facilities and other Minor Works Phase 1B. Millennium Development Authority-Biofil Technologies Ltd. (2013). Contract No.

3201202/1

Amendment No. 1 to The Construction of Equipping Schools, Toilets and District Education Offices and for Conducting Substantial Completion Inspection of School Facilities Constructed through the USAID TAP Program. USA-Ghana. (2013). Modified Fixed Amount Reimbursement Agreement.

Amendment No. 2 to The Construction of Equipping Schools, Toilets and District Education Offices and for Conducting Substantial Completion Inspection of School Facilities Constructed through the USAID TAP Program. USA-Ghana. (2014). Modified Fixed Amount Reimbursement Agreement.

Certificate of Completion: Construction of 3-Storey 18 Unit Classroom Block with Ancillary Facilities (Dansoman '1' Cluster of Schools at Okpoti), Government of Ghana- The United States of America, (2014).

Certificate of Completion: Construction of 3-Storey 18 Unit Classroom Block with Ancillary Facilities (Dansoman '2' Cluster of Schools at Nasarawa), Government of Ghana- The United States of America, (2014).

Certificate of Completion: Construction of 3-Storey 18 Unit Classroom Block with Ancillary Facilities (Mamprobi Salvation Army School Compound), Government of Ghana- The United States of America, (2014).

The Construction of Biofil Toilets for Phase 1B Schools Built with MCC Funding in Northern Agricultural Zones of Ghana. USAID – MiDA. (2012). Fixed Amount Reimbursement Agreement (with Provisions for Advance).

The FARA and the amendments listed above document the delays in constructing the KVIPs in remote locations. Biofil Technologies was the contractor hired by MiDA to do the work for USAID.

The Construction of Equipping Schools, Toilets and District Education Offices and for Conducting

Substantial Completion Inspection of School Facilities Constructed through the USAID TAP Program. USA-Ghana. (2011). Modified Fixed Amount Reimbursement Agreement (with Provisions for Advance).

This is the fundamental document of the PWC initiative in that it defines the objectives of the program and the modality of implementation through the FPMU. The document's Attachment II defines the design services, specifying that all the schools, toilets, and DEO buildings financed by USAID will be constructed to a safe standard following the Ghana Building Code, Ghana Standards, and the Uniform Building Code 1997, or the International Building Code (IBC) 2006 or 2009.

USAID/Ghana Contract No. AID-641-C-00003. USAID-FAS Consult, Ltd. (2013).

Amendment/Modification to USAID/Ghana Contract No. AID-641-C-00003. USAID-FAS Consult, Ltd. (2014).

Ghana Transition and Persistence Program, USAID- Plan International USA, Inc. (2010). Cooperative Agreement No. 641-A-00-10-00026-00.

Letter of Acknowledgement and Selection of Two Schools, Ghana Office of the Metropolitan Administration- USAID, (2014), A.010/18/43.

Modified Fixed Amount Reimbursement Agreement (With Provisions for Advance), The Accra Metropolitan Assembly- The United States of America, (2011).

Modification of Assistance 1. USAID- Plan International USA, Inc. (2010). Cooperative Agreement: 641-A-00-10-00026-00.

Modification of Assistance 2. USAID- Plan International USA, Inc. (2011). Cooperative Agreement: 641-A-00-10-00026-00.

Modification of Assistance 3. USAID- Plan International USA, Inc. (2012). Cooperative Agreement: 641-A-00-10-00026-00.

Modification of Assistance 5. USAID- Plan International USA, Inc. (2013). Cooperative Agreement: 641-A-00-10-00026-00.

Cooperative Agreement No. 641-A-00-10-00026-00 was signed on May 4, 2010 for a period of three years. The cost-sharing aspect of the Agreement is unique among the four IPs in the PWC. Plan International USA agreed to add $1,916,200 of the $8,000,000 grant from USAID. Total funding: $9,916,200. Plan International proposed a "whole school improvement approach" which emphasizes child-centered community development to achieve the project's objectives. Plan's strategy was to create a learning environment conducive to increasing enrollment and completion, while at the same time motivating and rewarding students, teachers, and communities to improve their performance.

USAID Assistance Agreement No. 641-008, Improved Quality of and Access to Basic Education: Implementation Letter (IL) No. 10, USAID- Ghana Ministry of Education, (2011).

USAID Assistance Agreement No. 641-008, Improved Quality of and Access to Basic Education: Implementation Letter (IL) No. 10 – Amendment 1, USAID- Ghana Ministry of Education, (2012).

