

**Improving Educational Quality Project**

**Pupil Profiles: IEQ Ghana**

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### **Pupil Profiles: IEQ Ghana**

IEQ much from the outset has focused on the child, the efforts, and changes that are nearby to improve the quality of education for primary level boys and girls. Aggregate results across children, classrooms, schools, and communities have yielded much information. This investigation shifts the lens from the aggregate to the individual.

### **Rational**

In order to develop explanatory hypotheses for academic success and failure individual students were explored. By providing a glimpse into the lives of a few children researchers are in a better position to frame questions and hypotheses that can be applied more broadly.

### **Methods**

The Improving Educational Quality (IEQ) program was a multi-national program designed to improve education based on the communities needs. In Ghana teacher training, adequate textbooks distribution, and specific interventions such as labeling classroom items, utilizing puppets to facilitate English language use by children, and the increased use of visual aids were all implemented. Fourteen schools took part in Ghana's IEQ project.

From this large subject pool six sixth grade students were selected for further case study. In 1994, four grade levels (2-5) were chosen from 14 primary schools in the Central and Western regions of Ghana. In each school the teachers were asked to rate the students based on English language ability in reading, writing, and speaking. Based on these ratings, a diverse group of 1,120 pupils were selected for participation in the study. In an attempt to determine differences between ability level and gender, a subset of 224 students were selected for pupil observations and interviews. The 224 students consisted of a high performing boy, a low performing boy, a high performing girl, and a low performing girl in each class. Performance was determined by teacher ratings.

In order to get an even greater sense of the urban and rural distinction, in depth case studies were prepared on six students in both rural and urban areas. The following information was gathered on each student:

- a) Teacher Ratings: Teachers rated all students in the study based on reading, writing, and oral language skills. Reading skills were determined by the child's ability to a) pronounce words as well as discriminate between words and sounds, b) read sentences aloud with correct intonation, and c) comprehend. Writing skills were based on the child's ability to a) write dictated words and sentences, b) do written exercises, and c) write a short composition with little assistance. Finally oral skills were determined by the child's ability to a) ask and answer questions, b) converse with classmates, and c) describe events and tell stories in English. A five point Likert scale ranging from 1 (poor) through 5 (outstanding)

was used. Based on these ratings a high and low rated boy and girl were selected from each class for pupil observations and interviews.

b) Academic Performance: Using a Curriculum Based Assessment approach students performance in reading, writing, and oral language skills in the English language were assessed in 1994, 1995, and 1996.

c) Classroom Observations: Classroom behaviors were also observed for three or more classes, three times between 1994 and 1996. These observations targeted items such as printed materials in the classroom, use and presence of visual aids, language use by the teacher, and the frequency of which printed material was used.

d) Pupil Observations: In addition to individual assessment four of the 15-25 students were monitored during pupil observations, which were conducted during English lessons. Observations were done three times from 1994 through 1996 and consisted of three or more classroom visits during a one week period.

e) Interviews: All teachers and head teachers, as well as the four pupils in each class who had been observed and their parents, were interviewed in 1994 and 1995. These interviews were aimed at gaining information to help improve interventions and determine the successfulness of interventions in the eyes of the school community.

## Subjects

After all testing had been completed it became clear that high and low ratings were very specific to the community around the school. Urban areas had low functioning students who performed better than most children in rural schools. In an attempt to select a diverse subject pool, final selections focused on gender, interventions in the school, and community population. The final subjects consisted of six pupils; all six were considered high achieving students in primary level six by July of 1996. These students were from Atwereboanda, Cape Coast, and Takoradi.

Takoradi is the third largest city in Ghana, a major port, and the countries largest producer of lumber. Cape Coast, the fourth largest city in Ghana, is an educational hub with the nations oldest schools and the University of Cape Coast, Ghana's university for education. The final school selected, Atwereboanda, is located in the rain forest more than six kilometers from any motorable roads. Agriculture is the primary means of subsistence in Atwereboanda where there is no electricity, water system, or medical services.

Atwereboanda Ebenezer and Julianna live in Atwereboanda. They are considered to be two of the higher performing children in class, but are unable to read much from their level 3, 4, 5, or 6 textbooks. Ebenezer lives with his grandmother (Comfort Offei), and three half-siblings about 6 kilometers from school. Ebenezer and his half-sister attend school semi-regularly, while the youngest children must remain home to help care for Mrs. Offei who is suffering from gangrene in her foot. Ebenezer's mother died during childbirth, when she was approximately twelve years old. Ebenezer's father teaches in Twifo-Praso, the district capital.

Also living in Atwereboanda is Julianna. She lives about 50 meters from school with both of her parents and five siblings. Julianna is a dedicated student, attends school regularly, and performs better than most of her classmates. However like Ebenezer, she can not comprehend passages read from her level 3, 4, 5, or 6 textbooks. Teacher training interventions did result in large improvements in reading the most used words in her English textbook.

Cape Coast Charles and Sylvia are two of the highest achieving students at Aboom A.M.E. Zion Primary School in Cape Coast. Charles's father, William Addison, is the headmaster of their school. Charles attends school in both the morning and afternoon sessions. He lives in an apartment house across from the school with his parents and three siblings. Charles reads 130 words per minute, and can comprehend passages from his grade level English textbook.

Sylvia attends school with Charles, but only during one session. She is 13 years old and the highest achieving student in her class. Sylvia had achieved mastery of all grade level tasks in English. Her mother supports her education because she believe Sylvia is "a clever girl."

Takoradi. The final two pupils profiled were Naomi and Ellen who attend Archbishop Porter Primary School in Takoradi. Ellen lives with both of her parents and three siblings about 100 meters from school. Ellen's mother is a teacher at Archbishop Porter, while her father is a Lutheran minister. Ellen has never visited a rural area, but told profile researchers that one day she would "like to experience village life". Ellen is one of the highest performing children in her class, but until recently had difficulty with reading comprehension.

Ellen's classmate, Naomi is also one of the highest achievers in class. Naomi's father died so she is required to work at her mother's cafe after school. She is still allowed time for homework because her mother, Elizabeth Nkrumah, believes that all girls should be educated. Naomi is shy and does not like to speak English, but has excelled in her academics.

## **Profile Interviews**

Interview guidelines were developed for students and parents. Each author contributed several questions which were intrinsically believed to be possible ingredients to a child's success in school. Other questions were inspired from answers to parent, student, and teacher interviews in 1994 and 1995. The final student interview resulted in a total of 22 questions on topics such as travel, hobbies, daily activities, access to mass communication, household populations, and others. Parent interviews consisted of several similar questions, such as access to mass media in the form of radio, and television. Other questions focused on the parent's educational level and the parent's knowledge of their child's education. There was an attempt to determine if home support for learning was present and if so who received the most support. A total of 40 questions were asked. In addition a simple census was taken on household population, English language use of household members, and educational level of household members. (See Appendix for interview questions).

Most interviews were conducted in Fante. Some of the parents in urban areas were interviewed in English and Ebenezer's grandmother was interviewed in Twi (her mother tongue).

## **Results**

No pattern existed between whether a mother or father was available for interviews. Only one parent was unavailable for interviewing.

### **Commonalties**

What do Charles, Sylvia, Ebenezer, Julianna, Ellen, and Naomi have in common? More than they don't. Although rural areas are not as exposed to as many novelty items as urban areas, there are many things that all the children shared. For example, all of the children said they enjoyed learning, playing, and working. Travel to more urban areas was also enjoyable. Sylvia, from Cape Coast, likes visiting Ellen's hometown (Takoradi), while Ellen is fond of Accra, the capital of Ghana. Julianna stated that she likes to travel from rural Atwereboanda to urban areas and hopes to live there in the future.

Oral language use in the classroom. Oral language use in the classroom is extremely important, since English is rarely spoken outside of schools. This is especially true for rural communities. In rural Atwereboanda, Ebenezer reported that he uses English in the classroom, but gave examples such as "Let's go to drink water?" and "Larbi come." While in Cape Coast Charles enjoys speaking English in class, one of his favorite lessons was a debate with his classmates over "who is more important doctors or teachers". Sylvia said that she enjoys group discussions in class.

Mass Media. All of the students profiled had access to either television or radio. Both radio and television are in English and Akan dialects. Ebenezer and Julianna listened to their radio once a week, but never see television. Ebenezer listens to "School Program" and "What Do You Know", while Julianna prefers "Radio Doctor" and "Mmofra Kyepen". Charles, Sylvia, Ellen, and Naomi watch television daily, but listen to the radio in varying degrees; from once a week to daily. The most popular television shows are "Akan Drama", "Concert Party", "Jake and the Fat Man", "By the Fireside", the nightly news, cartoons, and specials. It is possible that exposure to English through mass media may help accelerate the learning of English. This topic could be considered in a future study.

Future Occupations. Parents of the rural and urban students profiled had similar predictions for their child's future occupations. The ideas consisted of an artist, teacher, nurse, and secretary. Ebenezer and Julianna's guardians believe they will become a teacher and nurse respectively. Unfortunately these two rural children in level six, are unable to comprehend passages from the primary level three, four, five, or six textbooks. The children seem equally idealistic. Ebenezer plans to become a teacher and Julianna is intent on becoming a doctor rather than a nurse. Similar to Julianna, Ellen hopes to become a doctor rather than a nurse so she can finally prove to her parents that she "learns hard in school." In Cape Coast, Sylvia is hoping to become a teacher and Charles has chosen a non-academic career. He wants to be a professional football player even though he has already reached mastery level (comprehension and sight-word vocabulary) in his primary 6 textbook. Charles' father predicts his son will be an artist.

### **Parents/Home**

Languages spoken Similar to the community, rural children are exposed to less English at home. Ebenezer and Julianna's guardians were not able to speak English with profile interviewers.

Attitudes towards Education Education of all children is considered advantageous, but when funds are limited parents seem to use different criteria for determining which child will continue his or her education. Age and life experiences of parents and guardians may be indicators of which criteria are employed. Ebenezer's grandmother believes it is more important to educate boys "because a boy can go further in education and girls normally get pregnant and leave school" (translated from Twi). In Takoradi, Naomi's mother, Elizabeth Nkrumah, did not receive an education because her parents thought it was more important to send her brothers. Now she is widowed and had decided it is better to send girls to school stating "the girl will need the education to support her children in the future, but the boy will only be an individual. It is the girl who will build our family." The remaining parents believe access to schooling should be determined by ability level

or age of the child.

Although it may appear hopeful that younger parents are less biased when determining educational opportunity some of the rational was noteworthy. For example, Charles Addison's father, the headmaster of a primary school, stated that "If girls, like boys, are educated properly such problems like teenage pregnancy and drug abuse would be mitigated".

Homework assistance. All children received assistance with their homework. The educational attainment of the tutor at home was less in rural areas. This is not surprising since there are no secondary schools in Atwereboanda.

**Appendix A**

**Profiles on Specific Children**

**Atwereboanda:**

Julianna Odame and Ebenezer Larbi live in Atwereboanda and attend Atwereboanda D/C Primary School. Atwereboanda is located 6 kilometers from the nearest motorable road. The village has no electricity, running water, telephone, or medical care. In addition, the nearest motorable road is 6 kilometers away. All teachers including the head teacher walk through a narrow bush path to school each day. Since Atwereboanda is located beside the Kakum National Rain Forest, the rains often make travel to the school impossible for teachers and some students. A large playing field is located behind the school which slopes down into a small village. The chief and some students, one being Julianna Odame, live in this village. Ebenezer Larbi and other children walk to school from compounds in the schools vicinity. When research began the head teacher lived in Atwereboanda, but in 1995 he was replaced by a head teacher who chose to live in a less isolated area and walk to school with the classroom teachers.

Ebenezer and Julianna's classroom is located in a concrete block with a corrugated tin roof. The P1-P3 classes are housed under a thatched roof with no walls allowing for farm animals to disrupt lessons. Most of the teachers in Atwereboanda are men, appearing to be in their twenties and thirties. Julianna liked all of her teachers, but Ebenezer preferred Mr. Wadee (P6 teacher) to Mr. Nkrumah (P5 teacher) because Mr. Wadee "has more patience (than Mr. Nkrumah) with us and is therefore able to explain things to us fuller". Mr. Nkrumah and Mr. Wadee used flashcards and posters when teaching which helped Ebenezer and Julianna "be more attentive and remember words better". In addition, Mr. Wadee used puppets, labels, and charts to teach lessons. Ebenezer reported that puppets were helpful in overcoming shyness, while labels and charts helped him in remembering words better.

**Classroom environment**

By June, 1995 Julianna and Ebenezer had been observed in the classroom during three separate time periods. The observations occurred in July and November of 1994, and in June of 1995. Three to four English classes were observed in 18 five minute intervals for July 1994 and 40 five minute intervals for November, 1994 and June, 1995.

Books. In July 1994 Ebenezer and Julianna never had their own textbooks, but were observed to be sharing a textbook two-thirds of the class period; using it only half of that time. By November and June (1995), after CRIQPEG textbooks were distributed to the schools, they possessed their own textbook, but this did not alter the amount of time textbooks were used in the classroom. In 1995, Julianna reported to have homework twice a week, but brought her textbook home everyday. In 1996, Julianna took her textbooks home just as she was doing the previous year. These textbooks included English and Social Studies and she reads them everyday. It is important to note that Julianna's English textbook was badly damaged (water damage), but still usable which indicates it has been in her possession and not locked in an office.

The amount of time Ebenezer and Julianna possessed an exercise book also increased over the observation periods; from never possessing an exercise book in July (1994) to possessing one 18% of the class time in both November (1994) and June (1995). Unlike textbook possession, the possession of an exercise book was directly related to its usage.

During the three observation periods, Ebenezer and Julianna did not use any other books during class lessons. However, when profile researchers interviewed Ebenezer in June of 1996, he possessed a story book (Buzz said the Bee) and an environmental studies text (Our Country II). Unfortunately, he was unable to read either to the researcher. Julianna, however was able to read her story book, Striped Paint, to researchers.

Print in the classroom. The fact that textbook usage did not increase (regardless of increased possession) may be due to the introduction of other forms of teaching, introduced by the CRIQPEG researchers. Pupil observation revealed that new print on the chalkboard more than doubled. In addition, the usage of visual aids increased a total of 600% in the first year. Although pupil observations were not conducted in 1996, Ebenezer reported an increase in the types of visual aids used by his P6 teacher (Mr. Wadee).

Language Use. Ebenezer and Julianna's use of the English language was fairly constant. Although they never spoke English to another child, both spoke English to their teacher during approximately 40% of the intervals observed. Choralling of English decreased slightly, but remained a constant mode of teaching. By June of 1995, the student's use of a Ghanaian language during English class had been extinguished.

School: 2, Atwereboanda  
Level: Primary 6  
Child: Julianna Odame (No.18)  
Gender: Girl  
Ability: High

#### Insert Atwereboanda

#### Insert Classroom Environment

#### Introduction

Julianna is a high functioning girl from the rural town of Atwereboanda. She has been a student in the intensive schools from P4 through P6. By sixth grade Julianna's teacher believed her to be outstanding or above average in all reading, writing, and oral language skills, except one area. That area was in her ability to read aloud sentences and short passages with correct pronunciation, stress, and intonation. Overall, her performance is impressive since her teacher rated over a third of Julianna's classmates as below average or poor in reading pronunciation and reading comprehension.

Julianna Odame is 12 years old. She is the fourth child of Mr. Samuel Odame Adu (47 years) and Madam Margaret Ontumi (39 years). Julianna lives with both parents and five siblings. Both of Julianna's younger siblings attend Atwereboanda Primary.

During her free time Julianna enjoys reading. She also wants to get fully involved in any piece of work assigned her in school or at home because she does not want to be branded a lazy girl. To her, traveling is interesting and she hopes to travel and stay in an urban center in the future.

#### Typical Day

Before School. Julianna mentioned that immediately after she wakes up she washes her face, fetches water (from the stream), sweeps the compound, bathes and goes to school. Since her house is only 50 meters from the school, she always walks to school. Julianna takes her pen, pencil, textbooks and other books (a story book 'stripe paint') to school every day.

School Day. Julianna mentioned that her activities in school follow a certain pattern. For instance, every morning she joins her mates to sweep the classrooms and the school compound. Before the drums are beat for 'assembly' she prays, says the National Pledge and sings the National Anthem. It is after these activities that she settles in the classroom for the day's lessons to begin. Julianna indicated that during English lessons pupils are expected to speak English. She revealed that she has spoken English like, "Grace, bring me my pen", and "Justina, send the book to the teacher" during some English lessons. During reading, "my teacher gives us our textbooks and reads the passage before asking us to read on our own; whenever there is any problem, like we can't pronounce a word, he comes in to help." Julianna found copying most helpful because it aided her in remembering what she has written.

At the time of the research (June 1996), Julianna had two exercise books that she used at school; one for English and the other for mathematics. In the exercise book designated 'English', Julianna has written not only English exercises but also exercises in the subjects like Life Skills, Science and Cultural Studies.

After School. After school, Julianna performs 'chores', like cooking food, fetching water and sweeping the house. She also does her homework and reads the textbooks making use of the assistance given by her mother, father and brother. They assist her in pronunciation of words and comprehension.

