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A Tale of Two Ghanas: The View from the Classroom

**"It takes a village to raise a child.
We are the village,
and
these are our children."
(African Saying)**

June, 1995

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Dedication

We would like to dedicate this report to the children and teachers of Ghana, particularly those in the rural areas, who despite great odds, remain deeply committed to learning and teaching.

Study Team

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Preface

The research study team would like to thank many people for their help in facilitating this project. Without the help of many people in the offices of USAID, the MOE, GES, and PREP, our work would have been impossible. The District Directors of Education and their staffs were uniformly courteous and helpful in facilitating visits to schools in their Districts. The headteachers, teachers, and pupils willingly gave of their time to complete questionnaires, submit to interviews and permit strangers to sit in classes. We can never thank them enough. Community members, parents, and leaders took time away from their fields and families to help out at their local schools and to answer our many questions. We thank each of them for their commitment to educating the children of their villages.

The research reported on here is not a scientific, random sample, so the reader is cautioned not to read it as such. However, schools of all types, in all parts of the country were visited, and as such, we do believe the realities about which we have written are quite representative of those faced each day by the thousands of teachers and millions of children in Ghanaian schools. With only a few days preparation, ten days in the field and one week in which to process the mountains of data and write the final report, time was obviously of the essence. We ask the reader's indulgence for the many places in which time prevents us from commenting in detail on many of the findings, and also for the fact that with multiple authors, we did not have time to edit everything into a coherent, smooth flowing style.

Most of the qualitative and quantitative data reported on here was generated as part of this study. However, in order to give a broader picture of the current reality of education in the schools of Ghana, we have also included data from previous research in Ghana, particularly from the outstanding work of the CRIQPEG research group at the University of Cape Coast and the results of the Criterion Referenced Testing program. In addition, research results from the Curriculum, Textbook, syllabus and Handbook Analysis conducted by Kraft (1984) are included to fill in gaps in the current study.

If we have made a small contribution to the improvement of the quality of education in Ghana, we are thankful and appreciative of the opportunity to have done so.

Executive Summary

Equity and Community Issues

"I'd like to exhibit the children's work on the wall, but we have no walls. In fact, as you can see, we have no building" (Rural Teacher Interview)

"The parents each contributed 100,000 cedis to build the new building, and to pay the teachers extra each month." (Headteacher in Greater Accra) "The parents don't have the 200 cedis for membership in our PTA. There is just no money in the community" (Rural Volta Headteacher)

The subtitle of this report is "The Tale of Two Ghana." What became overwhelmingly obvious to the research team was the dramatic difference between the educational opportunities of the children in rural settings, compared to those who attend school in district towns, regional centers or the national capital. The disparity between the North and South or Central zones was also overwhelming. The differences were observed in almost every aspect of schooling: buildings, curriculum offerings, furniture, toilets, textbooks, management, parental wealth and education, trained teachers, and instructional materials, to mention but a few of the more obvious. The differences were not just qualitative in nature, but rather the complete absence of almost all of the above in many rural and northern schools. While community involvement and major responsibility for schools is an admirable goal, such a policy leads to staggering inequities. Following an assessment of the financial capabilities and measurement of local wealth we recommend the following actions:

- 1) An equity act in which all communities are required to make a minimal contribution of perhaps 10% of the cost of a building, furniture or other items, but then a sliding scale would be put in place to ensure that all communities have schools, furnishings, water and other things, which meet national minimal standards.
- 2) Where the national government cannot supply the funds to help a community meet the minimal standards, NGOs, religious groups, and international funding should be sought to help make up the difference.
- 3) Since the needs are massive throughout the nation, we recommend a carefully targeted selection of perhaps the 500 or 1000 poorest communities and schools. A follow-up on the current World Bank project to help build new or improved schools in these poor communities should be put in place. Too many communities visited had not yet received promised roofs or building help under past projects.
- 4) Community involvement through the Parent Teacher Association, building projects, and other school activities should continue to be encouraged. Headteachers should be trained in methods of involving their communities in decision-making and school improvement projects.

Teacher Issues

“Educational research indicates that with classes over 40 students, achievement starts to suffer dramatically. The northern research team found one classroom in the north with 130 P1 and 66 P2 students, for a total of 196 children, enrolled with one teacher. Is this education?” (Research Team Member)

This report is dedicated to the teachers of Ghana, particularly those in rural areas, who for little pay, and in near unbelievable working conditions, continue to provide a basic education for hundreds of thousands of children. Teachers, while deeply concerned about their salaries, continue to list the most fundamental things as major priorities: student and teacher furniture, teaching/learning aids, textbooks, building improvements, recreation, library books, toilets, and drinking water top their list of their recommendations. As professionals, teachers need to have their basic needs and those of their children met, if they are to improve the quality of education in their classrooms.