USAID Assistance Agreement No. 641-008, Improved Quality of and Access to Basic Education: Implementation Letter (IL) No FY11-641-1L-008-10-Amendment 3, USAID- Ghana Ministry of Education, (2013).

USAID Assistance Agreement No. 641-008, Improved Quality of and Access to Basic Education: Implementation Letter No. FY11-641-1L-008-009,-Amendment No. 4, USAID- Ghana Ministry of Education, (2014).

Other Documents (Titles):

Biofil – Operation and Maintenance Instructions

Community Services Activity: Provision of Latrines in Phase 1A &1B Schools: Justification for the adoption of Biofil Type of Toilet for the use of Phase 1A & 1B Schools

Construction Invoice Receipts: District Education Office Block. Received from FPMU

Construction Invoice Receipts: Junior High School, Kindergarten and KVIP Toilet Blocks. Received from FPMU

Construction Invoice Receipts: Junior High School, Kindergarten and WC Toilet Blocks. Received from FPMU

Cooperating Districts – FPMU/FPRA

MiDA. *Estimated Cost of Products: July 2009*

Preliminary Cost Estimates of Recommended Toilet Facilities

PRELIMS: District Education Office. Received from FPMU

PRELIMS: Kindergarten, Junior High School, Toilet Blocks. Received from FPMU

Revised Cost Estimates – Biofil Tiolet Facility (Phase 1B)

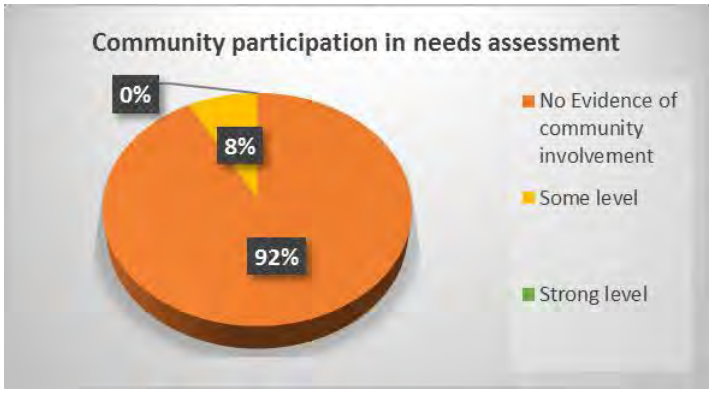
Technical Audit Report on Basic School Structures (2012)

Technical Specifications – Building Works. Received from FPMU

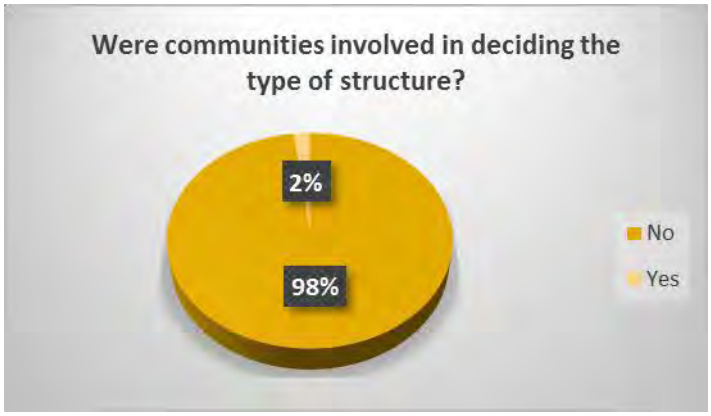
Annex 6: Results of the Quantitative Questionnaire for Group Discussion and KII Participants[1]

Q1. Was a needs assessment done?	
Scale	**Response**
Could not be determined	48
No	0
Yes	2
Total responses	50

Q2. Community Participation (in needs assessment)	
Scale	**Response**
No evidence of community involvement	46
Some level	4
Strong level	0
Total responses	50

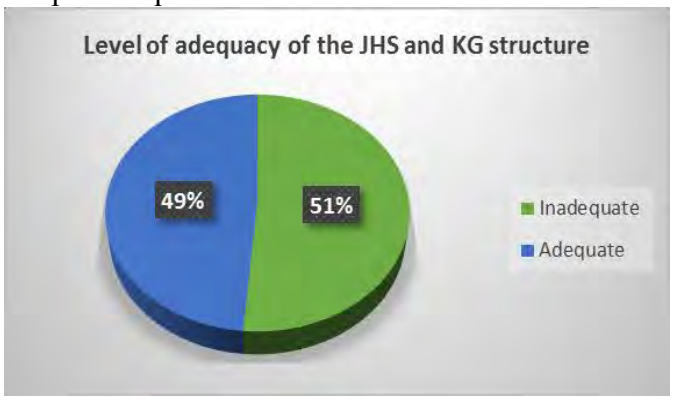


Q3. Were communities involved in deciding the type of structure?	
Scale	**Response**
No	49
Yes	1
Total responses	50