#### Family/Home

Educational Background. Members of Julianna's family have varying educational levels. Samuel Odame Adu and Margaret Ontwi, Julianna's father and mother respectively, have attended and completed the 'Middle School' and have also obtained the Middle School Leaving Certificate (MSLC). In 1996, two of her siblings were Junior Secondary School final year students, two were in the primary school, and the youngest, Henrietta (4) attended kindergarten.

Language Usage. At home, Julianna's parents speak, read, and write in English. The rest (with the exception of 4 year old Henrietta) do the same both at home and in school. Julianna speaks English outside

the classroom especially when playing with friends. Her examples of English use were statements such as; "Grace, come and let's go" and "Sarah, come and let's play ampe." Julianna's father claimed that he owns a radio set and that once every week his daughter listens to an English program 'Radio Doctor' and a Fante program 'mmofra kyepe'. This runs contrary to what Julianna said. Julianna stated that she does not listen to any radio program though every Sunday she goes to a neighbor's house to watch TV (Akan drama).

Support for Schooling. Julianna expressed that she likes school because it is a place where she can learn to read and write. She adds, "I feel that if one is not able to write letters (correspondence) it is a shame." She is confident of enjoying her parents' support for her schooling, because they want her to be well educated. Her father corroborated this during interviews in both 1995 and in 1996. Julianna receives homework assistance from both parents. In addition, assignments are created and then marked by her parents. Mr. Odame-Adu also reported that he went to school to look through her books, check handwriting, and check progress from the teacher (July 1995). Mr. Odame-Adu told researchers that he has no intentions of furthering his education but is presently working (farming) and seeing to it that his children are better educated (June, 1996). Julianna's father buys all materials that she needs in school. She explained that whenever she completes her exercise book her father buys her a new one.

Gender and Support for Education. Julianna's parents have three daughters and three sons. In 1995, her father, Mr. Richard Sammuel Odame Adu reported that in the learning of the English language he would give greatest support to "the eldest son and the eldest girl so that they can support their brothers and sisters." In 1995 he once again reiterated his equal support for learning. Julianna's father said that he is prepared to support both boys and girls. He said that his support for them (children) would not be based on the gender of the individual but rather on the person's ability. The one with higher ability will thus be considered first.

However, when this issue was probed further, he said that if his resources were such that he could support only one child at a time, then he would choose the boy because of their system of inheritance. His family practices the patrilineal system. The boy therefore has to be prepared (educated) to take over the family.

### Pupil Performance

Oral language. In 1994 Julianna was able to answer most functional items (basic questions such as "how are you?"). However full mastery was not achieved until 1995. When asked more difficult oral language questions, Julianna could not answer a single question correctly. However by 1995 she could answer a third of the questions. This rate of improvement continued in 1996, even with the addition of level 6 questions. Other areas of oral language grew dramatically during the first year of CRIQPEG interventions, but then plateau. For example her ability to complete oral commands (i.e., "point to the animal that gives us beef"; level 5, # 32) leaped from answering 20% of her grade level questions correctly to answering 89% successfully. In 1996, she experienced a mild decrease in performance due to the addition of level 6 listening comprehension items that required she comprehend and listen to an entire paragraph rather than a single statement. As Julianna's oral language skills are improving her attitude is also changing. In 1995 Julianna said she felt shy speaking English. A year later she stated "I do not feel shy when speaking English, because I know I can learn better when I speak the language." She decided to speak English as frequently as she could so that she would be corrected "by those who know (teacher)" and to seek her parents' help in pronouncing unfamiliar words (especially when reading).

Writing language. When researchers first arrived Julianna's writing ability was virtually non-existent. Julianna was able to copy letters in 1994, but unable to correctly write either her first or last name. This may have been due to her lack of any paper to practice writing. When researchers returned a year later her ability to write words increased from 3 to 44. In 1996 it was apparent that both labeling and access to library books had contributed to Julianna's ability to write words. She could write many of the words in her library book "Striped Paint" and labeled objects in the classroom. Although Julianna's writing skills improved she was still far from grade level. When assessed for spelling and dictation, Julianna was able to write 28% of the words in each sentence dictated to her. When dictation was done in sentence or paragraph form, Julianna was only able to write 20% of the words and correctly capitalize two of the ten words. By 1996, things had not improved. Even with poor writing skills Julianna still believes that "if one is not able to write letters (correspondence) it is a shame"(profile interview, 1996).

Reading. Julianna's reading improved over the research period, but she was still far below grade level in 1996. In 1994 Julianna was virtually unfamiliar with print, unable to answer questions such as

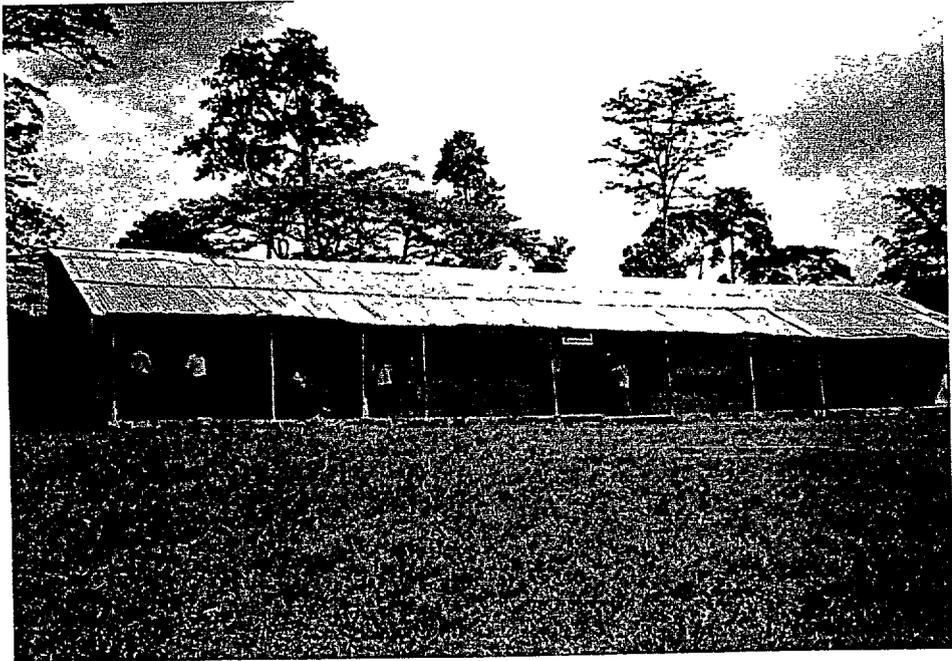
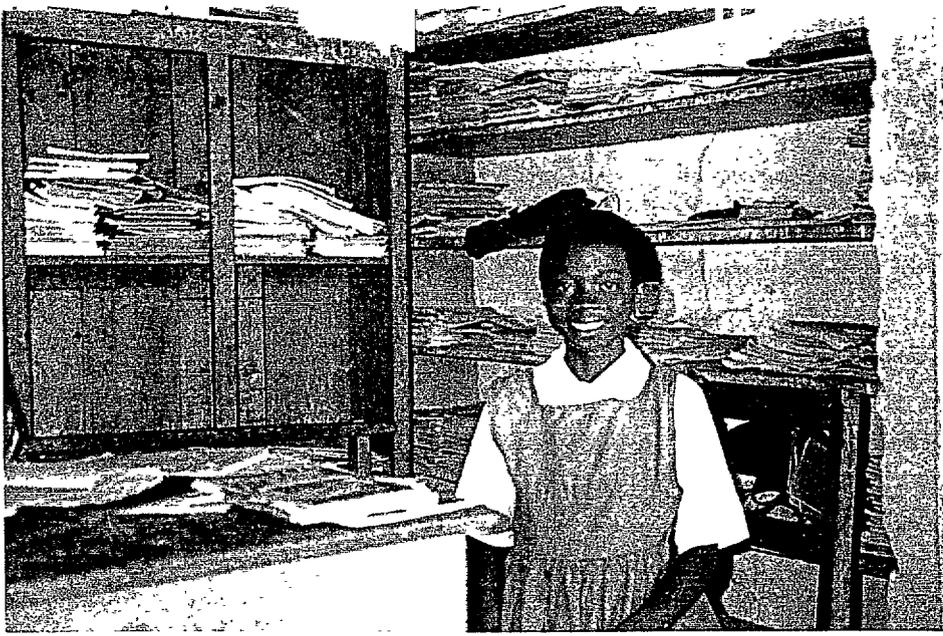
“how do you open a book?” and “where does one begin to read?”. At this time, the alphabet was familiar to her, but she could not name all letters of the alphabet in upper and lower case letters. With these basic reading skills missing, it was not surprising that Julianna could only read 3 of the 100 most commonly used words in her textbook. Even with assistance she was could only barely improve her performance. Even with this limited achievement, Julianna was one of the highest performing children in her class.

After one year of interventions Julianna and her classmates had shown improvement. Along with 80% of her class, Julianna had fully mastered basic familiarity with print. She also knew the entire alphabet and could read nearly half of the most commonly used words in her text. Julianna’s knowledge and recognition of both upper and lower case letters also improved. By 1995 she was able to read 44 of the 100 most used words in her P5 textbook and then 92 when assisted. Even with an improved reading vocabulary, Julianna was still a non-reader due to her inability to answer a single question about what she had read.

By the final year of research, Julianna had learned to read in English. She was reading slowly (32 words per minute from her P6 text), but was able to read 88% of the words in a passage from the P2 text. Although Julianna’s reading had improved by 1996 she was far below grade level. Julianna was happy to read Striped Paint to researchers pointing to each word as she read it. Julianna, however, had not covered much in her P6 English textbook. She had only mastered the first paragraph of Unit 1. It may thus be presumed that Julianna has laid more emphasis on reading the story book than the English textbook. She hinted that her specific reading difficulties were that she found some words unfamiliar and thus could not pronounce or understand them. She says nevertheless that, she has developed (new) ways of learning English better; she first focuses mentally on the word, spells it and then tries to pronounce it. She has also decided to seek assistance from others (parents, teachers) whenever she cannot pronounce or does not understand any word. This approach may have improved her reading comprehension. It was not until P6 that Julianna could answer a single question regarding a passage she had read. That year she answered half of the questions about a passage in a P2 textbook, one of eight questions from a P3 text, but still none from the P4, P5, and P6 textbook. Although Julianna had grown in four years, her lack of familiarity with printed material in P4 made grade level attainment by P6 virtually impossible.

#### Aspirations

Although Julianna is not performing well in school, she is outperforming her peers and has high aspirations. Julianna wants to be better educated so that she will secure a good job in the future. She hopes to proceed from the primary school through the JSS, SSS and finally, the university. She wants to be a doctor when she grows up because she would enjoy helping the sick.



**Table 1: Percentage of Julianna's classmates in non-mastery, partial master, and mastery of skills.**

Atwereboanda D/C Atwereboanda Oral Language Tasks	Non-Mastery			Partial Mastery			Mastery		
	1994	1995	1996	1994	1995	1996	1994	1995	1996
Functional Items	0	0	0	96	30	8	4	70	92
Listening Comprehension	80	0	0	12	5	25	8	95	75
Oral Language	100	35	42	0	60	58	0	5	0

Atwereboanda D/C Atwereboanda	Non-Mastery			Partial Mastery			Mastery		
	1994	1995	1996	1994	1995	1996	1994	1995	1996
Reading									
Letter Recognition	24	0	0	48	20	0	28	80	100
Concepts About Print	8	16	0	88	37	8	4	47	92
Aided Reading	100	63	0	0	32	25	0	5	75
Reading Most Used Words	100	74	0	0	26	66	0	0	33
Reading P2 Passage	100	79	0	0	21	58	0	0	42
Reading P3 Passage	100	79	8	0	21	50	0	0	42
Reading P4 Passage	100	84	17	0	16	42	0	0	41
Reading P5 Passage	X	74	0	X	26	83	X	0	17
Reading P6 Passage	X	X	17	X	X	66	X	X	17
Comprehension P2 Passage	100	89	33	0	11	66	0	0	0
Comprehension P3 Passage	100	100	75	0	0	25	0	0	0
Comprehension P4 Passage	100	100	92	0	0	8	0	0	0
Comprehension P5 Passage	X	100	100	X	0	0	X	0	0
Comprehension P6 Passage	X	X	100	X	X	0	X	X	0

Atwereboanda D/C Atwereboanda	Non-Mastery			Partial Mastery			Mastery		
	1994	1995	1996	1994	1995	1996	1994	1995	1996
Writing Tasks									
Copy Letter	0	0	0	N/A	N/A	N/A	100	100	100
Write Name	80	0	0	N/A	N/A	N/A	20	100	100
Write Word	100	10	0	0	25	0	0	65	100
% words (spelling)	X	100	42	X	0	58	X	0	0
% correct letters (spelling)	X	70	17	X	30	75	X	0	8
Correct words (dictation)	X	95	92	X	5	8	X	0	0
Correct capitals (dictation)	X	100	83	X	0	17	X	0	0
Corrects Word Sequence	X	100	100	X	0	0	X	0	0

X = Julianna Odame

School: 2, Atwereboanda  
Level: Primary 6  
Child: Ebenezer Larbi (No.16)  
Gender: Boy  
Ability: High

#### Insert Atwereboanda

#### Insert Classroom Environment

#### Introduction

Ebenezer Larbi is a primary 6 student in the rural town of Atwereboanda. At 14 years, he is a dedicated student, reporting to read, write, and speak English everyday of the week. His teacher commented that he is a "very serious student", but that he "fools around in class at times" (Report Card, P6, 1996). Ebenezer's P6 teacher, Mr. Wadee, was concerned with Ebenezer's attendance, because he does not attend school when it rains. In 1994, Ebenezer's teacher believed Ebenezer's reading, writing, and oral language skills were average. Reading scores were based upon sound discrimination, pronunciation, stress, intonation, and comprehension of short passages. Writing scores were based upon dictation, written exercises, and composition; while oral language was determined by the child's ability to ask and answer questions, converse with classmates, and describe events or tell short stories. Ebenezer and half of his class were rated poor or below average in their reading skills in 1994.

In 1996, Ebenezer appeared to be the tallest boy in his class. His uniform was clean and in good condition, although there was speculation that it had been borrowed for the day due to his prior knowledge that researchers were coming. When asked what are some things you like, Ebenezer responded (in English) "Playing football because it is nice to play it, reading English because it helps me improve on my vocabulary, and eating ampesi, because it is delicious". Although his father lives in Twifo-Praso, Ebenezer's favorite place to travel to is Accra (capital of Ghana). When asked why he stated that "there are a lot of beautiful things there". Ebenezer lives with his paternal grandmother who is Larteh and speaks Twi. His mother died during childbirth when she was approximately 12 years old and his father is a teacher in Twifo-Praso. In 1996, researchers interviewed Ebenezer's grandmother, Comfort Offei, at her home. At the time she had an infection (gangrene) in her foot that required medical attention. Ebenezer's father wanted her to move to Twifo-Praso, but she did not want to go.

#### Typical Day

Before School. Each morning Ebenezer washes his face, cleans his teeth, and then goes to fetch water at the river. Some of this water is then boiled for bathing. After bathing he takes breakfast and then walks approximately 2 km to school along a narrow footpath. When Ebenezer is attending school he brings his English textbook, exercise books, and a pen.

School Day. In June of 1996, Ebenezer told researchers that upon arriving to school he sweeps the school compound, attends morning devotion and then marches to class. Classes begin with either English or math, and after two periods the students receive a break before third period. An additional break comes after third period. On a normal day school ends at 2 p.m., but on rainy days school closes as soon as it starts to rain heavily. This is usually about noon and is done to enable teachers to return home before the foot path becomes flooded.

According to Ebenezer a typical English class consists of Mr. Wadee reading the textbook and then asking students to read it to themselves. He then gives an exercise based on the passage read. One month from the close of the school year Ebenezer's class was only on Unit two of the textbook and Ebenezer could not pronounce two words ('asked' and 'who') in the first two sentences of the chapter.

During school he is expected to speak English; such as "Larbi come" and "Let's go to drink water". Writing of English was done in both copying and composition, such as writing about "My friend". Ebenezer believes reading and mathematics are most helpful and told researchers that his favorite activity was a composition describing himself.

After School. When school is over, Ebenezer returns home to help his grandmother, eat, and then do any homework that may have been given. Ebenezer brings his textbook home everyday. He receives homework assistance from his uncle, who lives in the same compound as Ebenezer. Since he is assisted

with pronunciation, Ebenezer reports that his greatest difficulty while doing homework is comprehension. He attributes this to the fact that his aunts and grandmother "keep sending me (on errands) which disrupts my work". The following year this was no longer a problem. Ebenezer stated that "they used to ask me to pound fufu or to fetch water from the river side. Now I make sure all these household jobs have been done before I start reading." Even without these disruptions, comprehension, along with pronunciation, remained Ebenezer's most difficult task when doing his homework. In 1996 Ebenezer told researchers that his uncle helped by teaching him the "meaning and pronunciation of the difficult words".