While the data and narratives which form the body of this report are often critical of teaching behaviors of many teachers, we were astounded at the outstanding quality of education that many teachers provided under the most primitive of circumstances. Until such problems as overcrowding, lack of textbooks and instructional materials, furniture, water, food and sanitary facilities reach minimal standards, it is unlikely that the qualitative reforms recommended will achieve their full potential. We offer the following suggestions as fruitful areas of involvement with teachers:

- 1) While national standards should be maintained to enter and be promoted within the system, experimental, local and district, **pre and in-service training programs** should be encouraged. Exceptional teachers should be released from teaching at times to conduct much of the training, and teacher resource centers should be strengthened. Subject matter associations and subject organizers could strengthen this effort. While pre-service is critical in preparing a cadre of the next generation of teachers, we believe that in-service education should receive the primary emphasis and will reap the greatest rewards in improving educational quality. Headteachers, if given appropriate training, should be a major component in the in-service training effort, through improved supervision of teachers in their schools.
- 2) **Teacher recognition** needs to be improved to help morale. While salary improvement continues to be a high priority for radically underpaid teachers, outstanding teachers at the building, district, region and nation should be chosen each year, with awards, possibly including cash to be given. Outstanding primary teachers should be included along with those in each specialty at the JSS and SSS levels.
- 3) The firing of “pupil teachers,” particularly in the North has led to countless classrooms having no teacher whatsoever. Classrooms with no adult supervision were too common throughout our survey.

Substitute teachers, national service personnel, and community members should be used to ensure that children do not sit in unsupervised, non-learning sessions for hours each week.

- 4) While recognizing the problems involved in sending female teachers into the rural areas, we strongly recommend the need to balance the number of women teachers to be found outside the urban areas. Girls in rural areas need educated female role models if they are to remain in school and contribute their skills to the society.
- 5) While housing is difficult for teachers nationwide, it is particularly difficult for those in the north. Accommodations for teachers should continue to be a priority, along with the possible purchase of bicycles for those who must commute more than 2 kilometers.
- 6) The problem of teacher absences could be confronted by greater use of national service personnel and local community members who could fill in as substitutes. In addition, teachers should be permitted a certain number of "personal leave" days, perhaps three a term, in addition to a regularized sick leave policy, after which punitive measures on salary would be imposed.

Organization and Management

Interviewer "Where is the P2/3 teacher?" Teacher "Oh, he never comes on Fridays, so the children come and sit all day" (Rural school in south)

Interviewer "Where are the students? Isn't this a school day?" Teacher "Yes, but they are all away on a sports festival today and tomorrow" (School in Ashante)

The headteacher had to ride 24 kilometers on his bicycle to pick up two registration books from the district office. After hours of riding the unpaved roads, he finally got them, but on his way home, the district supervisor drove up in his car to tell him he only needed one of them and took one back. (School in the north)

The research team found a wide array of challenges to the organization and administration of Ghanaian schools. The headteacher's manual produced in 1994 was found in the "offices" of several headteachers, and most of them were very consistent in keeping official records on finances, textbooks, attendance, and other matters. Supervision of teachers, however, appeared to be a major area of weakness, as many did not visit classes or offer real instructional leadership. In addition, there was an all too pervasive atmosphere of not assuring regular teacher and pupil attendance. This varied widely with a few schools running very "tight" ships, while others started late, ended early, and had high teacher and pupil absences. Although teachers and headteachers nearly unanimously denied it, parents, children and our own observations confirm that children are being used to collect wood for the teachers, work on their farms, and do a range of tasks in their homes.