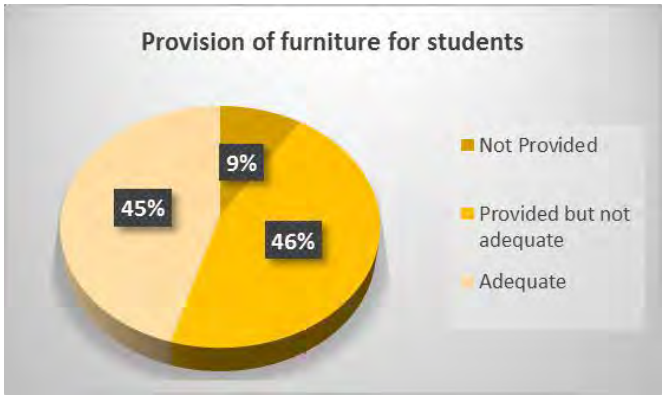


[1] The evaluation team was unable to arrange group discussions or interviews with stakeholders at the seven MiDA sites sampled, bringing the total number of responses to 50. Response totals may vary depending on the relevance of the specific question to the sites visited.

Q4. Level of adequacy of structures: classrooms (KG/JHS) – student ratio	
Scale	**Response**
Inadequate	19
Adequate	18
Total responses	37

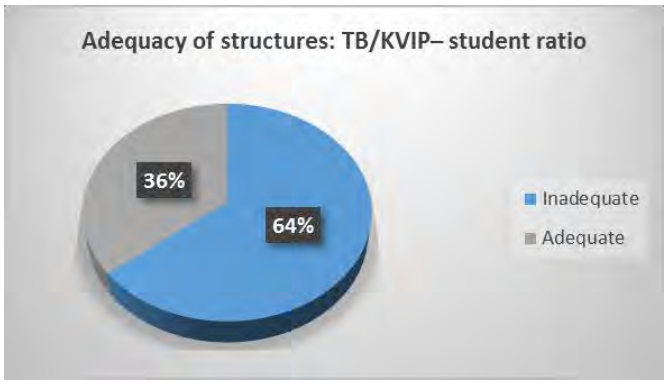


Q5. Provision of furniture for students	
Scale	**Response**
Not Provided	3
Provided but not adequate	15
Adequate	15
Total responses	33

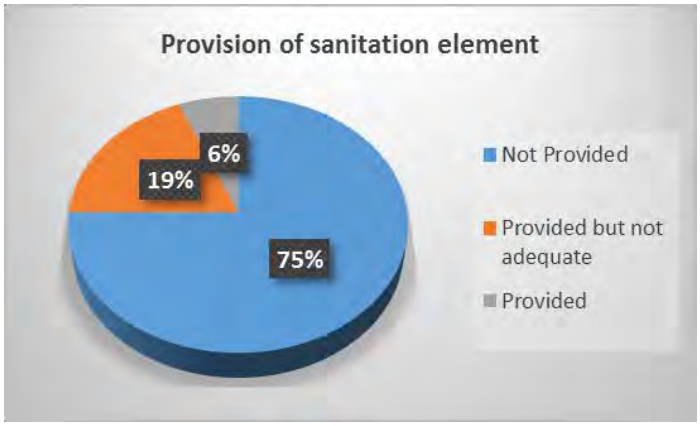


Q6. Provision of furniture for staff	
Scale	**Response**
Not provided	27
Provided but not adequate	3
Adequate	3
Total responses	33

Q7. Level of adequacy of structures: TB/KVIP– student ratio	
Scale	**Response**
Inadequate	9
Adequate	5
Total responses	14

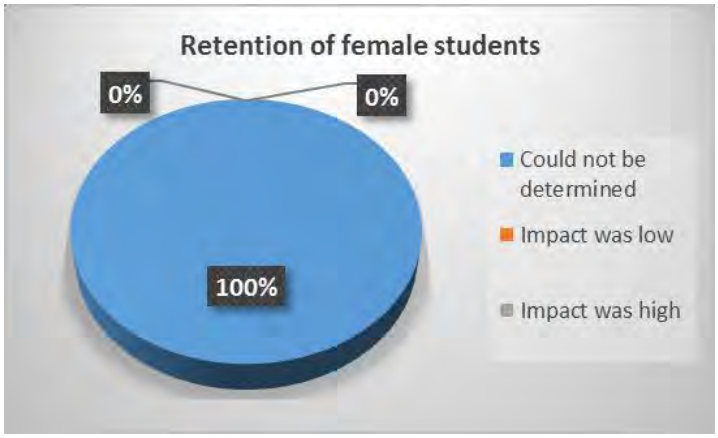


Q8. Provision of sanitation elements (waste bins, soap and water)	
Scale	**Response**
Not provided	12
Provided but not adequate	3
Provided	1
Total responses	16