### Family/Home

Family. Ebenezer lives with his paternal grandmother, Comfort Offei. Since Ebenezer's father is teaching in the regional capital, Twifo-Praso, (36 kilometers from Atwereboanda's nearest motorable road), Mr. Larbi and his third wife are living in Twifo-Praso. Ebenezer's mother died when she was approximately 12 years old due to complications during the birth of Ebenezer. Her death left Ebenezer with no full siblings, but his father's second marriage produced three children, the oldest Sarah is in Ebenezer's P6 class, but lives with her mother who is divorced from Mr. Larbi. The younger two children live with Ebenezer and their grandmother in a mud and thatch hut. Ebenezer's youngest sister is ten years old and is in class one, while his younger brother is in nursery. Both children occasionally miss school in order to care for their grandmother. However Ebenezer is spared this responsibility, because he is the eldest son.

Ebenezer is the highest educated member of his household. According to Madame Offei, she never attended school because she lost her father when she should have begun schooling and his successor did not help her. Other huts in the compound are occupied by his two aunts and their families. No other families live in the immediate area.

Exposure to English. No one in Ebenezer's household speaks English nor is anyone capable of reading or writing English. The only exposure to English comes from the radio. Twice a week Ebenezer listens to his uncle's battery powered radio. The programs he attends to are 'School Program' and 'What do you know?', both of which are broadcast once a week in English by the government run GBC2. Since his uncle lives in the compound the radio is easily accessible, but used sparingly due to the cost of batteries.

Support for schooling. Ebenezer's grandmother takes an interest in his schooling. She purchases exercise books six times a year, saves report cards, checks his books to make sure they are in good condition, and wants Ebenezer to be a teacher. However she claimed that due to being an illiterate she could not assist him with homework or determine the difference between doing homework and self-initiated attempts at reading.

Although she wants him to go on to Senior Secondary School (S.S.S.) and then the University, Madame Offei was unable to judge the likelihood of either occurring. Instead she presented researchers with Ebenezer's report card and asked that they assess Ebenezer's capability to further his education past Junior Secondary School (J.S.S.). Each of Ebenezer's report cards were saved and kept clean, an impressive feat; since all paper is kept in their mud and thatch hut and rains are a frequent occurrence. Ebenezer realizes his grandmother is supportive and told researchers his education is supported at home "because I am liked by my grandmother".

Gender and Support for Education. Gender bias exists in Ebenezer's family. In 1995 Stephen Larbi, Ebenezer's uncle, told researchers that he would give greater support to a boys education "because they can be trusted that they can complete their education without being school dropouts through unwanted pregnancy. They then can be our future breadwinner". In 1995 Ebenezer's grandmother supported this belief stating that a boy can go to a greater height on the academic ladder, because girls normally marry, get pregnant, and stop schooling. Approximately half of the children in Ebenezer's class are without a male guardian at home and nearly all of the female guardians do not speak English at home. It is likely that most children's fathers are working outside of Atwereboanda and have been educated further than the women who remain with the children. This is the case with Ebenezer since his educated father is teaching in Twifo-Praso and has left three of his four children under the care of his illiterate mother.

### Pupil performance

After a year of CRIQPEG interventions, Ebenezer was asked if his reading, writing, and speaking of English had improved 'Greatly', 'Little', 'Very Little', or 'None'. At that time (June 1995) he believed that his reading, writing, and speaking of English had only improved 'Very Little'. However after the second year he stated that reading, writing, and speaking of English had improved "greatly". Ebenezer's report card

indicated that of all the students in his class, Ebenezer performed the best in English and the worst in vernacular language. Fante is the vernacular language taught in school and Ebenezer's mother tongue is Twi, therefore his difficulties with Fante are not surprising.

Oral language. In 1994 Ebenezer was unable to complete any tasks from the oral expression and listening comprehension subtests. However these scores improved to 29% and a remarkable 81% on the revised and expanded test given in 1995. Even with the addition of P6 materials in 1996 the listening comprehension improvements were virtually sustained, while the oral expression growth continued. It is important to note that Ebenezer was able to answer 46 of the 48 command questions (i.e. "push the table" or "point to the Tsetse fly"), but missed all 12 questions directed to comprehension of passages read by the examiner.

In 1994 Ebenezer and nearly his entire class had partial mastery of the functional items which consisted of answering questions such as "What is your name?". By 1995 Ebenezer and most of his classmates could answer these questions in full sentence format. For example if asked "What is your name?" the answer was "My name is Ebenezer Larbi."

As Ebenezer's oral language abilities were improving, his attitude towards speaking English changed. In 1995, Ebenezer reported he did not use English outside of the classroom, because his friends laugh when he mispronounces words. In 1996 Ebenezer reported that laughing was no longer a problem, because "our teacher (Mr. Wade) says we are all learning so no one should laugh when one makes a mistake." He had also begun to speak English when playing football with his friends, but claims that shyness and a lack of vocabulary are his biggest obstacles.

Writing language. The basic writing tasks (write name and copy letter) were mastered at baseline. His ability to write words increased every year. By the time Ebenezer was finishing P6 he could write 28 words in ten minutes. His performance placed him in the middle of his class who ranged from 18 to 35. The most complex word he wrote was 'window', the remaining 27 words consisted of names, numbers, and simple one, two, three, and four letter words. The positive affects of the labeling intervention were apparent. Most students in the class included window and door (two items which had been labeled in their classroom).

In 1995 and 1996 spelling and dictation were assessed. Originally, Ebenezer performed poorly, but then showed impressive improvements. In 1995 he could write one of every five words dictated to him. By 1996, Ebenezer could write approximately half of those words. Of the words dictated to him Ebenezer wrote approximately two-thirds of the letters in the words dictated to him, a vast improvement from the previous year. When dictation was done in sentence or paragraph form, he was only able to write 13% of the words, but was unable to accrue any points for correct capitalization or correct word sequence. By 1996 only slight improvements were noticed. Ebenezer was only capable of writing words that he has in his limited repertoire other words were impossible to decode. For example when dictated "boys and girls always play" Ebenezer wrote "bosy and girls ynsb plnd". His performance was reflective of the entire class.

Even with poor performance on dictation, Ebenezer was able to recall a writing assignment he enjoyed. The lesson was to write a composition which Ebenezer titled 'Myself'. He recalled the composition as follows:

"My name is Ebenezer Larbi.  
I am 14 years old.  
I am in class 6.  
I come from Larteh Akuapim."

Reading. Ebenezer's reading improved over the research period, but he was still far below grade level in 1996. In 1994 Ebenezer was virtually unfamiliar with print, unable to answer questions such as "how do you open a book?" and "where does one begin to read?". In 1996 Ebenezer was still unable to identify the front of his textbook, however he was able to accurately identify all other aspects of reading such as pointing to print, where you start to read, and the difference between letters and words. Since he was able to answer all other concepts about print questions, it is more likely that Ebenezer did not understand the question rather than that he did not know the difference between the front and back of his textbook. During the two year period, Ebenezer's letter recognition increased from 43 to all of the upper and lower case letters of the alphabet. Each year, Ebenezer was asked to read a list of the most commonly used words in his grade level textbook. Before interventions began, Ebenezer could not read any of the most commonly used words in his Primary Level Four English Textbook. When a researcher aided him he

was still unable to read any of the words. A year after interventions began he was able to read almost half of the most used words in his P5 textbook, but a researchers assistance did not increase his ability to read more words. In 1996 Ebenezer's reading improved again. During this assessment he could read slightly more than half of the most used words in his Primary 6 textbook and with assistance he was capable of reading 22% of the most used words in his Primary Level 6 English textbook. As a non-reader in 1994, Ebenezer's reading improved consistently each year. Perhaps the most impressive example of this improvement was shown when he was presented with passages to read from his textbook. Before interventions Ebenezer was only able to read one word from his Primary Level Four English textbook, the following year he was able to read 39% of the words in a P4 passage, and then in 1996 Ebenezer was able to read almost all of the words in that passage. Even with these improvements, Ebenezer was only able to read 60% of the words in his grade level textbook. Comprehension was still a major problem for Ebenezer. All three years Ebenezer was asked comprehension questions on the passages he had read. Aside from questions on a Primary Level 2 Passage read when he was in P6, Ebenezer was unable to answer a single question correctly. Even more upsetting is that he could only answer half of the P2 questions correctly. This comprehension difficulty was similar to that exhibited in the listening comprehension tasks.

#### Future Aspirations

Even with extremely low performance, Ebenezer has set his sights high. One day Ebenezer hopes to attend the university reasoning "because I want to become a teacher and a good one of course" (June, 1996). When asked why he responded "I just like the job". These goals are similar to those stated earlier by his grandmother.

Dictation examples:

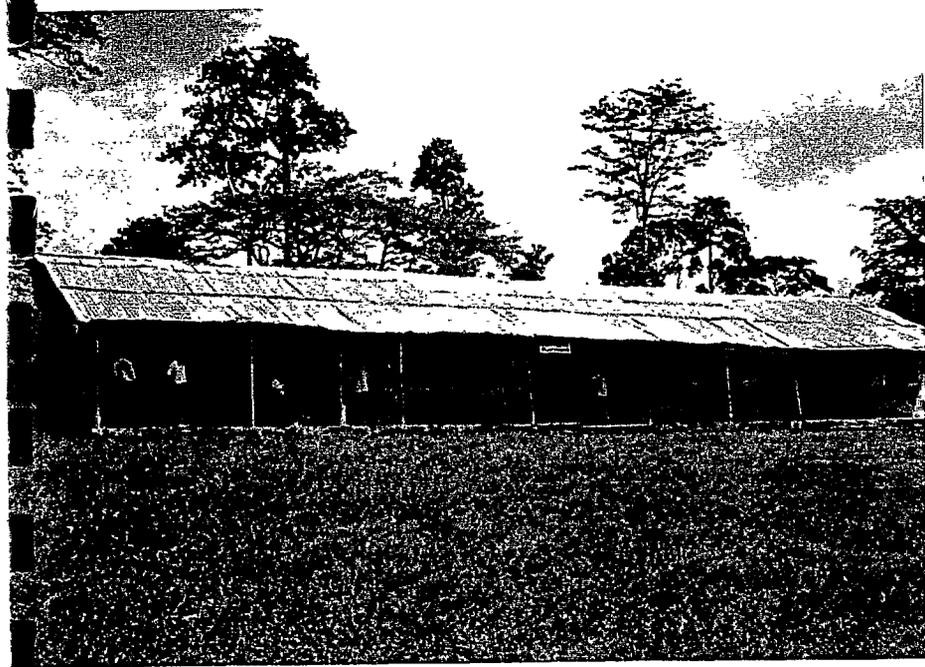
Dictation Today I am going to town. Look at me.

Ebenezer Today I am going to the Look at y

Dictation Boys and girls always play games with their friends. When they are Ebenezer  
boys and girls ynsb plnd fahis osld day

Dictation going to school or coming home from school, they walk with their  
Ebenezer was shem from school day skdes

Dictation friends and talk with them. They go for water together."  
Ebenezer school and dorsi day go of water to t msehd"



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Table 1: Percentage of Ebenezer's classmates in non-mastery, partial master, and mastery of skills.

Atwereboanda D/C Atwereboanda Oral Language Tasks	Non-Mastery			Partial Mastery			Mastery		
	1994	1995	1996	1994	1995	1996	1994	1995	1996
Functional Items	0	0	0	96	30	8	4	70	92
Listening Comprehension	80	0	0	12	5	25	8	95	75
Oral Language	100	35	42	0	60	58	0	5	0

Atwereboanda D/C Atwereboanda	Non-Mastery			Partial Mastery			Mastery		
	1994	1995	1996	1994	1995	1996	1994	1995	1996
Reading	100	100	100	0	0	0	0	0	0
Letter Recognition	24	0	0	48	20	0	28	80	100
Concepts About Print	8	16	0	88	37	8	4	47	92
Aided Reading	100	63	0	0	32	25	0	5	75
Reading Most Used Words	100	74	0	0	26	66	0	0	33
Reading P2 Passage	100	79	0	0	21	58	0	0	42
Reading P3 Passage	100	79	8	0	21	50	0	0	42
Reading P4 Passage	100	84	17	0	16	42	0	0	41
Reading P5 Passage	X	74	0	X	26	83	X	0	17
Reading P6 Passage	X	X	17	X	X	66	X	X	17
Comprehension P2 Passage	100	89	33	0	11	66	0	0	0
Comprehension P3 Passage	100	100	75	0	0	25	0	0	0
Comprehension P4 Passage	100	100	92	0	0	8	0	0	0
Comprehension P5 Passage	X	100	100	X	0	0	X	0	0
Comprehension P6 Passage	X	X	100	X	X	0	X	X	0

Atwereboanda D/C Atwereboanda	Non-Mastery			Partial Mastery			Mastery		
	1994	1995	1996	1994	1995	1996	1994	1995	1996
Writing Tasks	100	100	100	0	0	0	0	0	0
Copy Letter	0	0	0	N/A	N/A	N/A	100	100	100
Write Name	80	0	0	N/A	N/A	N/A	20	100	100
Write Word	100	10	0	0	25	0	0	65	100
% words (spelling)	X	100	42	X	0	58	X	0	0
% correct letters (spelling)	X	70	17	X	30	75	X	0	8
Correct words (dictation)	X	95	92	X	5	8	X	0	0
Correct capitals (dictation)	X	100	83	X	0	17	X	0	0
Corrects Word Sequence	X	100	100	X	0	0	X	0	0

☐ = Ebenezer Larbi

## Takoradi

Ellen Bart-Plange and Naomi Nkrumah both live in one of Takoradi's many suburbs. Takoradi is the third largest city in Ghana, a major port, and the country's largest producer of lumber. Takoradi is also home to one of Ghana's three train depots. Residents of Takoradi have a higher standard of living than many other Ghanaians due to the urban conveniences of electricity, tap water, sewer drainage, medical care, and numerous retail stores and markets. However, urban problems of overcrowding and low wages do exist.

## Archbishop Porter Primary School

Ellen and Naomi attended Archbishop Porter School. Their school was one of the CRIQPEG non-intensive schools and like all the other non-intensive schools benefited only from the supply of textbooks during the period of the research. The school has concrete floors, windows with shutters, and a metal roof. All six classrooms are in a single block. Located in the same compound is another primary school, nursery school classes, and two junior secondary schools (J.S.S.). All of the classes encompass a large playing field and a canteen where most students purchase food during break periods. Students are seated two pupils per bench. It appears that on the whole, the furniture available for pupils is insufficient. For instance, in the P5 classroom six pupils were observed sitting on the floor just in front of the chalkboard.

A majority of the teachers at Archbishop Porter are women. When asked about differences between their last two teachers, Miss Tando (P6) and Miss Akakpo (P5), the girls had differing opinions. Ellen stated that "the change has not affected my studies. They all like me, they are punctual, and give us assignments; but they both cane a lot." Naomi preferred Miss Akakpo "because she was not caning." Although Ellen and Naomi's definition of 'a lot of caning' may differ, both agreed that caning does not improve their learning.

## Classroom Environment

Books. Ellen and Naomi had an English textbook during two-thirds of her English lessons. The amount of time textbooks were used increased over the years. Between July 1994 and June 1995, textbook use increased from 22% to 36%, and then to 48%. This increase occurred after the distribution of textbooks by CRIQPEG researchers. It is possible that textbook use increased, because not all students possessed a textbook in 1994. In addition to English; math, social studies, science, and Fante textbooks were used in P6. Naomi and Ellen's P6 teacher, Miss Vera Tando, was able to teach 18 of the 30 units in the P6 English textbook by the final month of school. She also covered more of the other subject areas than any other school in this study.

Library books were also available to students. Ellen had just completed Cinderella, while Naomi told researchers she had read A Girl to Love, The Ginger Bread Man, and The Elephant and the Hippopotamus.

Exercise books. Similar to textbooks, the possession and use of exercise books increased between 1994 and 1996. In 1994 exercise books were not used during class. During the next two observation periods (November, 1994 and July, 1995) Ellen and Naomi used their exercise books during a third of the class period. In 1996 the girls used an exercise book everyday. They reported to have exercise books for English composition, English dictation, mathematics, cultural studies, science and agriculture, Fante, and life skills.

Print in the classroom. Archbishop Porter Primary School was a control school so teachers did not receive training in CRIQPEG interventions. Therefore classroom print did not include labeling or the use of visual aids. The only non-text print in the classroom was on the chalkboard or a small poster hanging on the wall. Teachers would print on the board before students entered class and intermittently add new print to the chalkboard. In 1994 new print was added during approximately half of the lesson. This amount decreased by half as the use of textbooks increased. When researchers visited Ellen and Naomi's class in 1996 there was one poster documenting types bacterial illnesses.

Language use. Ellen and Naomi's teachers used the Ghanaian language a few times during the English lessons observed in June 1995. During a majority of the lessons teachers spoke to students in English. Choralling English was a student's most common use of language in the classroom. However, choralling of English reduced considerably over the period of the observations. For instance, choralling during English classes fell from 89% in July, 1994, to 34% in November 1994, and finally to 38% in June, 1995.