Q9. Level of toilet privacy	
Scale	**Response**
No privacy	3
Some level of privacy	12
Adequate level of privacy	0
Total responses	15

Q10. Impact of TB/KVIP on retention of female students	
Scale	**Response**
Could not be determined	16
Impact was low	0
Impact was high	0
Total responses	16



Annex 7: Building Adequacy Criteria

The evaluation team adopted the following adequacy criteria based on technical expertise and bolstered by best practices in similar country contexts, in order to have a parameter to which to compare the observations derived from document review and field work.

Quantitative Criteria

JHS: The school should suit the needs of the students graduating from rimary School in the catchment area. In areas of population growth, a 20% extra capacity should be considered beyond the design capacity. Maximum of 40 students per classroom.

KG: The school should suit the needs of the un-attended population in the age bracket in the area where students live. In areas of population growth, a 20% extra capacity should be considered beyond the design capacity. Maximum of 30 students per classroom.

KVIP/ TB: One toilet for every 30 students. One sink for every 4 toilets.

DEO: The office building should suit the needs of all the staff that presently works at the District Education Office. In areas of enrollment growth, a 20% extra capacity should be considered beyond the design capacity.

Qualitative Criteria

JHS: The school should include all the types of spaces that are needed to deliver the JHS curriculum including classrooms, laboratories, library, spaces for physical education, etc. Such spaces include the necessary utilities to run the equipment. Toilets should be in close proximity to the classrooms and have running water and drainage. Walkways between the school entrance and the main school buildings should be paved, accessible, and protected from rain. The same applies to walkways from classrooms to toilets, labs, etc.

KG: The school should have appropriate finishes to allow educational activities to be conducted with no harm to students and facilities. KG design should also allow for growth beyond two classrooms with a proportionate increase in ancillary spaces like bathrooms, cafeteria, administrative offices, playground, etc. Exterior gates should be closed but not be locked during school hours. Grass and green areas are necessary for recreation and educational purposes. Large sand patches are costly and not sustainable. When steps are necessary, adequate railings should be provided.

KVIP/ TB: Floors and walls should be covered with tiles up to regulation height. Fixtures, pipes, and connections should be heavy-duty in quality. Shut-off keys and meters should be concealed. Leads for inspection chambers and septic tanks should be removable only by authorized personnel. Doors for toilet stalls should me marked on the outside to designated use by boys, girls or professors. Doors for toilet stalls should be lockable from the inside and not from the outside. Urinals for boys should be roofed and placed away from the entrance of the girls' toilets. Open urinals for girls are not acceptable.

DEOs: Places for community gatherings should be placed preferably on the ground floor to facilitate access. Individual offices should be kept to a minimum, giving preference to open spaces with work stations that are more space efficient. Entrance halls and internal circulations should be kept to a minimum. External perimeter should be kept to a minimum. Structural system should be as simple as possible. Glass louvers should be avoided as much as possible and sliding aluminum windows should be used instead. Exterior doors should be of a higher grade than interior doors. Furniture dimensions should be the appropriate to the function. Doors in emergency exits should open to the outside and should not be locked. All working rooms should be air conditioned to avoid the dust that could damage office equipment. A central air conditioning system should be considered as it is much more efficient than individual wall units.

For all constructions:

- The perimeter of the school should be fenced and gated to provide additional security and safety to occupants and premises.
- Buildings should be oriented to avoid excessive heat gain and dust.
- Landscape should be designed to support education and to improve the livability of the built areas.
- Building and site layout should comply with all regulations concerning accessibility of persons with disabilities.
- As much as possible buildings should be located in flat sites and away from possible high water streams during the rainy season.
- All hardware should be heavy-duty in quality and appropriate for intensive use.
- Water and electrical controls should be accessible only to authorized personnel.
- No pipes or electrical wiring should be exposed or left without protection.
- Doors and window protections should have proper latching to avoid possible harm to occupants and to the facilities.
- Walls and roofs should be insulated to prevent heat gain.
- Paint jobs should be properly finished.
- Rain gutters and water down spots should be firmly bracketed, especially when rain water is collected to further use.
- Rain water contained in tanks should be processed before it is made available for human consumption.