Aside from choralling the teacher, Ellen and Naomi spoke very little. Ellen spoke English to her teacher the few times she was called upon (5-16% of class) and rarely spoke to her classmates. Ellen was never observed speaking English to another child during English classes, while Naomi spoke English to a classmate once. They rarely spoke the Ghanaian language to other children during of the English lessons. These singular incidents were probably due to pupils engaged in conversation among themselves while lessons were in progress. In 1996 Ellen told researchers that although she did not speak English in class in 1994 and 1995, she has presently overcome that problem because she speaks English in class and she encourages them to do so as well.

School: 9, Archbishop Porter Primary 'A', Takoradi.  
Level: Primary 6  
Child: Ellen Bart-Plange (No.01)  
Gender: Girl  
Ability: High

**Introduction:**

In July 1996 Ellen was a sixth grade, high performing pupil in an urban primary school. Two years prior, when she was in P4, her teacher rated her as performing 'above average' in reading and 'average' in oral and written language. Reading scores were based upon sound discrimination, pronunciation, stress, intonation, and comprehension of short passages. Writing scores were based upon dictation, written exercises, and composition; while oral language was determined by the child's ability to ask and answer questions, converse with classmates, and describe events or tell short stories. Academic assessments in 1994, 1995, and 1996 showed Ellen to be one of the highest performing students in her class.

Ellen Bart-Plange is the third of four children and lives with both of her parents in Takoradi. In her leisure time, she reads story books and has just finished reading "Cinderella". She has never traveled to a rural area, but she wishes to experience 'village life' one day.

Typical Day

Before school When Ellen was asked about her day, she said that she washes her face, cleans her teeth, sweeps the compound, tidies her parents' room, bathes and finally goes to school, walking a distance of about 100 meters. Ellen says that she has a school bag which contains pencils, pens, exercise books, and textbooks. She takes these items to school every day.

School Day When Ellen goes to school, she joins her friends to sweep the classrooms and to do other groundwork. Then, she attends the morning devotion to pray after which she goes to the classroom. She mentions that even before the pupils go to their classrooms to learn, the teachers inspect the school grounds.

During English lessons, the teacher expects her (and other pupils) to speak English. She remembers that she once asked (in an English class) "who is a blacksmith"? Ellen reported that during 'English reading' the teacher asks them to read the passage aloud. He explains the 'new words' and writes them on the chalkboard. She recalls some examples of English lessons taught by the teacher as "past and present tenses". She indicated that she finds composition most helpful because "it helps me to write English using my own words". Ellen says she likes school because the teachers help her in her studies.

After school When Ellen arrives home from school, she takes a siesta and then reads her story books. She also does her homework. Her brother helps her to do the homework. Apart from the exercises that she takes home from school, her brother also gives her assignment in English (i.e. composition.).

**Family/Home**

Educational background. With the exception of her Auntie, Kokor (18 years) who has never had any formal education, all the relatives with whom Ellen lives are educated. Her father, Mr. Joseph Bart-Plange (41 years) attended Secondary School up to the sixth form. In addition, he has done a 'pastoral course' and now practices as the reverend minister of the Lutheran Church, Takoradi. Mrs. Hannah Bart Plange (39 years) has completed Training College and was the class one teacher in Archbishop Porter Primary 'A' School when the research was being conducted.

All Ellen's siblings still attend school. Joseph (15 years) is a final year student of a senior secondary school; Harry is in the second year of senior secondary school, and Mary (6 years) is in class one (primary school).

Language use Though Ellen said last year (1995) that she did not speak English at home, the situation has now changed. She says "these days we speak English in school so I find it easier speaking it at home". Her mother communicated that she hears her daughter speak English when conversing with her sister at home. Furthermore, she continues, "even if I use the vernacular to send her at home, she would remind me that I should have used English". Mrs. Bart-Plange also said that her daughter sometimes speaks English with some of her father's white (expatriate) friends whenever they pay them a visit.

Ellen communicated that she speaks English at home especially when "conversing with my parents." They also read an English Bible at home. Ellen said that her parents speak, read, and write English at home. However, most of the English she is exposed to occurs when she is in school.

In addition to her English textbook and the story books that she reads, she also reads the Bible. Ellen listens to 'musicals' on the FM (Takoradi) Radio. On the television, her favorite programs are 'Akan drama' (Fante), and 'Toddlers time' (English). She watches each of these programs once a week.

Support for schooling Ellen is convinced that she will continue to enjoy her parents' support for her education. She explains that they always tell her to learn hard. Corroborating this, her mother said she wants her daughter to be properly educated so that she will be gainfully employed. She adds "the present economic situation of the country demands that she (Ellen) gets a high and better education". Ellen's mother further said that as a teacher she has almost all the textbooks at home that Ellen uses in school. She also borrows books from the school library for her to read during vacations. In addition, Ellen's parents buy her pens, pencils, and exercise books (she has 8 of them in school). Mrs. Hannah Bart-Plange also inspects her daughter's exercise books because she is "interested in what she does in school".

Gender and support for education. Ellen's mother believes that both boys and girls should be properly educated. She added however that, if resources are scarce such that she has to help only one, she would support the child with the greatest ability.

### Pupil Performance

In 1996, Ellen's mother felt that Ellen's oral language and writing skills had improved 'a little', while her reading skills had improved 'greatly'.

Oral Language Ellen could perform most of the tasks of functional items. In 1994 she was among 50% of her class who had attained partial mastery of the tasks. By 1995 her score of 70% had brought her to the full-mastery level. This high performance was even further improved in 1996 when she responded correctly to all the functional items. The next two subtests, oral expression and listening comprehension, included grade level and below items. Therefore each year more difficult items were included to reflect Ellen's current grade level. On the listening comprehension subtest she performed brilliantly as she was always amongst the best (25%) of the class who attained full-mastery of the relevant tasks. Ellen was performing at the partial mastery level on the oral language subtest in 1994, but in 1995 and 1996 she joined the top five in the class operating in the full mastery zone.

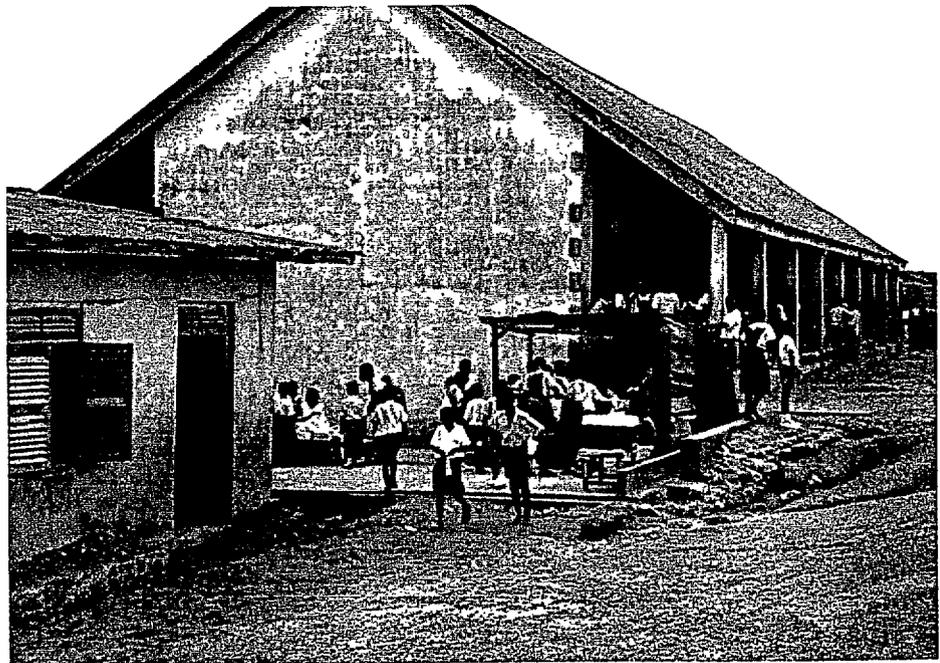
Written language The basic writing tasks (write name, copy letters) had been mastered by Ellen at baseline. Her ability to write English words improved from 10 at baseline to 62 in 1995 and then 89 in 1996. On dictation she improved from partial mastery in 1995 to full mastery with regard to correct words in 1996. Concerning her performance on Correct Word Sequence she also improved from partial mastery (61%) in 1995 to full mastery in 1996. Despite this she maintained a low performance on capitalization. Ellen correctly capitalized only 3 of the 10 capitals in 1995 and 1996. Ellen performed at full mastery in all spelling tasks, registering 80% words and 90% correct letters in 1995. This high performance was maintained in 1996.

Reading. Ellen had mastered basic reading skills at baseline. These skills were assessed by her knowledge of concepts about print, letter recognition, and the reading of the most used words in her textbook. Ellen's reading improved between 1994 and 1995. For instance in 1994 she read 55 words in one minute. In 1995 she read 66 words per minute from the same passage, which was culled from the P2 textbook, but this dropped to 51 in 1996. In 1994, she was able to read 93 words per minute from a passage in the P4 textbook. In 1995 she read 108 words from the same passage in one minute, whilst in 1996 she read 122 words in the same time limit. Her performance in one minute on the P5 passage was also encouraging, though she dropped from 106 in 1995 to 91 in 1996.

Ellen showed a consistent improvement in her reading whole passages selected from P2-P6 textbooks. For instance in 1994 she read 87% of the P2 passage correctly representing partial mastery of the task. This notwithstanding she fully mastered the P2 passage as well as all the other passages on which she was assessed in 1995 and 1996. Ellen was also asked to answer some comprehension questions based on passages she read. Her performance in this area was poor in 1994 and 1995. Those years she was only able to answer half of the comprehension questions for the P2 passage. Her performance improved in 1996. That year Ellen had full mastery of all reading skills assessed.

Aspirations

Ellen wants to be a doctor in the future. This is because she finally wants to prove to her parents that she learns hard in school. She wants to proceed from Primary school through JSS, SSS to the university. Ellen's mother feels she (Ellen) can be a nurse because she is serious with her studies.



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Table 1: Percentage of Ellen's classmates in non-mastery, partial master, and mastery of skills.

Archbishop Porter, Takoradi Oral Language Tasks	Non-Mastery			Partial Mastery			Mastery		
	1994	1995	1996	1994	1995	1996	1994	1995	1996
Functional Items	0	0	0	50	12	0	50	88	100
Listening Comprehension	37	0	0	37	0	19	26	100	81
Oral Language	37	12	14	63	25	33	0	63	53

Archbishop Porter Takoradi	Non-Mastery			Partial Master			Master		
	1994	1995	1996	1994	1995	1996	1994	1995	1996
Reading									
Letter Recognition	0	0	0	7	7	0	93	93	100
Concepts About Print	7	20	0	40	0	0	53	80	100
Aided Reading	13	27	0	33	7	0	53	67	100
Reading Most Used Words	33	27	0	40	13	13	27	60	87
Reading P2 Passage	40	13	0	33	27	27	27	60	73
Reading P3 Passage	27	27	0	40	13	27	33	60	73
Reading P4 Passage	47	20	6	13	20	13	27	60	81
Reading P5 Passage	X	20	0	X	27	27	X	53	73
Reading P6 Passage	X	X	6	X	X	19	X	X	73
Comprehension P2 Passage	87	33	34	13	47	6	0	20	60
Comprehension P3 Passage	93	60	34	7	7	6	0	33	60
Comprehension P4 Passage	80	47	34	20	27	19	0	27	47
Comprehension P5 Passage	X	53	47	X	20	6	X	27	47
Comprehension P6 Passage	X	X	40	X	X	6	X	X	54

Archbishop Porter Takoradi	Non-Mastery			Partial Mastery			Mastery		
	1994	1995	1996	1994	1995	1996	1994	1995	1996
Writing Tasks									
Copy Letter	0	0	0	N/A	N/A	N/A	100	100	100
Write Name	0	0	0	N/A	N/A	N/A	100	100	100
Write Word	13	0	0	37	13	0	50	87	100
% words (spelling)	X	13	7	X	25	26	X	62	67
% correct letters (spelling)	X	0	7	X	25	46	X	75	47
Correct words (dictation)	X	13	33	X	25	14	X	62	53
Correct capitals (dictation)	X	75	67	X	0	33	X	25	0
Corrects Word Sequence	X	25	40	X	37	20	X	38	40

= Ellen Bart Plange

School: 9, Archbishop Porter Primary 'A', Takoradi.  
Level: Primary 6  
Child: Naomi Nkrumah (No.04)  
Gender: Girl  
Ability: Low

Insert Takoradi

Insert Archbishop Porter Primary School

Insert Classroom Environment

### Introduction:

Naomi was a pupil of the Archbishop Porter Primary 'A' in Takoradi in the Western Region of Ghana at the time of the research. In 1994 Naomi was rated by Miss Judith Kyei, her P4 teacher, as performing 'average in oral language and 'above average' in both reading and writing. Reading scores were based upon sound discrimination, pronunciation, stress, intonation, and comprehension of short passages. Writing scores were based upon dictation, written exercises, and composition; while oral language was determined by the child's ability to ask and answer questions, converse with classmates, and describe events or tell short stories. Teacher ratings were not available in 1996, but performance data indicates Naomi was one of the highest achieving students in her class.

### Typical Day

Before School. Each morning Naomi washes and then begins her walk to school. She walks approximately three-quarters of a kilometer and carries her textbooks, exercise books, and pencils.

School Day. At school Naomi sweeps the compound, goes to morning devotion, and then marches to her classroom to start the days work. Her teacher, Miss Tando, usually starts with math or English lessons. Reading lessons are usually taught by going through new words and then reading in groups. When doing reading composition lessons Miss Tando helps by giving outlines of the essay. The most helpful lesson for Naomi is comprehension. She told researchers that it is the most helpful, "because it tests my understanding of the passage."

After School. At the end of the school day, Naomi returns home to help her mother cook. On some days she takes over the cafe so that Mrs. Nkrumah can attend to other things. After eating dinner Naomi washes the dishes, completes her homework assignments, and then watches television. If she needs assistance with her homework, Naomi is assisted by her brother. He is most helpful in providing the correct pronunciation or definition of difficult words.

### Family/Home

Educational background. She is the youngest child and has an older sister and two older brothers. Two years before the start of the research (in 1992) Naomi lost her father. Since the death of her father all the children have been taken care of by their mother, who operates a cafe. Her eldest brother, Frank, has completed the Junior Secondary School (J.S.S.) and is now at the Takoradi Technical Institute, while the second boy (Felix) is in J.S.S. 3. Mary, her elder sister has just completed J.S.S. and is planning to attend a vocational school.

Language use. Naomi is shy and does not like to speak English at home. Her mother has tried to encourage her, but did not feel Naomi had the vocabulary to express herself. Naomi does read and write, in English at home. She watches television programs in English and Fante. Her favorite programs are Jake and the Fat Man, Concert Party, Akan Drama, Kyekyekule, By the Fireside, Oshin, and TV Theatre.

Support for schooling. Naomi's mother is very supportive of her schooling. This support stems from her belief that girls should be educated, because women are responsible for a family and men are only responsible for themselves. Mrs. Nkrumah's parents were very poor and could not afford to send her to school after middle school. However, they did send her brothers. She is intent on not allowing Naomi to "suffer the same fate." School supplies (exercise books, pens, and pencils) are purchased by Mrs. Nkrumah, so that Naomi will be prepared.

Gender and support for education. As was stated earlier, Mrs. Nkrumah is very supportive of education for girls. Her support is so strong that she would educate her daughter, rather than her son, if she could not afford school fees for both.

### **Pupil Performance**

On the whole, Naomi's performance in English language improved between 1994 and 1996. Her mother believes that writing and reading improved 'greatly', but oral language did not improve at all.

Oral English. In 1996, Naomi's mother felt Naomi's spoken English had not improved and Naomi feared being laughed at when she made mistakes. However, her performance on oral language subtests was better than or equal to her peers. Oral language subtests, consisted of Functional Items, Listening Comprehension, and Oral Expression. The functional items subtest consisted of answering questions such as "What is your name?". In 1994 Naomi was able to answer 75% of these questions in full sentence format. By 1995 she could answer all questions in full sentences. The next two subtests, oral expression and listening comprehension, included grade level and below items. Therefore each year more difficult items were included to reflect Naomi's current grade level. During the oral expression subtest, Naomi was asked questions such as "What is this?" and "Do you live by the sea?". In 1994, Naomi and most of her class were answering less than 15% of the questions accurately. By 1995 and 1996 her scores improved to 73% and 94%, respectively. The final subtest, listening comprehension, was the easiest for Naomi. In 1994 she was able to correctly respond to four of every five items. These items consisted of commands such as "stand behind the chair" and "point to the Tsetse fly." By 1995 and 1996, she correctly responded to 93% and 97%, respectively. This performance put Naomi in the top third of her class in oral language skills.

Writing. Since 1994, Naomi could write her name correctly and copy letters. However, while she wrote only 12 words in ten minutes, in 1994, she could write 45 and 114 words with in the same time limit in 1995 and 1996 respectively. In 1995 dictation and spelling were added to the writing subtest. Naomi could spell 92% of the words and had 99% of the letters in correct order. On the dictation tasks she had 79% of the words correct, could indicate eight out of ten capitals correctly, and had 83% of the words in the correct sequence. By 1996 Naomi was able to complete all spelling tasks flawlessly, but still failed to master the rules of capitalization and had slight difficulty with correct word sequences during dictation tasks.

Reading. At baseline (1994) Naomi knew the alphabet, was familiar with most concepts regarding print, and could read 96% of the most used words in her English textbook. The following two years (1995 and 1996) Naomi's performance improved. When asked questions about print such as "how do you open a book?" and "where does one begin to read?"; Naomi improved from a mastery of six, nine and then ten out of ten in 1994, 1995, and 1996, respectively.

In addition to basic concepts, more advanced reading skills were assessed. Each year Naomi was asked to read passages from primary level English textbooks. One passage was selected from the P2 level text through to her grade level text. She was assessed on her speed, ability to read each word, and the comprehension of the entire passage. Speed was determined by the number of words read correctly in the first minute (words per minute). Ability to read each word was converted into a percentile; for example if she could read 125 words in a 250 word passage she received a score of 50%. Finally, to determine her comprehension Naomi was asked several questions (8 for P2-P5 passages, and 6 regarding the P6 passage).

At baseline (1994), Naomi could read an average of 55 words per minute from the P2, P3, and P4 passages and accurately read 89% of the passage. With slow reading speed and inaccuracies, Naomi could only answer an average of 1 in 8 comprehension questions correctly. By 1995, her performance had only improve to an average of 57 words per minute on the P2, P3, P4, and P5 passages. However, reading accuracy improved to 98% and Naomi could answer approximately 6 of the 8 comprehension questions. It wasn't until 1996 that her reading skills became fluent. She read all passages flawlessly and reading speed nearly doubled to an average of 94 words per minute. In addition, Naomi was able to accurately answer 36 of the 38 reading comprehension questions.

### **Aspirations**

Naomi hopes to go on to the university, because she "admires those who have gone through the university" and "wants to do the same so as to get a good job." When asked what job she would like,

Naomi told researchers she would like to be a secretary. Naomi's mother would also like her to be a secretary.

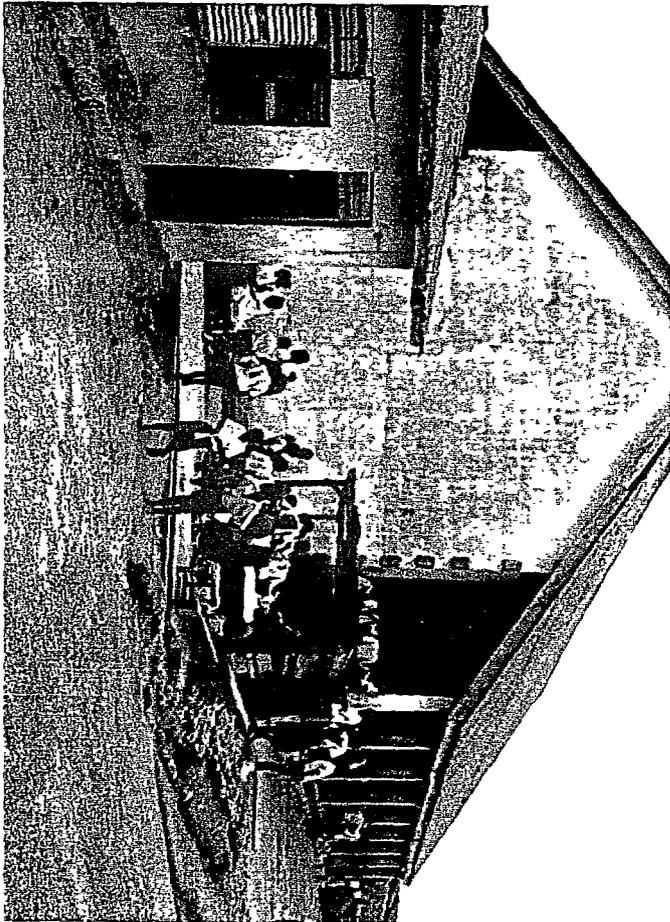


Table 1: Percentage of Naomi's classmates in non-mastery, partial master, and mastery of skills.

Archbishop Porter, Takoradi Oral Language Tasks	Non-Mastery			Partial Mastery			Mastery		
	1994	1995	1996	1994	1995	1996	1994	1995	1996
Functional Items	0	0	0	50	12	0	50	88	100
Listening Comprehension	37	0	0	37	0	19	26	100	81
Oral Language	37	12	14	63	25	33	0	63	53

Archbishop Porter Takoradi	Non-Mastery			Partial Mastery			Mastery		
	1994	1995	1996	1994	1995	1996	1994	1995	1996
Reading									
Letter Recognition	0	0	0	7	7	0	93	93	100
Concepts About Print	7	20	0	40	0	0	53	80	100
Aided Reading	13	27	0	33	7	0	53	67	100
Reading Most Used Words	33	27	0	40	13	13	27	60	87
Reading P2 Passage	40	13	0	33	27	27	27	60	73
Reading P3 Passage	27	27	0	40	13	27	33	60	73
Reading P4 Passage	47	20	6	13	20	13	27	60	81
Reading P5 Passage	X	20	0	X	27	27	X	53	73
Reading P6 Passage	X	X	6	X	X	19	X	X	73
Comprehension P2 Passage	87	33	34	13	47	6	0	20	60
Comprehension P3 Passage	93	60	34	7	7	6	0	33	60
Comprehension P4 Passage	80	47	34	20	27	19	0	27	47
Comprehension P5 Passage	X	53	47	X	20	6	X	27	47
Comprehension P6 Passage	X	X	40	X	X	6	X	X	54

Archbishop Porter Takoradi	Non-Mastery			Partial Mastery			Mastery		
	1994	1995	1996	1994	1995	1996	1994	1995	1996
Writing Tasks									
Copy Letter	0	0	0	N/A	N/A	N/A	100	100	100
Write Name	0	0	0	N/A	N/A	N/A	100	100	100
Write Word	13	0	0	37	13	0	50	87	100
% words (spelling)	X	13	7	X	25	26	X	62	67
% correct letters (spelling)	X	0	7	X	25	46	X	75	47
Correct words (dictation)	X	13	33	X	25	14	X	62	53
Correct capitals (dictation)	X	75	67	X	0	33	X	25	0
Corrects Word Sequence	X	25	40	X	37	20	X	38	40

X = Naomi Nkrumah

### Cape Coast

Charles Addison and Sylvia Tawiah live in Cape Coast, a city on Ghana's coastline between Accra and Takoradi. Cape Coast has had a long history of education, claiming the distinction of housing the first and oldest school on the West African coast. In addition, Cape Coast is home to one of Ghana's three universities. The standard of living in Cape Coast is higher than rural areas, since most residence have access to electricity, tap water, and medical services. Many foreign travelers come to Cape Coast to visit a renovated castle (used to store slaves during the slave trade) or study at the University of Cape Coast.

### Aboom A.M.E. Zion

Sylvia and Charles attend Aboom A.M.E. Zion Primary School. Aboom is close to the center of town so most children walk to the school, which is housed in two concrete block structures. Both primary and junior secondary classrooms are housed in these two blocks. Many of the teachers are women, including Charles' and Sylvia's P6 teacher, Miss Betty Nunoo. Sylvia believes that Miss Nunoo is a better teacher than their P5 teacher, because "she makes sure everybody understands her and she does not cane us." Upon approaching the school, it is clear that these teachers have implemented CRIQPEG interventions. Doors, windows, and tables are clearly labeled, whilst posters and charts are visible in the classrooms. Due to the large population of children, Aboom has two 'streams' of students, which alternate between morning and afternoon classes.

The academic work at Aboom has progressed quicker than other schools in the study. By the last month of the school year, Charles and Sylvia's P6 class was on Unit 24 of the 30 unit English textbook. However other texts were less well covered; Social Studies and Science the least at Unit 4 and Unit 5, respectively.

### Classroom Environment

Books. Textbooks were in short supply when research began in 1994. At that time, Sylvia and Charles possessed their own textbooks during approximately half of the English lessons observed. However, they only used them during a third of that time. Over the next two years the time they possessed textbooks dramatically increased and then fell. However the amount of time textbooks were used remained at less than a quarter of the lesson.

In 1996 the P6 students had English, Math, and Fante textbooks, which they took home with them. Social Studies and Science textbooks were used in the classroom, but could not be taken home since the school did not possess enough books for all students in the morning and afternoon shifts. Other books were available to Charles and Sylvia from the school library. In 1996 Charles could quickly name three books he had read from the library, these books were Chichi and the Termites, The Masquerade, and Soccer Game. Sylvia enjoys reading the Bible and library books, such as The Old Man and the Rabbit.

Exercise books. Like textbooks, the use of exercise books was not related to the possession of exercise books. Charles and Sylvia have at least twelve exercise books! Three of which are dedicated solely to English; one for composition and dictation, one composition and structure, and one for English writing. The remaining exercise books are divided between mathematics, agriculture, science, life skills, social studies and Fante language.

Print in the classroom. Aside from the textbooks and exercise books, there are posters in the classrooms and labeling of doors, windows, and furniture is consistent. Students even see their performance rated on classroom charts.

Language use. Apart from baseline samples (November, 1994), when the teacher spoke Ghanaian language once during an English lesson; all instruction was done in English. Charles and Sylvia spoke to their teacher in English more after interventions were implemented. During this same period Charles' use of Ghanaian language decreased. Sylvia, however increased her use of Ghanaian in the classroom. It is not clear why Sylvia spoke more Ghanaian, since she claims to speak more English to her friends. Choralling of English decreased rapidly over the period under consideration. Each year choralling was reduced by approximately half; from a high of 64% of the class period. According to Charles choralling of English was replaced with classroom debates.

School: 1, Aboom A.M.E. Zion, Cape Coast  
Level: Primary 6  
Child: Charles Addison (# 02)  
Gender: Boy  
Ability: High

Insert Cape Coast

Insert Aboom A.M.E. Zion

Insert Classroom Environment

#### Introduction:

In July 1994, when Charles was in P4, his teacher considered him to be high functioning in comparison to his peers. His teacher rated him as performing 'above average' in oral language and 'outstanding' in both reading and writing. Reading scores were based upon word pronunciation or sound discrimination, pronunciation, stress, and intonation, and comprehension of short passages. Writing scores were based upon dictation, written exercises, and composition; while oral language was determined by the child's ability to ask and answer questions, converse with classmates, and describe events or tell short stories. Performance data and the opinions of research team members confirmed the teachers' ratings. Charles and a large majority of his class had already mastered all basic language skills by 1994 and each year they were performing at grade level in the reading, writing, and oral language skills assessed. By 1996, Charles' teacher believed him to be outstanding in oral language, reading, and writing. He shares this honor with four of his classmates.

#### Typical Day

Before school. Charles sweeps the concrete floors of his house, bathes and has breakfast every morning before school. He then heads to school after gathering his school supplies, which consist of exercise books, textbooks, a mathematics set, a ruler, and pens.

School day. Charles has begun to attend both sections because he feels it helps him learn more things. When Charles arrives at school he is greeted by his teacher and asked to bring out his English textbook. Mrs. Nunoo then writes a lesson on the chalkboard and explains the topic. English is used by the students and teacher throughout the school day. Charles told researchers that his favorite lesson was a class debate. He enjoys reading his English textbook and believes comprehension exercises are the most helpful because "it is easy to understand and it helps me to speak and write English".

After school. Since Charles attends both the morning and afternoon streams he has less after-school time than other children in his class. Immediately after school he goes home to eat, do any homework, read his textbook, and then plays with his friends. Homework is assigned three times a week. When he needs help in pronouncing a word Charles asks his father or mother. In 1996, Charles said homework "is helpful because I encounter new words which I keep in memory". During Charles's free time he plays football, helps his mother prepare her teaching materials, reads, and watches television. In addition he has a pen pal whom he writes to. His parents send him on errands occasionally and ask him to do chores, but Charles doesn't mind believing that it is his responsibility to help his parents.

#### Family/Home:

Educational Background Charles's father, William Addison (49), and his mother Cecilia Nelson (38), both attended teacher training college. Mr. Addison is the head teacher at Charles' school. However his mother teaches elsewhere. Charles is the second of four children and the oldest boy in the family. Charles's younger brother and sister attend Aboom A.M.E. Zion. His eldest sister is preparing to attend the university.

Exposure to English English is used frequently in the Addison home. This is helpful to Charles who learns new words by talking with his fathers friends. In addition to conversational English, Charles is exposed to English through both television and radio.

Support for Schooling. Mr. Addison still has aspirations to attend the University for a degree, because he feels it will further help him in effectively performing his duties as head teacher. It is believed,

by Mr. Addison, that Charles will attend a university because "he is a clever boy" and "he is enthusiastic about science, math, and art and other subjects". Charles supports his mothers teaching by using his artistic talent to help her prepare teaching materials.

School supplies are readily accessible to Charles. His father has a stock of exercise books in the house which he draws from. The Addisons check their children's exercise books "to alert them and motivate them to do better". In addition to school supplies, Mr. Addison paid additional fees so that Charles could attend both the morning and afternoon streams, in 1996. Charles believes this is helpful; reporting that "in most cases I have the advantage of learning new topics."

Gender and Support for Education. Mr. Addison would support boys and girls equally in education. He believes that if girls are properly educated some of the problems, like teenage pregnancy and drug abuse can be mitigated. However, if forced to choose only one child he would send the girl because "girls tend to be more problems to the family if they are not properly educated" referring to teenage pregnancy and giving birth to too many children. He then added that "an educated girl exerts greater influence on her family in the future." These beliefs are illustrated in the Addison household, where all the children attend school and Charles oldest sister, Elizabeth, is awaiting admission to University.

### **Pupil Performance**

Oral language. Each year Charles's ability to understand spoken English and express himself in English was at full mastery for his grade level. Oral language assessment tasks began with answering rudimentary questions such as "How are you?", and complying with commands such as "Put the pen on the chair". In 1994 and 1995, Charles answered nearly every question asked of him. By 1996 he was able to answer every question in perfect English. The only oral language difficulty Charles confronted was when he was asked to answer questions about a story read to him.

Writing language. In 1994 Charles had good writing skills. He was able to write 55 words when given ten minutes. This increased to over 80 words by 1995 and 87 by 1996. In both 1995 and 1996, Charles' performance in spelling and dictation were assessed. These tests required correct spelling of 25 words, as well as correct spelling, punctuation, and capitalization of sentences dictated to him. Charles completed these tasks with over 90% accuracy in both 1995 and 1996.

Reading. In 1994 Charles knew all the basic concepts about print, such as reading from left to right. He also knew all the letters of the alphabet in upper and lower case form. In addition Charles could read all of the most frequently seen words in his English textbook. With a solid base, Charles' reading speed improved each year. For instance, in 1994 he was able to read 46 words per minute from a passage in a P2 English textbook. The following year he was able to complete a 68 word passage in less than a minute. In addition to reading faster, Charles maintained his reading comprehension skills. In 1994 he read three passages and correctly answered 14 of the 15 questions asked. By 1996 Charles could read approximately 130 words per minute, read all five passages accurately, and answer all 38 questions correctly.

### **Aspirations**

Although Charles plans to attend the University so that he can "secure a good job", his future aspirations are to become a footballer so he can cater for himself. Mr. Addison believes Charles will attend the University, but thought his future occupation would be as an artist or draftsman.