Further References on Building Adequacy

In order to provide additional support to the Adequacy Criteria mentioned above, the evaluation team considered several sources of guidelines on international good practices in school design. The following provide useful references for evaluating the PWC activities and planning corrective measures to deal with identified program limitations.

- Theunynck, S. (2008). *School construction strategies for universal primary education in Africa should communities be empowered to build their schools?* World Bank.

This comprehensive compendium of good practices in school construction from Africa (or are applicable to the continent) covers some of the key issues raised during the PWC evaluation. First of all, the author explores the pros and the cons of centralized management of school construction. He concludes that if community support is important, a decentralized approach is best. One of the challenges of the PWC program was the top-down nature of its design and implementation. Besides providing land and support to construction crews, local residents had little or no involvement in the choice of structure that was eventually built in their communities. Since the beneficiary schools did not often receive what they had requested, there is little incentive for them to develop and fund

maintenance plans. In order to address such a problem this book provides a road map for decentralized school construction and management, taking into account the risks of corruption in giving funds to local education authorities to contract local construction firms to build schools.

The book provides useful guidance, with many references to established practices in Africa and other developing regions in the areas of:

1. Local procurement and contract management;
2. Setting up a community school management system;
3. Local involvement in school maintenance;
4. Dealing with corruption in school construction;
5. The role of external donors in supporting local initiatives.

- De Spiegeleer, J. (1986). *Primary school buildings: Standards, norms and design*. Thailand: Unesco Regional Office for Education in Asia and the Pacific. Retrieved from: http://unesdoc.unesco.org/images/0010/001017/101760e.pdf

This document focuses on building small rural schools using local materials. It proposes school and classroom designs to support student-centered learning. The author provides techniques for calculating the demand for education in a school's catchment area and providing larger classrooms for the lower grades. In Bhutan, as in rural Africa, KG and first grade have more students than 6th grade. JHS1 has larger enrollments than JHS3. The issue is the impact of grade repetition and dropping out, which means that out of a cohort of 100 students in 1st grade, 70 may complete 6th grade in rural areas. JHS enrollments follow a similar pattern.

The document provides useful guidance on school location in relation to its physical environment as well as designing furniture of different sizes to accommodate younger and older students. The KG chapter is particularly useful for the Ghanaian context.

- International Building Code. (2007). Retrieved March 1, 2015, from http://publicecodes.cyberregs.com/icod/index.htm

The International Building Code (IBC) is a model building code developed by the International Code Council (ICC). The ICC documentation is comprehensive and should be used selectively in school design and construction in general, and in Ghana in particular.

Annex 8a: Observations on the FARA between USAID and FPMU

Page/ Point #	Line or Paragraph	Observation
1/1	… Substantial Completion Inspection…	"Substantial Completion" is only a phase of the construction supervision process. Based on the letter of this contract nobody has been charged with the responsibility of making the final inspection.
2/2	… to make available $ 19 MM for the design ….	According to USAID the designs were a contribution by the MoE. It is not clear how the money available for design was used.
3/3	Construction and furnishing up to: ….	This is not precise contract language and it is prone to many possible interpretations. There is no description of the type, capacity, area or specifications of the buildings to be constructed. To the opinion of this evaluation team and according to international best practices, three classrooms and a small administrative area do no constitute a school.
3/4	… MoE/ FPMU will consult with the District Education Offices …. to determine the specific location of each kindergarten and Junior High School …	The team's observations indicate that school communities were not consulted in this process or not listened too.
3/5	… MoE/ FPMU shall submit to USAID detailed and site specific designs …	According to USAID such designs were never submitted and USAID approved only generic designs. USAID did not enforced this clause of the contract.
3/6	Once approved by USAID, …. May not be altered of modified ….	The team's observations indicate that the generic designs were altered during construction and there is no record of USAID approval for such changes.
3/7	All the equipment, labor and materials …. will be in strict accordance with specifications, drawings …on internationally-accepted requirements …	The designs used for these projects were model designs that the MoE was using for a long time without any adaptation to USAID requirements. There is no evidence that USAID conducted a review to enforce this point.
3/8	MoE/ FPMU will coordinate with Plan USA to conduct substantial completion inspections ….	The team's observations indicate that each of the implementing partners conducted their construction works inspections.
4/9	... costs not to exceed the maximum USAID reimbursement per unit cost for each particular line item …. upon determination by USAID …	The evaluation team was informed that FPMU provided the unit costs and USAID approved them.