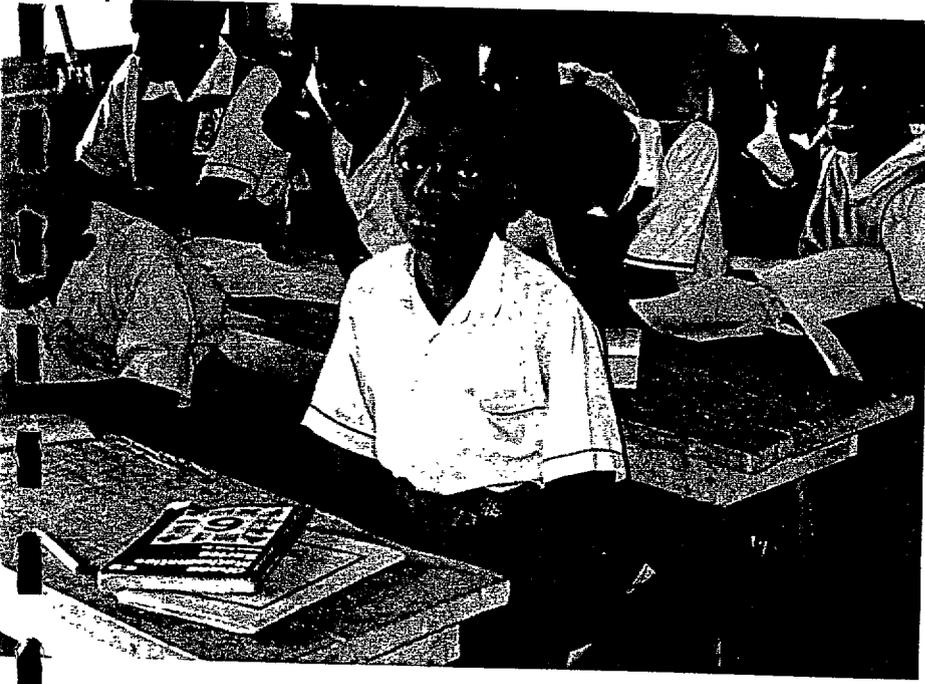
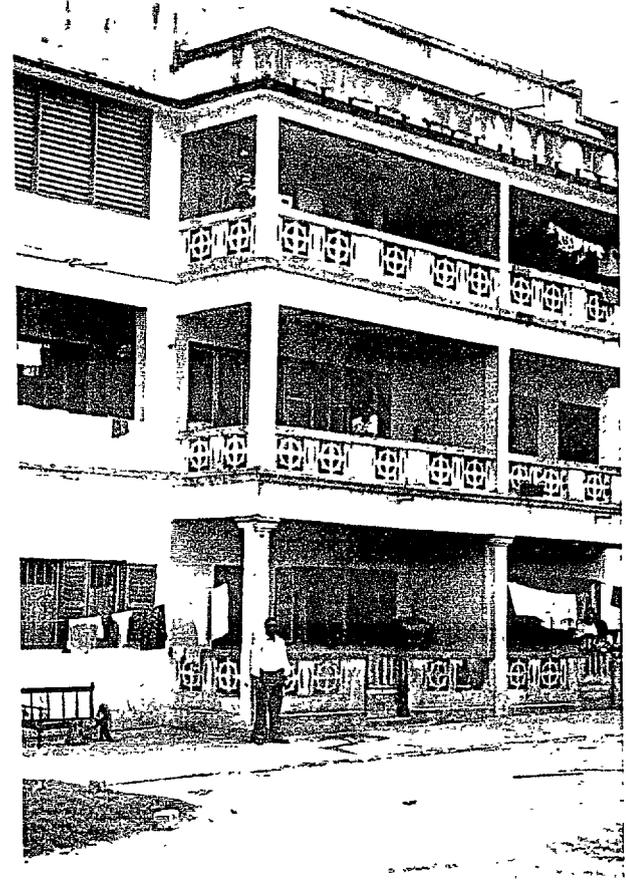
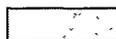


Table 1: Percentage of Charles' classmates in non-mastery, partial master, and mastery of skills.

Aboom A.M.E. Zion, Cape Coast Oral Language Tasks	Non-Mastery			Partial Mastery			Mastery		
	1994	1995	1996	1994	1995	1996	1994	1995	1996
Functional Items	0	0	0	32	0	0	68	100	100
Listening Comprehension	0	0	0	8	0	0	92	100	100
Oral Language	4	4	0	76	0	0	20	96	100

Aboom A.M.E. Zion Cape Coast Reading	Non-Mastery			Partial Mastery			Mastery		
	1994	1995	1996	1994	1995	1996	1994	1995	1996
Letter Recognition	4	0	0	8	0	0	88	100	100
Concepts About Print	0	0	0	0	0	0	100	100	100
Aided Reading	16	4	0	8	0	0	76	96	100
Reading Most Used Words	24	4	0	8	0	0	68	96	100
Reading P2 Passage	16	4	0	20	0	0	64	96	100
Reading P3 Passage	16	4	0	20	0	0	64	96	100
Reading P4 Passage	16	4	0	16	0	0	68	96	100
Reading P5 Passage	X	4	0	X	0	0	X	96	100
Reading P6 Passage	X	X	0	X	X	0	X	X	100
Comprehension P2 Passage	64	8	0	36	40	8	0	52	92
Comprehension P3 Passage	68	12	0	32	28	4	0	60	96
Comprehension P4 Passage	56	4	0	44	56	4	0	40	96
Comprehension P5 Passage	X	12	8	X	32	8	X	56	84
Comprehension P6 Passage	X	X	0	X	X	16	X	X	84

Aboom A.M.E. Zion Cape Coast Writing Tasks	Non-Mastery			Partial Mastery			Mastery		
	1994	1995	1996	1994	1995	1996	1994	1995	1996
Copy Letter	0	0	0	N/A	N/A	N/A	100	100	100
Write Name	0	0	0	N/A	N/A	N/A	96	100	100
Write Word	8	0	0	8	4	0	84	96	100
% words (spelling)	X			X	30-70		X		
% correct letters (spelling)	X			X	30-70		X		
Correct words (dictation)	X			X	17-35		X		
Correct capitals (dictation)	X			X	4-7		X		
Corrects Word Sequence	X			X	19-40		X		

 = Charles Addison

School: 1, Aboom A.M.E. Zion, Cape Coast  
Level: Primary 6  
Child: Sylvia Tawiah (# 06)  
Gender: Girl  
Ability: High

Insert CapeCoast

Insert Aboom A.M.E. Zion

Insert Classroom Environment

#### **Introduction:**

At the time of research, Sylvia Tawiah was living in Cape Coast, Ghana and attending Aboom A.M.E. Zion Primary School in Cape Coast. Her school was one of the schools receiving interventions from researchers at CRIQPEG. In July 1994, when Sylvia was in P4 her teacher considered her reading, writing, and oral language skills to be 'outstanding' in comparison to her peers. Her teachers opinions did not change when Sylvia's performance was rated again in 1996. Reading ratings were based upon sound discrimination, pronunciation, stress, intonation, and comprehension of short passages. Writing scores were based upon dictation, written exercises, and composition; while oral language was determined by the child's ability to ask and answer questions, converse with classmates, and describe events or tell short stories. Performance data and research team members' opinions confirmed the teachers' ratings. However, it is believed that there is another girl in her class who is even higher functioning than Sylvia.

Sylvia's hobbies include reading story books, watching television, and playing Ampe. Her overall appearance compared to her mates was good. Since Sylvia could express herself very well in English, her entire interview was conducted in English.

#### **Home/Family:**

Sylvia lived with Miss Selina Prah, her mother who was 33; Miss Charlotte Prah her 60 year old grandmother, Miss Selma Prah, a 39 year old aunt; Mr. Samuel Prah, a 25 year old uncle, and her two siblings (Ruby, 15, and Ebenezer, 4). All of her family lived in the Cape Coast suburb of Zongo. Zongo is close to the market circle of Cape Coast.

Educational Background. Her mother, grandmother, uncle, aunt, and sister all had basic education and completed middle school. Therefore, everybody in the house, with the exception of little Ebenezer could speak English. Sylvia's mother wished she could have continued with her education, but had to stop after middle school due to financial constraints.

Exposure to English. Sylvia does not listen to any radio at home but watches TV almost everyday. She listens to the TV news at 7 p.m. and watched other weekly programs like the TV theatre, "By the Fire Side" (a children story telling program) and Sunday Afternoon Movies which are in English. She also watches Ghanaian language programs such as "Concert Party Show", Akan Drama, Show Case in Ga, all of which are telecast weekly. She also reads a lot of story books and the Bible.

Support for Education. Sylvia told researchers that her family supports her education because "they like me and want me to get a good job in the future". These perceptions were accurate. Miss Selina Prah, Sylvia's mother, told researchers that she would support Sylvia's education because "she is a clever girl and needs to be supported and encouraged to develop her potentials".

Her school supplies are replenished four times a year by Sylvia's mother and father (who does not live with Sylvia). This is done to "be sure of performance in school."

Gender and Support for Education. Sylvia's mother who was interviewed in 1996 does not discriminate between gender in the support of her children. She believes that both girls and boys need to be supported to be functional in life. However, when pressed to discriminate in her support should it happen that she could afford to send only one child to school, she opted for her eldest child who happens to be a girl. To her, the eldest must first be supported in any situation like this.

### Typical School Day

Before School Experience. Like most Ghanaian children, the first thing Sylvia does when she wakes up is to wash her face and clean her teeth. Then she sweeps the house and washes the cooking utensils and plates. After that she goes to fetch water for domestic use before having her bath. Once Sylvia has bathed, she eats her breakfast, collects money for snacks before going to school, and walks a distance of about 1 km to her school (Aboom A.M.E. Zion Primary School).

Sylvia takes her exercise books, pens, pencils, textbooks (Math and English), note books and a set of mathematical instruments to school. These items are carried in her school bag. According to her, she gets these supplies of exercise books and pens/pencils from her parents as often as they get completely used up (an average rate of 4 supplies a year). Her elder sisters old exercise books are as used as 'jotters'.

A Typical School Day. When Sylvia arrived at school, she joined her mates to sweep the grounds and prepare their classroom for the day's lessons. After this they attended an assembly session for devotion and to be briefed on any announcements for the day. Assembly was concluded and all students marched to their respective classrooms.

Describing a typical English lesson taught by her class teacher, Sylvia had this to say: "For reading, my teacher begins by writing the new words on the chalkboard. She then helps us to pronounce and explain each word, forming sentences with them. After that she reads through the passage to our hearing and then calls on individual pupils to read. Small groups like all girls, all boys or particular rows are also called to read. We then do the comprehension exercises on the passage".

According to Sylvia, she and her peers were expected to speak and write English at school and these she did without any serious difficulties. She mentioned composition, reading comprehension, dictation, grammar and writing or copying as the types of English exercises they usually did in class but indicated that the most helpful ones to her were composition and reading. In P5 composition was the most difficult exercise for her but she says this is no longer true because her P6 teacher helped her to understand what to do and how to go about it. Although Sylvia learns a lot during reading and composition lessons, her favorite activity is a debate. Her P6 teacher organized them in groups to discuss whether teachers or doctors are more important.

After School Experience. When school is over Sylvia goes home to help her mother to cook. After meals she does her homework and engages in her private studies. She then watches TV and goes to sleep around 10 p.m. Sylvia reads extensively at home and reading is one of her hobbies. It is her elder sister who generally assisted her in reading by explaining any word or phrase she did not understand. On the weekends, Sylvia met with three other friends (Maame, Ama and Ante Akua), from different schools in Cape Coast to read and discuss what they read.

### Pupil Performance

Both Sylvia and her mother agreed in 1996 that there was a great improvement in Sylvia's oral and written English as well as her reading. Her performance data also pointed to a consistent improvement generally from 1994 to 1996.

Oral language. In 1994, Sylvia had full mastery of grade level tasks which assessed her ability to understand individual sentences spoken in English (Listening Comprehension) and participate in basic conversation (Functional Items) such as "Good morning" and "My name is Sylvia". Although she maintained her full mastery of basic conversation, Sylvia's listening comprehension ability fell. In 1996 her listening comprehension performance fell due to the addition of two lengthy passages rather than single sentences. On the oral expression subtests in 1994 she scored 73% on the questions posed to her. In 1995 she improved to 82%. It is worth noting that although Sylvia did not answer any oral expression question wrong in 1995, she received partial credit for her failure to answer in complete sentences. For example when asked "Do you live near the sea?", Sylvia received a score of 1 by responding "Yes"; rather than 3 points for "Yes, I live near the sea" or 2 points for "I live near sea". In 1996 she was able to overcome this difficulty to score 100% on the oral expression subtest.

Writing language. The basic writing tasks (write name and copy letter) were mastered at baseline. Her ability to write words increased from the writing of 40 words in ten minutes in 1994 to 103 and 111 respectively in 1995 and 1996. It is noteworthy that when writing words, in 1995, Sylvia's word pattern focused on a train of thought, rather than a "what words do I know how to write?" approach used by many other children in the study. For example, she wrote "dark , night, sun, moon, window, dress, skirt, etc. . ."

In 1995 and 1996 Sylvia was tested on dictation and spelling. Of no surprise, she was outstanding on both of these tasks. She spelled all of the most used words in her grade level textbook correctly. She also achieved full mastery of the dictation subtest both years.

Reading. In 1994 Sylvia knew all the basic concepts about print, such as reading from left to right. She also knew all the letters of the alphabet in upper and lower case form. In addition Sylvia could read all of the most frequently seen words in her English textbook. Sylvia's reading at baseline left little room for improvement. At that time, she read the entire P2 (68 words) passage in less than a minute, making just a single error in pronunciation. The following year (1995) her speed of reading was outstanding. She read the same P2 passage in 35 second and 174 of the P5 passage's 207 words in a minute. She further improved in 1996, reading 185 words of the P5 passage in one minute and 180 of the P6 passage in the same time. In 1995 and 1996, Sylvia was able to read all the passages to her grade level correctly, whereas her poorest performance the previous year was on the P4 passage which she read an equally impressive 97% correctly. Her performance on the comprehension of these same passages improved consistently over the three years under discussion. Although she was capable of answering all questions asked for the P2 passage in all the three years, the P3 passage proved to be more difficult. In 1994 she answered 2 of the 5 questions correctly (40%), by 1995 she had improved to 6 out of 8 questions (75%) and in 1996 she further improved to 7 out of 8 (representing 87.5%). Her comprehension of the P4, P5, and P6 passages was flawless.

#### Aspirations

It is Sylvia's plan to go on to the university in order to become a good professional in life. Based on her academic success this goal seems within Sylvia's reach. Miss Prah, Sylvia's mother, shares this view and is prepared to support her to attain such heights because in her estimation her daughter is clever and therefore needs to be supported to develop her potential to the fullest.

Although Miss Prah has no specific hopes for Sylvia's future occupation, Sylvia wants to become a teacher because she "likes the work."

Exercise Books. Sylvia's exercise books showed that they are all being taken good care of and therefore they are in almost new conditions in spite of their extensive usage. Three of these exercise books are used for English language instruction exercises. Between October 1995 and May 1996 the number of exercises done in the month are as shown below:

	Oct	Nov	Dec	Jan	Feb	Mar	April	May
Eng. Composition/Dictation	1	8	4	8	7	8	0	3
English Compre/Structure	6	18	6	9	13	10	7	5
English Writing	3	4	0	5	2	4	2	1



Table 1: Percentage of Sylvia's classmates in non-mastery, partial master, and mastery of skills.

Aboom A.M.E. Zion, Cape Coast Oral Language Tasks	Non-Mastery			Partial Mastery			Mastery		
	1994	1995	1996	1994	1995	1996	1994	1995	1996
Functional Items	0	0	0	32	0	0	68	100	100
Listening Comprehension	0	0	0	8	0	0	92	100	100
Oral Language	4	4	0	76	0	0	20	96	100

Aboom A.M.E. Zion Cape Coast	Non-Mastery			Partial Mastery			Mastery		
	1994	1995	1996	1994	1995	1996	1994	1995	1996
Reading									
Letter Recognition	4	0	0	8	0	0	88	100	100
Concepts About Print	0	0	0	0	0	0	100	100	100
Aided Reading	16	4	0	8	0	0	76	96	100
Reading Most Used Words	24	4	0	8	0	0	68	96	100
Reading P2 Passage	16	4	0	20	0	0	64	96	100
Reading P3 Passage	16	4	0	20	0	0	64	96	100
Reading P4 Passage	16	4	0	16	0	0	68	96	100
Reading P5 Passage	X	4	0	X	0	0	X	96	100
Reading P6 Passage	X	X	0	X	X	0	X	X	100
Comprehension P2 Passage	64	8	0	36	40	8	0	52	92
Comprehension P3 Passage	68	12	0	32	28	4	0	60	96
Comprehension P4 Passage	56	4	0	44	56	4	0	40	96
Comprehension P5 Passage	X	12	8	X	32	8	X	56	84
Comprehension P6 Passage	X	X	0	X	X	16	X	X	84

Aboom A.M.E. Zion Cape Coast	Non-Mastery			Partial Mastery			Mastery		
	1994	1995	1996	1994	1995	1996	1994	1995	1996
Writing Tasks									
Copy Letter	0	0	0	N/A	N/A	N/A	100	100	100
Write Name	0	0	0	N/A	N/A	N/A	96	100	100
Write Word	8	0	0	8	4	0	84	96	100
% words (spelling)	X			X	30-70		X		
% correct letters (spelling)	X			X	30-70		X		
Correct words (dictation)	X			X	17-35		X		
Correct capitals (dictation)	X			X	4-7		X		
Corrects Word Sequence	X			X	19-40		X		

= Sylvia Tawiah

Key:	Non-Mastery			Partial Mastery			Mastery		
	1994	1995	1996	1994	1995	1996	1994	1995	1996
Oral Language Tasks									
Functional Items	0	0-6	0-6	1-2	7-14	7-14	3	15-21	15-21
Listenign Comprehension	0-30	0-5	0-17	30-70	6-11	18-43	70-100	12-16	44-62
Oral Language	0	0-23	0-60	1-2	24-55	61-139	3	56-80	140-201

Key Reading	Non-Mastery	Partial Mastery	Mastery
Letter Recognition	0-16	17-35	36-52
Concepts About Print	0-3	4-7	8-10
Aided Reading	0-30	30-70	70-100
Reading Most Used Words	0-30	30-70	70-100
Reading P2 Passage	0-30	30-70	70-100
Reading P3 Passage	0-30	30-70	70-100
Reading P4 Passage	0-30	30-70	70-100
Reading P5 Passage	0-30	30-70	70-100
Reading P6 Passage	0-30	30-70	70-100
Comprehension P2 Passage	0-2	3-5	6-8
Comprehension P3 Passage	0-2	3-5	6-8
Comprehension P4 Passage	0-2	3-5	6-8
Comprehension P5 Passage	0-2	3-5	6-8
Comprehension P6 Passage	0-1	2-4	5-6

Key	Non-Master y	Partial Mastery	Mastery
Wrting Tasks			
Copy Letter	0	N/A	1
Write Name	0	N/A	1
Write Word	0-5	6-10	11-high
% words (spelling)	0-30	30-70	70-100
Correct letters (spelling)	0-26	27-61	62-88
% correct letters (spelling)	0-30	30-70	70-100
Correct words (dictation)	0-16	17-35	36-52
Correct capitals (dictation)	0-3	4-7	8-10
Corrects Word Sequence	0-18	19-40	41-59

Aboom A.M.E. Zion, Cape Coast Oral Language Tasks	Non-Mastery			Partial Mastery			Mastery		
	1994	1995	1996	1994	1995	1996	1994	1995	1996
Functional Items	0	0	0	32	0	0	68	100	100
Listening Comprehension	0	0	0	8	0	0	92	100	100
Oral Language	4	4	0	76	0	0	20	96	100

16

Aboom A.M.E. Zion Cape Coast Reading	Non-Mastery			Partial Mastery			Mastery		
	1994	1995	1996	1994	1995	1996	1994	1995	1996
Letter Recognition	4	0	0	8	0	0	88	100	100
Concepts About Print	0	0	0	0	0	0	100	100	100
Aided Reading	16	4	0	8	0	0	76	96	100
Reading Most Used Words	24	4	0	8	0	0	68	96	100
Reading P2 Passage	16	4	0	20	0	0	64	96	100
Reading P3 Passage	16	4	0	20	0	0	64	96	100
Reading P4 Passage	16	4	0	16	0	0	68	96	100
Reading P5 Passage	X	4	0	X	0	0	X	96	100
Reading P6 Passage	X	X	0	X	X	0	X	X	100
Comprehension P2 Passage	64	8	0	36	40	8	0	52	92
Comprehension P3 Passage	68	12	0	32	28	4	0	60	96
Comprehension P4 Passage	56	4	0	44	56	4	0	40	96
Comprehension P5 Passage	X	12	8	X	32	8	X	56	84
Comprehension P6 Passage	X	X	0	X	X	16	X	X	84

6

100

92

75

33

42

42

41

17

17

0

0

0

0

0

Aboom A.M.E. Zion Cape Coast Writing Tasks	Non-Mastery			Partial Mastery			Mastery		
	1994	1995	1996	1994	1995	1996	1994	1995	1996
Copy Letter	0	0	0	N/A	N/A	N/A	100	100	100
Write Name	0	0	0	N/A	N/A	N/A	96	100	100
Write Word	8	0	0	8	4	0	84	96	100
Words (spelling)	X	6	0	X	11	8	X	83	92
% correct letters (spelling)	X	6	0	X	0	4	X	94	96
Correct words (dictation)	X	6	4	X	11	8	X	83	88
Correct capitals (dictation)	X	11	4	X	17	21	X	72	75
Corrects Word Sequence	X	11	4	X	17	4	X	72	92

5

100

100

100

0

8

0

0

0

47

Archbishop Porter, Takoradi Oral Language Tasks	Non-Mastery			Partial Mastery			Mastery		
	1994	1995	1996	1994	1995	1996	1994	1995	1996
Functional Items	0	0	0	50	12	0	50	88	100
Listening Comprehension	37	0	0	37	0	19	26	100	81
Oral Language	37	12	14	63	25	33	0	63	53

Archbishop Porter Takoradi	Non-Mastery			Partial Mastery			Mastery		
	1994	1995	1996	1994	1995	1996	1994	1995	1996
Reading									
Letter Recognition	0	0	0	7	7	0	93	93	100
Concepts About Print	7	20	0	40	0	0	53	80	100
Aided Reading	13	27	0	33	7	0	53	67	100
Reading Most Used Words	33	27	0	40	13	13	27	60	87
Reading P2 Passage	40	15	0	33	27	27	27	60	73
Reading P3 Passage	27	27	0	40	13	27	33	60	73
Reading P4 Passage	47	20	6	13	20	13	27	60	81
Reading P5 Passage	X	20	0	X	27	27	X	53	73
Reading P6 Passage	X	X	6	X	X	19	X	X	73
Comprehension P2 Passage	87	33	34	13	47	6	0	20	60
Comprehension P3 Passage	93	20	34	7	7	6	0	33	60
Comprehension P4 Passage	80	27	34	20	27	19	0	27	47
Comprehension P5 Passage	X	27	47	X	20	6	X	27	47
Comprehension P6 Passage	X	27	40	X	X	6	X	X	54

Archbishop Porter Takoradi	Non-Mastery			Partial Mastery			Mastery		
	1994	1995	1996	1994	1995	1996	1994	1995	1996
Writing Tasks									
Copy Letter	0		0	N/A	N/A	N/A	100	100	100
Write Name	0		0	N/A	N/A	N/A	100	100	100
Write Word	13		0	37	13	0	50	87	100
% words (spelling)	X		7	X	25	26	X	62	67
% correct letters (spelling)	X		7	X	25	46	X	75	47
Correct words (dictation)	X		33	X	25	14	X	62	53
Correct capitals (dictation)	X		67	X	0	33	X	25	0
Corrects Word Sequence	X		40	X	37	20	X	38	40

**Appendix B**  
**General Interview Guide**

## Introduction:

Introduce yourself and use the following script to guide questions:

I want to learn more about children and what they like and how they learn. Will you help me?

I am going to speak in English if you do not understand or need to answer in the vernacular feel free.

Do you understand?

- 1 What are some things you like to do?  
(Specific games, subjects you enjoy learning, food, travel)  
Why?
- 2 Do you enjoy traveling?  
Where do you like to go?  
Why?
- 3 Tell me about your day?  
What do you do first when you wake up?  
Then what?  
Then what? (repeat until the child tells you they go to school)  
How do you get to school? (how far away, distance or time (walk/ride))
- 4 What do you take to school each day?
  - a Exercise Books:
    - Do you have an exercise book?
    - More than one?
    - How often are they used?
    - How often do you get a new exercise book?
    - Do you have other papers to use?
    - Where do you get school supplies such as exercise books and pencils?

May I see the supplies?\*

\*Review what is in it with the child (dates, condition, how often it is used, etc).

- b Textbooks:
  - Do you take textbooks home?
  - Which ones?
  - How often?
  - How do you use them at home?
  - How often do you read your English textbook?
  - Are there other books at home?

Did you have textbooks last year?  
 Could you take them home?  
 What happened to them at the end of term?  
 Which textbooks do you use at school?  
 What unit are you on in English?

Math?  
 Social Studies?  
 Science?

c Other Books:

Are there other books at school?  
 What books?

5. Please tell me about what happens during the day at school.

a General:

Is there a pattern?  
 Does the teacher begin with a particular activity?

b English:

How does the teacher teach English?  
 Can you give me an example?  
 Are you expected to speak English?  
 Can you give me an example?  
 Are you expected to write English? (composition or copying)  
 Can you give me an example?  
 What is most helpful to you?  
 Do you remember any activities or lessons that you really liked?  
 Tell me about it?

6. What happens after school is over? (Chores, homework, etc.)

Are you given homework?  
 Who assists you in your reading at home?  
 Describe the type of assistance the individuals(s) gives you.

7. Mass Media

a Radio

Do you ever listen to a radio?  
 What station do you listen to?  
 What programs do you listen to?  
 How often?

b Television

Do you ever watch t.v?  
 What programs do you watch?  
 How often?

- 8 Do you like school?  
Why?
- 9 Did you like school when you were in P1 (Class 4) P1-P3 (Class 6)?  
Why?
- 10 Who was your teacher last year?  
Who is your teacher this year?  
If different:  
What difference do you see between these two teachers?  
[attendance, punctuality, attitude towards work, attitude towards  
pupils, etc . . . ]  
If same:  
Has your teacher's attitude changed?  
How? [attendance, punctuality, attitude towards work, attitude towards  
pupils, etc . . . ]
- 11 Do you plan to go on to J.S.S.?  
S.S.S?  
University?  
Why?
- 12 Do you think your parents will support your education?  
Why/ Why not?
- 13 What do you want to be when you grow up?  
Why?
- 14 Questions specific to child developed from 1994 and 1995 interviews.
- 15 How many times in a week do you read English textbook at home?
- 16 What specific difficulties do you encounter in reading ?
- 17 Does your teacher give you homework in English?  
How does doing homework in English help you to learn English better?  
Mention some of the difficulties you face, if any, when doing your  
homework.
- 18 How often do you read English materials other than your English textbook?  
What kinds of English material do you enjoy reading?

- 19 Do you speak English outside the classroom? Yes/No.  
If Yes In what kind of situations do you use English?  
If No Why not?
- 20 How do the following affect your learning?
- 21 What problems, if any, do you face when speaking English  
outside the classroom?  
in the classroom?
- 22 Have you developed ways that help you to learn English better?  
If Yes, in what ways?
- 23 How has your English improved since the beginning of the academic  
year in the following areas?

## Parents' Interviews

- 1 How many of your wards/children are boys/girls in schools?  
Total number of children: # of boys in school:  
# of girls in school:  
Place of Child in Order:
- 2 Which of these boys or girls would you give greater support in the learning of English? Give reasons for your preference.  
  
If you had an equal number of boys and girls which would you give greater preference to?
- 3 Does your child/ward have homework in English?  
How does your ward/child go about doing his/her homework?  
Does anyone assist your child/ward with reading at home?
  - a) helped by friends
  - b) by himself/herself
  - c) with parents
  - d) others (specify)
- 4 Describe the type of assistance?
- 5 How many times in a week does your child/ward read his/her English textbook at home?
- 6 What specific difficulties does your child/ward encounter in reading?
- 7 How often do your child/ward read English materials other than their English textbook?
- 8 Do your child/ward speak English outside the classroom?  
If Yes  
In what kind of situations does he/she use English?  
If No  
Why not?
- 9 How has your child/ward's English improved since the beginning of the academic year in the following areas?
- 10 What do you think your child will do when he/she grows up?

- 11 Did you have the opportunity to go to school?  
What was the highest level you achieved?  
Did you want to go on further?  
If yes:  
why and why didn't you? (\$, no school, family values)  
If no:  
why not?
- 12 Do you want your child to go further?  
Why?/Why not?
- 13 Do you think (Child Name) will go further?  
Why?/Why not?
- 14 What does your child take to school each day?
- Exercise books:  
Does your child have an exercise book?  
More than one?  
How are they used?  
How often does this child get a new exercise book?  
Does the child have other paper to use?  
Where does the child get school supplies? (exercise books, pencils etc.)  
Do you ever look at the exercise books?  
If yes:  
Why  
If no:  
Why not?
- Textbooks:  
Does the child bring textbooks home?  
Which ones?  
How often?  
How do they use them at home?  
Are there other books at home?  
What are they?  
Did this child have textbooks last year?  
Could he/she bring them home?  
What happened to them at the end of the term?

- 15 Radio:  
Does the child ever listen to a radio?  
Where?  
What station/program? (English or Vernacular)  
How often?  
Is it electric or does it have batteries?  
Who buys new batteries?  
Where does the electricity come from; do you have it at home?
- Television:  
Does your child watch t.v.?  
Where?  
What station/program? (English or Vernacular)  
How often?  
Is it electric or does it have batteries?  
Who buys new batteries?  
Where does the electricity come from; do you have it at home?
- 16 How often does the child do homework?  
If yes:  
Why  
If no:  
Why not?
- 17 Does the child like to go to school?  
Why/Why not?
- 18 If you had two boys and two girls, who would you support in education?  
Why?  
If the answer is all:  
If you could only afford to send one child whom would it be?  
Why?

## GUATEMALA

The selection for Guatemala includes an executive summary for the IEQ work with the *Nueva Escuela Unitaria* (NEU) Program and case studies from two selected schools in the research studies---one *Nueva Escuela Unitaria* school and one traditional, comparison school.

## EXECUTIVE SUMMARY

From 1993 to 1996, the Improving Educational Quality (IEQ) Project studied the implementation and impact of the *Nueva Escuela Unitaria* (NEU) program, an active, child-centered learning program for rural Guatemalan children. The research included observations in the naturally-occurring contexts of the classroom, interviews with parents, and achievement testing in 10 NEU schools and 10 comparison schools. The research was longitudinal in nature, with testing and observations carried out with the same children who began the study in 1993. The original sample of children was composed of first and second graders in the 1993; thus, their progress to appropriate grade levels in order to make normal progress toward primary school completion was also monitored.

### DESIGN

The study design was a pre-post test, with a comparison group. Children beginning the NEU program in 1993 were compared to similar children in traditional rural schools in each year of the study. Also, children entering first grade were compared each year. Children in the experimental schools attended the NEU program in two rural regions of the country, one of which served primarily children of indigenous origin and the other, children of *ladino* background. The comparison schools followed a traditional program but had characteristics similar to those of the experimental schools, such as distance from an urban center and number of students.

The children were tested on a battery of instruments consisting of reading, mathematics and creativity measures. The subsample of children chosen in 1993 was observed in 1994 and again in 1995. Over the course of the study, children were observed at six points in time in academic subjects for one hour at each observation period. In addition, parents and teachers were interviewed about issues of interest to the NEU program implementors, especially about the transfer of learning from the school environment to daily life.

Several statistical techniques were used to analyze the data, such as two-tailed t-tests, analysis of covariance, repeated measures and chi square, depending on the type of data to be analyzed in each case. In each year, the data were analyzed by region, by gender, and by language. The observations were coded using the codes developed in 1993, and the interaction codes were summarized and used to complete the data analysis.

## MAJOR FINDINGS

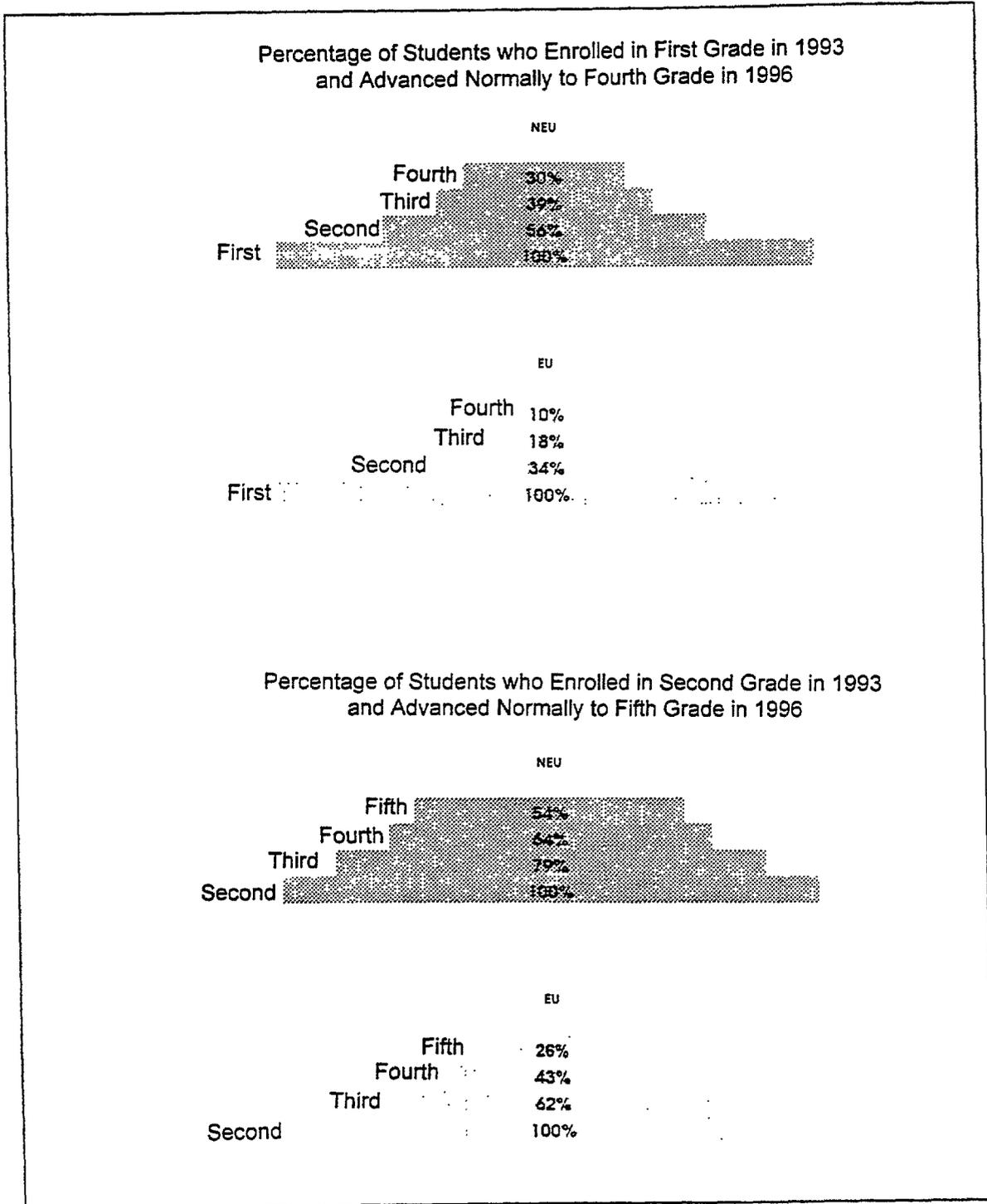
### 1. Children

- **The NEU program has had a significant impact on increasing the number of children staying in school and making yearly progress toward primary school completion.**

Over the three years that dropout rates were measured, they have consistently been lower in NEU schools than in similar schools without the NEU program. In 1994 and 1995 dropout rates in the NEU schools were significantly lower than in the comparison group. Rates averaged about twelve percentage points less than those in the comparison schools. The greatest impact was among Indigenous girls in Alta Verapaz where dropout rates were significantly lower for NEU students in all three years of the investigation.