4/10	… determination by USAID that specific works have been completed in accordance with the site specific designs and specifications approved by USAID …	USAID did not have the opportunity to verify that works were completed in accordance to site specific designs, because site specific designs were never done for this project.
4/11	USAID's agreement to reimburse the MoE ….is contingent on USAID approval of progress on the works and the final approval of the completed works.	USAID did not have the administrative capacity to directly oversee work progress and completed work, and had to rely on FPMU and third parties for this task.
5/12	USAID will provide the MoE/FPMU with a monthly advance of funds …	There was only one advance of funds at the beginning of the project. No other payment was provided on a regular monthly basis, but as a reimbursement of completed work.
5/13	USAID will provide … advances for conducting substantial completion inspections …	This contract does not specify obligations by FPMU to do any kind of site inspections except for the substantial completion.
6/14	Financial management issues	There is no evidence of a planned correlation between construction progress and money advances or reimbursements.
6/15	USAID … will inspect the works … in accordance with USAID regulations, policies and procedures …	No regulations, policies and procedures for work inspections could be found at the USAID offices.
7/16	Parties understand … that USAID … will not reimburse the MoE/FPMU for any works … unless said works have been completed in accordance with this Agreement and the specifications, drawings and schedule as detailed in the site specific designs submitted and approved by USAID	The team's observations indicate that USAID made payments to MoE/FPMU without a consideration of drawings, specifications or schedule.
8/17	MoE/ FPMU shall provide USAID with a PMP within 45 days of this agreement. The PMP shall include a results table with indicators and targets to measure the results of the program.	MoE/ FPMU did not prepare a PMP and USAID did not enforce this part of the contract.
8/18	The completion date for all works … will be 24 months …	This time limit proved unrealistic considering that the program had insufficient planning and the necessary resources were not deployed to ensure the project would be completed in a timely fashion.
9/19	The Assistance Agreement requires the GoG to provide a cost-share match	The evaluation team could not find any record of the exact amount or the breakdown of the GoG's contribution.

	of at least thirty-three percent of the total value of USAID contributions.	
9/20	As a condition for this agreement the MoE/ FPMU agrees to address all the recommendations in the pre-award assessment (report) conducted by Price Waterhouse Coopers ….	There is no evidence that MoE/ FPMU has complied with all the recommendations proposed by PWC. USAID did not enforce this part of the contract.
11/21	The MoE/FPMU agree that if any reimbursements are made by USAID for work subsequently determined by USAID to be incomplete , nonfunctional of otherwise not in accordance with the terms of this FARA. USAID shall have the right to require a refund of any or all payments made by USAID for such work.	At this point it is not yet certain if USAID will enforce this part of the contract.

Annex 8a: Observations on the FARA between USAID and MiDA

Page/ Point #	Line or paragraph	Observation
2/1	Attachments	None of these attachments were made available for the evaluation team to review.
4/2	… the GoG through the Ministry of Education …and ensure the proper maintenance and repair of facilities constructed … for a period of two years ..	The MOE did capacity to ensure the maintenance of any of its facilities, and USAID was aware of this situation at the time of signing this contract.
5/3	… USAID will not reimburse MiDA … for any activity …unless such activity has been completed in accordance with … the specifications, drawings …	USAID did not have the technical or logistical capacity to verify the completion of 24 distinct projects, each of them in remote parts of the country.
6/4	Progress reports	Progress reports were not available to the evaluation team.
6/5	Completion date	The project was not completed by Feb 15, 2012. In January 2013 and in February 2013 MiDA requested extensions of the contract.
7/6	All works … will conform to the specifications, drawings and criteria …	Such specifications, drawings and criteria could not be found at the USAID Mission.

Annex 8c: Observations on the FARA between USAID and AMA

Page/ Point #	Line or Paragraph	Observation
2/1	… and maintenance of schools …	The evaluation team could not find any evidence that a specific maintenance strategy and resource stream has been implemented for these schools. A little over a year after completion, some of these projects already show signs of lack of maintenance.
2/2	Constructing, furnishing, inspecting and maintaining four three-story 18-classroom school	These are very vague definitions. There is no indication of school level, dimensions, finishings, type of furniture or other specifications.
2/3	… AMA shall submit detail site-specific designs …	AMA was not able to provide to the evaluation team with copies of such designs.
3/4	The site-specific designs and specifications as approved by USAID …	There is no evidence at USAID that the mentioned designs and specifications have been approved by USAID.
3/5	AMA will digitalize records and files …	The evaluation team could not find any evidence that project records have been digitalized.
3/6	… and upon a determination by USAID that the specific Works have/ has completed in accordance with site specific designs….	USAID did not have any objective measure to determine the approval of works.
4/7	USAID's agreement to reimburse …	The reimbursement process is in contradiction with the intention stated above of making advance payments.
4/8	USAID will provide the AMA with a monthly advance of funds …	According to AMA verbal testimonies, USAID did not honor the promise of advancing funds on a monthly basis.
4/9	… AMA shall prepare and submit to USAID a monthly cash flow projection of requirements …	Neither AMA nor USAID were able to provide the evaluation team with any kind of cash flow requirements.
6/10	… USAID will not reimburse the AMA under this FARA for any works … unless said works has been completed in accordance to this agreement …	The evaluation team has reason to believe that payments have been made to AMA, even though AMA did not comply with the terms of the agreement.
7/11	Reporting…	Neither AMA nor USAID were able to produce copies of any of these reports for the evaluation team to review.
7/12	Environmental Mitigation Plan	Neither AMA nor USAID were able to produce copies of the Environmental Mitigation Plan for the evaluation team to review.
7/13	Performance Management Plan	Neither AMA nor USAID were able to produce copies a Performance Management Plan for the evaluation team to review.

Annex 8d: Observations on the Cooperative Agreement between USAID and Plan International/Ghana

Page	Line or Paragraph	Observation
5	Within 45 days of signing …. The recipient shall submit a final Performance Monitoring Plan. …	The PMP presented by Plan Ghana called for features like "walling-in, girl-friendly latrines, hand washing stations, and access to water and electricity" None of these conditions were verified by the evaluation team's observations on the ground.
9	USAID requires that the recipient … make every effort to comply with the objectives of the USAID Disability Policy ….	The schools the evaluation team visited that Plan Ghana designed and built did not comply with Ghana law or USAID regulations in regards to accessibility for people with disabilities.
15	Our approach is … innovative …	Plan Ghana claim that their approach is innovative could not be verified by the evaluation team in terms of school construction. The team observed that the constructions are very similar to the educational buildings Ghana has built for the past 10 years.
15	We propose to implement programs that are tested and have impacted enrollment….	One of the schools built by Plan Ghana (Tano South) that the evaluation team visited had declining enrollment to the point where teachers were concerned about a possible closure of the school.
16	As a result of our interventions we expect to see a 15% increase in enrollment at TAP schools….	
20	…emphasizes child centered ….participatory approach …	The densely packed furniture lay out the team observed in the Plan Ghana schools indicates that instruction is teacher centered with little participation of students in their own learning process.
24	We will provide two handicapped accessible latrine cubicles with a ramp and wider door for wheelchairs …	The evaluation team was not able to verify the existence of such facilities in the Plan Ghana schools visited.

Annex 8e: Observations on the FAS Consult Reports (March, May, June, July, September, October 2014)

Fact: FAS Consult indicates that they have been engaged by USAID to manage the project and to ensure the project objectives are met.

Observations:

1- The reports that the evaluation team reviewed indicated that FAS Consult observed buildings under construction and reported on their observations, but did not assumed management responsibilities.
2- The evaluation team could not find any evidence that the project management role of FAS Consult was communicated to the implementing partners.
3- The evaluation team could not find any evidence that FAS Consult had any contractual authority to "ensure" that the objectives of the projects were met.
4- The evaluation team did not see in any of the documents reviewed that FAS Consult had made any observation about the achievement of an increase in access to education which is the main objective of the PWC activities.
5- Many of the observations made by FAS Consult in one month are repeated in the following months with not much attention given to observations and recommendations.
6- Same of the progress photos contained in different monthly reports seem to be the same photos.
7- FAS Consult does not make any observations about cost overruns or schedule slippages, which normally constitute project manager observations.
8- Some of the observations of FAS Consult like "quality of work is questionable" do not lead to specific remedial actions.
9- All the monthly reports describe activities such as field visits and report writing. Very few include meetings with the interested parties for exchange of information and possible improvement in performance.

Fact: FAS Consult makes several observations about what the contractors should do, or should have done.

Observations:

1- The evaluation team did not find any evidence of an authority relationship between FAS Consult and the contractors. There is no clarity either about was supposed to happen after FAS Consult had pointed out important issues.
2- The evaluation team has not seen evidence of a close follow-up by either USAID or the implementing partners of the issues that FAS Consult pointed out.

Fact: FAS Consult indicates that a number of projects had reached "substantial completion."

Observations:

1- There is no specific definition of what "substantial completion" means for FAS Consult or to USAID.
2- Usually in a construction project "substantial completion" is a very important phase that comes along with several documents. FAS Consult reports do not show any evidence of such documents.

Fact: After the last report submitted, USAID decided to no longer use the services of FAS Consult.