The percentage of children who advanced a grade each year was twice as high in NEU as in the comparison group. The percentages were similar for both boys and girls, and the differences were significant in all cases. As can be seen in Figure A, 30% of the NEU first graders had advanced to fourth grade, and 54% of the NEU second grade children were in fifth grade in 1996. This compares to 10% of the first grade cohort and 26% of the second grade cohort, respectively, in the comparison group.

Figure A



- **NEU has maintained academic quality, as measured by achievement tests, while improving educational efficiency.**

The greater numbers of children advancing through the primary grades created a broader range of abilities in NEU schools than in the comparison schools, where only the better students remained in school. However, on the average, the NEU students performed as well as the children in the comparison group in both mathematics and reading.

- **The NEU program has had a positive impact on the success of Indigenous children who enter school with some knowledge of Spanish. NEU has had little impact, however, on monolingual Mayan children.**

A significantly higher percentage of NEU children who entered school with at least rudimentary knowledge of Spanish remained in school at the end of the study than did comparison children. Thirty-three percent of the children in NEU who had some knowledge of Spanish were still in school and in the appropriate grade, compared to 6% in traditional schools. However, only 5% of students in either type of school who understood little Spanish on entering school were still enrolled after four years.

- **Children with poor nutritional status have a somewhat higher probability of remaining in school in NEU than in traditional schools. This would appear to be in part because the active methodology employed in NEU encourages children to participate rather than remaining passive. However, most malnourished students drop out.**

A higher percentage of the most undernourished children in the NEU schools remained in school over the course of the study than were present in comparison schools. These children were observed to take a more active part in the classroom learning contexts than their counterparts in the traditional schools. However, the dropout rate for most undernourished children was over twenty percentage points higher than that of other children in both types of schools. Only 10% of the most undernourished children who began first grade in NEU and 29% of those who were in second grade at the start of the study remained in school four years later. The percentages of undernourished children remaining in traditional schools were 6% and 10% respectively, for first and second grade.

- **The NEU active learning methodology contributed to significant socio-emotional development in terms of participatory behaviors such as taking turns, guiding other students in their academic work and expressing opinions in class.**

The NEU program promoted the participation of children of different sexes and ethnicity. Boys and girls in the NEU program in the indigenous region and in the *ladino* region exhibited these behaviors with significantly greater frequency than children in comparison schools during all three years of the study. Participatory behaviors were not only more frequent but were also different in quality in NEU and traditional schools. In the NEU schools, the behaviors were generally observed with peers in the naturally-occurring classroom contexts. In the traditional schools, on the other hand, where these behaviors occurred, they were generally directed by the teacher.

## 2. Teachers

- **The Nueva Escuela Unitaria program has been successful in building teachers' confidence to work with multiple grades by decentralizing the learning experience of children and encouraging their active learning. However, teachers were not always able to take advantage of such contexts by encouraging exploratory, collaborative learning experiences.**

A majority of NEU teachers stated that they could work successfully with three or more grades, compared to only 9% of teachers in traditional schools. This difference was reflected in classroom organization where between 40%-50% of NEU students interactions took place in small group learning contexts. This compares to between 3%-10% in traditional schools. However, in some cases, the learning strategies that were used in small groups included copying, practicing models supplied by the teacher, and reading in unison. These were the same strategies used by teachers in large group contexts in traditional schools. Thus, although the setting and materials employed differed in the two types of schools, the actual practice with academic content was similar owing to teachers' lack of mastery of the NEU methodology.

- **The organization of the school day in both NEU and traditional schools resulted in a limited amount of instructional time.**

Observations in classrooms throughout a three-year period showed that the school day was organized in a similar fashion in both types of schools. Slightly more than two hours a day was devoted to instruction, and close to an hour was devoted to recess. Much of the remaining time involved transition from one activity to another or teachers attending to tasks outside the classroom.

### 3. Parents

- **NEU has had an impact on parental attitudes toward the school.**

Throughout the study, greater percentages of NEU parents felt that positive changes were occurring in the school than among comparison group parents. The majority of parents of children in both experimental and comparison schools, however, felt that positive changes had taken place in their children's behavior at home. The most commonly cited changes were that children read more and exhibited generally better conduct at home.

### RECOMMENDATIONS

- **Continue to expand the NEU program as a relatively effective innovation for improving the efficiency and quality of primary education in isolated rural schools.**

The success of the NEU program in consistently encouraging significantly more children to stay in school and make yearly advances in grade level than did traditional rural, multigrade schools suggests that the program should continue to be expanded to additional rural, multigrade schools in Guatemala. The significantly greater progress was made toward primary school completion by Indigenous and *ladino* children of both genders, as well as by children who entered school with poor nutritional status argues that the program can be effective with a variety of rural student populations.

- **Achievement tests by themselves should not be used to measure educational quality if a true understanding of program impact is to be gained.**

The results of this investigation show that academic achievement tests must be used in combination with other measures of quality and effectiveness in making decisions about programmatic outcomes. Simply comparing mean differences on the achievement measures, without examining the numbers of children successfully advancing toward primary school completion, could lead to the erroneous conclusion that the two groups were performing similarly.

- **NEU should be carefully monitored to ensure that refinements are made to maintain and improve on successful results.**

Despite the relative success of the NEU program, only 30% of the cohort of first grade children beginning school in 1993 had made normal progress through school.

Observations showed that teachers were at times unable to determine the reading abilities of their students and had children engage in traditional learning activities in small group contexts. This suggests that continued monitoring and feedback is necessary if teachers are to improve their mastery of the program elements. Such improved mastery can come about by the mentoring relationships established between successful NEU teachers and new teachers in the expansion program, through the continued use of teachers' circles, and through training of supervisors to carry out systematic classroom observations.

- **Bilingual versions of the NEU materials should be developed in Mayan languages and bilingual teachers trained in the NEU methodology.**

The relative success of Indigenous children with some knowledge of Spanish shows that the NEU active learning methodology is culturally appropriate for Mayan children. However, the lack of impact of the NEU program on monolingual Indigenous children and the generally high dropout among such children in rural schools, argues for bilingual versions of the NEU materials. Thus, the efforts underway by the Ministry of Education through UNICEF- and USAID-funded projects to develop NEU materials in Mayan languages and to train bilingual teachers should be completed.

- **The provision of nutritional supplements in a consistent manner should be part of planning expansion of the NEU program or similar active learning methodologies.**

In rural areas of Guatemala, the NEU active learning methodology must be combined with consistent efforts to improve nutritional status of severely undernourished students if greater efficiency is to be achieved. Although NEU has been more effective than traditional schools in maintaining undernourished children's normal progress toward primary school completion, the majority of the most undernourished children dropped out. This suggests that attention to nutritional status should be part of an integrated active learning program.

- **Examine strategies for extending actual class time dealing with academic content in rural schools.**

Findings show that only about two hours a day are used for learning subject matter, which suggests that the school day might be organized more efficiently for learning. While beyond the scope of the IEQ work, a study of what children do during the recreation period and teachers' reactions to the feasibility of shortening the time spent in recreation might be studied.

## CASE STUDY OF CARRILLO SCHOOL

### Description of the School:

Carrillo school is part of the NEU program. It is located in a village approximately 3.5 kms. from the municipal center and approximately 22 kms. from the departmental capital of Jalapa. The village has approximately 825 inhabitants.

The site has a moderate and humid climate. The primary crops are corn and beans. The secondary crops are sugar cane and coffee. The village also has a variety of fruit trees, such as mangos, *jocotes*, etc. The community is accessible via a road made of hard-packed earth which begins in the departmental capital and runs past the village which is impassable during most of the winter. Public transportation is available, and the trip from the departmental capital to the village takes three hours.

The school is located in the center of the community, surrounded by the majority of the houses and some hills. The school is made of cement block and has a tin roof and a concrete floor. It has two classrooms, a kitchen which is in decent shape, a bedroom for the teacher, and three latrines behind the school building. There is no electricity nor drinking water.

The school has two teachers: a woman who serves as the principal and teaches the morning classes and a man who teaches in the afternoon. These teachers currently serve 125 students in first through sixth grade. The students ages fall between 6 and 15 years old.

The following table shows variations in the enrollment at Carrillo across the years. As shown, there is a constant increase in enrollment which is almost the same for students of both sexes. However, there is a slight decline for girls in 1994 and 1995.

**Table 1: Variations in the Number of Students Enrolled across Years**

	1993	1994	1995	1996
Boys	43	31	44	64
Girls	47	46	43	63
Total	90	77	87	127

### Teachers:

The teachers live in the municipal center and travel to the school daily. The female teacher, who serves as the principal, was transferred to the school in 1987. The other teacher was assigned to his post in 1996.

In terms of the NEU program, the female teacher says that she began to work with the new methodology so that she could work more effectively with the great number of students at the school. She also mentioned that at the beginning of the NEU implementation she found it difficult to use the NEU elements, but, with the training at the workshops and information exchanges at the teachers circles, she was able to perfect her teaching. Now she feels that the methodology has been 80% implemented, as the complete program cannot be implemented due to a lack of community resources.

During the three years of the study, the teacher displayed a positive attitude toward the NEU program, although on some occasions she seems to lack motivation due

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to the large number of students who enrolled during the second year of NEU implementation, which made her job almost impossible.

Strategies used by the teacher:

Since Carrillo became part of the NEU program, it has changed. First the children were grouped together, except for the first grade students, due to a lack of classroom space and the number of students. However, all of the NEU program s elements were observed in use during the observations. This is reflected in the following table which presents the teacher s use of different instructional contexts.

**Table 2: Percentage of Use for Different Instructional Contexts**

Year/Context	Small group (with / without teacher)	Whole class and seatwork	Total instruction time
1993	30%	69%	70%
1994	30%	70%	73%
1995	29%	71%	71%

As seen in Table 2, the teacher has spent a lot of time with the students in groups and this pattern was consistently maintained over the years. Although more time is spent in the traditional context, a shift toward the NEU methodology in general is observed. The amount of time dedicated to instruction did not vary over the years.

Drop out and repetition in the school:

The drop out and repetition rates at Carrillo were also analyzed over time. In the table below which shows these rates, it can be seen that the drop out rate reached its highest point in 1994 for girls, although this fell in 1995. The drop out rate for boys remained fairly constant over the last two years, with a 10% decline over the study period. The repetition rates for boys and girls dropped brusly in 1994. With the exception of 1994, the repetition rates are higher for girls.

**Table 3: Drop Out and Repetition Rates**

Year	Drop Out		Repetition	
	Boys	Girls	Boys	Girls
1993	41%	8%	19%	24%
1994	33%	48%	7%	5%
1995	31%	25%	31%	33%

Equality in classroom interactions:

At Carrillo the different interactions initiated by students with classmates of both sexes and the teacher were analyzed, as were interactions initiated by girls and boys with the teacher, in order to determine if more equitable relationships towards girls had been established over time. The following tables show the percentages of these interactions across years.

**Table 4: Percentage of Interactions Initiated by Students of Both Sexes**

Year	Initiated by Girls		Initiated by Boys	
	with girl	with boy	with girl	with boy
1993	80%	20%	10%	90%
1994	85%	15%	15%	85%
1995	87%	13%	31%	69%

Table 4 shows that girls have not changed much in their interactions with classmates of the same sex and with boys over the years. Boys have increased their interactions with girls and reduced those with classmates of the same sex.

Table 5 shows the interactions initiated by the teacher with children of both sexes and the percentages of interactions initiated by the students with the teacher.

**Table 5: Percentage of Interactions Initiated by the Teacher and by Students of Both Sexes**

Year	Initiated by Teacher		Initiated with Teacher	
	with girl	with boy	by girl	by boy
1993	46%	54%	34%	66%
1994	44%	56%	15%	85%
1995	64%	36%	58%	42%

As seen above, during the first two years, teacher addressed students of both sexes almost equally, but in 1995 this changed, and she began to initiate more interactions with girls. Boys interacted with the teacher more frequently in 1993 and 1994, while girls initiated more interactions with her in 1995.

## CASE STUDY OF SAN FERNANDO SCHOOL

### Description of the school:

San Fernando is a traditional school, located approximately 3 kms. from the departmental capital of Jutiapa. The village has approximately 600 inhabitants. The site has a moderate climate. The primary crops are corn and beans for family consumption. The primary occupation of families in the community is raising cattle, which generates the majority of their income. The village is accessible via a road made of hard-packed earth which is passable year round. There is no public transportation, so residents must walk to reach the departmental capital.

The school is located approximately 200 meters from the entrance of the village. Most of the houses are spread out, and the school is surrounded by fields which are used for grazing cattle and two houses. The school is made of adobe and has a tin roof and a concrete floor. It has one classroom and a small storage room. Its furniture is in poor condition. There is a latrine made of adobe and tin which the teacher and students use. There is no electricity nor drinking water at the school, despite its location close to the departmental capital.

The school has only one teacher who teaches approximately 20 students in first to third grade. The students range in age from 7 to 12 years old. The following table shows variations in the enrollment across the years. As shown, there has been a decline in the number of students enrolled at San Fernando.

**Table 1: Variations in the Number of Students Enrolled across Years**

	1993	1994	1995	1996
Boys	12	12	8	8
Girls	12	11	9	6
Total	24	23	17	14

### Teacher:

The teacher who currently works at San Fernando lives in the departmental capital. This teacher was relocated to this school and has been there for about nine years. She uses the traditional methodology, relying on text books.

### Strategies used by the teacher:

The teacher arranges the students by grade, but seats them in the traditional manner. Generally, she begins class by leaving the first graders with model words and sentences to copy. Then she tells the other grades to copy a lesson from a reading text. When she has finished giving assignments to the first graders, she corrects the second and third graders notebooks. The teacher spends most of the morning sitting at her desk reading biblical texts. The children work alone and, when they finish, they talk amongst themselves without supervision. This is reflected in the following table which presents the teacher's use of different instructional contexts.

**Table 2: Percentage of Use for Different Instructional Contexts**

Year/Context	Small group (with / without teacher)	Whole class and seatwork	Total instruction time
1993	6%	93%	57%
1994	1%	98%	59%
1995	0%	100%	62%

As seen in Table 2, individual seatwork and work with the entire class is the predominant way of teaching at this school. Instruction time rose slightly in the last year, although in general the percentage of time spent on instruction at San Fernando was low compared to the other schools in the sample.

Drop out and repetition in the school:

The drop out and repetition rates at San Fernando were also analyzed over time. The table below shows these rates.

**Table 3: Drop Out and Repetition Rates**

Year	Drop Out		Repetition	
	Boys	Girls	Boys	Girls
1993	0%	13%	10%	13%
1994	60%	43%	30%	29%
1995	50%	100%	25%	50%

The drop out rate was calculated each year by noting which students had not re-enrolled, while repetition was calculated at the beginning of the school year by determining if students were enrolled in the same grade they were in the previous year. Therefore, although the table above shows that 100% of the girls had dropped out, there were girls in the school. However, the girls enrolled the previous year had not enrolled again.

Repetition and drop out rates in the last two years rose considerably, affecting girls more than boys, especially in 1995, where all of the girls enrolled in 1994 dropped out and half of the girls enrolled in 1995 were repeating a grade.

Equality in classroom interactions:

At San Fernando the different interactions initiated by students with classmates of both sexes and the teacher were analyzed, as were interactions initiated by girls and boys with the teacher, in order to determine if more equitable relationships towards girls had been established over time. The following tables show the percentages of these interactions across years.

**Table 4: Percentage of Interactions Initiated by Students of Both Sexes**

Year	Initiated by Girls		Initiated by Boys	
	with girl	with boy	with girl	with boy
1993	64%	36%	31%	69%
1994	75%	25%	31%	69%
1995	71%	29%	6%	94%

Table 4 shows a consistent pattern of interactions in which both male and female students prefer to interact with classmates of the same sex.

Table 5 shows the interactions initiated by the teacher with children of both sexes and the percentages of interactions initiated by the students with the teacher.

**Table 5: Percentage of Interactions Initiated by the Teacher and by Students of Both Sexes**

Year	Initiated by Teacher		Initiated with Teacher	
	with girl	with boy	by girl	by boy
1993	57%	43%	64%	36%
1994	53%	47%	46%	54%
1995	81%	19%	67%	33%

As shown above, during the first two years it can be seen there was equality in the interactions initiated by the teacher with the students. This is not the case in the final year where there is an increase in the percentage of interactions directed towards girls. While the percentages of interactions initiated with the teacher by boys and girls varies over the years, a fairly equal pattern is seen.