Observations:

1- The services of FAS Consult were hired when the project was quite advanced and serious problems related to planning and design could not be fixed in retrospect.
2- As an alternative to hiring FAS Consult, the project could have provided adequate training to construction companies and supervision teams.
3- Observations and recommendations that FAS Consult made are all self-evident and easy to detect by a well trained professional.
4- Observations by FAS Consult indicate that certain works were completed but make no reference to the quality, durability or sustainability of the works completed. None of the observations make a reference to adherence of the structures built to construction codes or other contractual obligations by contractors and/or implementing partners.

Fact: FAS Consult was hired to make observations on the quality, dimensions and quantity of the furniture supplied as of June 2014.

Observations:

1- FAS Consult noted that in some cases the specifications, dimensions and quantities were not met. Additionally, in some cases, furniture that required assembly was not assembled.
2- The evaluation team could not find of any record of action by USAID or the implementing partners to make sure that the furniture providers would carry out their obligations or correct the issues pointed out by FAS Consult.
3- FAS Consult does not make any reference to the adequacy of the furniture, which in many cases the evaluation team found to be too heavy and/or too big to efficiently use the space provided.
4- FAS Consult does not make any reference to the possible use of existing furniture in replaced classrooms or in rented administrative offices.

Fact: In the Oct 2014 report FAS Consult mentions that non-destructive tests were conducted on concrete structures and wooden pieces.

Observations:

1-There is no indication of a trigger for such tests or how the structures to be tested were selected among all the other structures.

2- The results of such tests were not made available to the SI evaluation team.

Fact: The last available FAS Consult report (Oct 2014) indicates that 86 structures have been handed over to the District Assemblies and are in use. Some have been supplied with furniture and others are yet to be supplied. It also indicates that 20 structures are substantially completed, but have remedial work to be done on them. Additionally, it reports that 51 structures are yet to be completed, out of which 11 have been abandoned for the last two months, no progress has been noted on 4, and 24 structures have slow progress. Two toilet blocks in the Northern Region have not been started.

Observations:

1- The evaluation team could not find any particular strategy to complete the unfinished structures other than extending the FARA agreements.

2- 51 uncompleted structures represent a high percentage of the overall project, which was meant to be completed in two years and is still far from completion after its fourth year anniversary.

3- Having about 1/3 of the planned structures not be operational also hinders the impact of the project in achieving the expected improvements in access to education.

4- Remedial work to be done in structures currently in use may require a strategy to ensure the safety to students and other occupants while work is in progress.

Common themes in FAS Consult findings[1]:

- Contractors at different times abandoned the sites and remobilized.
- In abandoned sites weeds grow out of control. Excavations are not covered.
- Remedial works were necessary in different locations and were performed by the contractors as requested.
- In some cases wooden structural elements were exposed to rain for several months with advanced deterioration.
- Slow progress is noted.
- Structures build started to be used even though they had not been formally handed over, which significantly reduces the liability of the contractor and endangers occupants.
- USAID branding was absent from completed jobs.
- Common defects were: non-alignment of structural members, exposed reinforcements in

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[1] Several of the issues identified in the FAS Consult reports coincide with direct observations of the evaluation team during site visits.

structural members, warping of timber members, cracks in screed and rendering, warping of timber members, exposed reinforcements in structural members and roof leakages resulting in damage to the ceiling.

- Contractors have to be paid promptly.
- There is further need to advocate for health and safety in construction sites, and well as for environmental issues.
- Black boards were provided (without chalk) instead of white boards with markers.
- Stones being used as window and door stays are damaging the hinges, doors and window panels.
- Hinges are not properly fixed and are coming loose.
- Disable ramps are too steep.
- Sagging noggins and ceiling elements need to be reinforced.
- Septic tanks and soak-aways do not have covers
- Rebar in columns and beams are exposed because of defective casting or poor quality concrete.
- Structural elements are not well aligned.
- Previously noted defects were not corrected.
- Contractor has no presence onsite.
- Window frames are not properly fixed.
- Wood for doors, windows and ceilings are not well seasoned.
- Cracks on plaster and screeds are noted.
- Photos of "substantially completed" works do not show any landscaping, only rough dirt.
- Electrical wiring not in conduits.
- Metal gates are not well fixed.
- Termites are attacking door frames.
- Interior floors are not leveled.
- Paint is peeling off.
- Toilet floors do not have proper slope.
- Rain gutter is not completed.
- Protective hoardings are non-existing or fallen down.
- Furniture was supplied when construction was still in progress.
- Water pipes leak.
- Power connections are not done.
- Part of structures had to be demolished and rebuilt.