- 1) National policies on total number of school hours should be passed, with local flexibility on length of **school day, days per week**, and related factors should be enforced to ensure that students receive a full 180 days, 1080 hours of school per year. The school year could be made flexible to accommodate different growing seasons and other things, but it is important that all children receive a full year of education. Some schools in other countries, particularly those in rural areas where children have experimented with a four day school weeks, with resulting higher student and teacher attendance and even slightly improved achievement.
- 2) **Headteachers** who have to teach classes in addition to their **administrative responsibilities** are greatly overloaded, often having to leave their own classes to take attend meetings, cover for absent teachers, supervise other teachers, and work with their communities
- 3) Policies at the national, regional and district levels should be put in place to control **class size**. It is particularly critical to have small P1-3 classes, rather than teachers in those classes facing the largest classes
- 4) Variations in the **length of the school day** should be considered, particularly for small children. Without breakfast, water, canteen or feeding, many children have a near impossible time learning after 11 a m
- 5) **Automatic promotion and retention** both have been proven to be of little value. Without meaningful **remediation programs** in place to help children who have not learned previous material, the majority of Ghanaian children will continue to fail to master the basic skills and remain functionally illiterate.
- 6) **Continuous assessment and examinations** are issues facing Ghana as in every other country, and it was obvious to the team that the current teachers still need extensive training and help in how to go about assessing students in their classrooms
- 7) The case of the JSS is a special one. Too many of them in rural areas had only 3-6 teachers to cover the whole **curriculum**, and thus many courses were never offered, or given in a manner making it nearly impossible for students to pass the examinations. This must be confronted if quality is to be improved
- 8) Strict policies and monitoring on the improper use of school children to do **private work for teachers and headteachers** must be put in place

- 9) While we have mixed emotions about advocating strict adherence to a **timetable** about which we have many questions, it was obvious to us that Ghanaian children receive radically different amounts of education. It appears to be at the whim of the teacher as to whether the timetable is followed and we found countless incidents in which 30 minute classes went for two hours and many parts of the timetable were skipped altogether.

Student Issues

Interviewer: "Why aren't half the children writing in exercise books?"

Teacher: "Because they can't pay their fees, so they have to sit and watch the others work all day." (Interview in Western Region)

In the experience of at least one of the international members of the team, Ghanaian children are perhaps the best behaved children anywhere in the world. To watch a group of 7 and 8 year olds quietly waiting quietly at their desks for four hours for their teacher to come was an almost unbelievable experience. To have never seen a single child acting up in class, and only one small playground scuffle in two weeks of observation was eyeopening, to say the least. Most "developed" nations are struggling with ways to motivate, control and discipline their over privileged children, while Ghanaian children are patiently "waiting for teacher". These precious children can and will succeed at staggeringly high levels if only given the opportunity. *Ghana's educational challenge is not one of motivation, it is one of opportunity.*

- 1 Many poor countries, often with the help of UNICEF or NGOs, have provided powdered milk and crackers to every P1-3 child. The educational and human payoffs of this minimal, cost-effective intervention, have been proven countless times.
- 2 No child should be denied the right to participate in class simply because they have been unable to pay their fees. **Sliding scales** for the very poor must be in place, so that even the poorest children have access to exercise books, pencils and other necessary educational materials. The same should be true of school uniforms, which are impossible for many of the poor in rural areas to afford.
3. While very high **attendance**, usually over 90%, was found in most schools in the south and central region, there appears to be a major problem in the north. Suggestions elsewhere about flexible school schedules, four day weeks, controls on sports days, etc, could help improve attendance all over.
- 4 Health is an issue for most rural children, and all too many in urban areas. **Visiting nurses, clinics, and other health programs** were a priority of many teachers and community members.

Chapter One: The Research

Background and Purposes of the Study

The research team was asked to analyse the provision of effective teaching and learning in Primary and JSS with an emphasis on equity and efficiency. The stated objective of the project was to “obtain an analytic overview of policy and reform implementation issues from the school level, examining the relationship between policy intents and school-level practice”

Methodology

The research study team as made up of three Ghanaian educators employed by the GES at the Ministry of Education in Accra, three Ghanaian university researchers from the CRIQPEG project at the University of Cape Coast, three external advisors, one with over three decades of anthropological research in Ghana, and the other two with extensive educational experience in Africa. Following an analysis of existing research studies and policy documents, a set of protocols and instruments was developed. A list of the instruments follows, and the reader is directed to the Appendices for the complete documents

1. Master sheet for evaluators
2. Key Statistics
3. Primary Headteacher Questionnaire
4. JSS Headteacher Questionnaire
5. Teachers and Headteacher Questionnaire
6. Headteacher Interview Protocol
7. Teacher Interview Protocol
8. Parent and Community Interview Protocol
9. Pupil Interview Protocol
10. Classroom Observation Protocols
 - a. Time Management Coding Sheet Subject, Activities, Language, On-Task/ Off-task Behavior and Questioning
 - b. Use of Material by Teachers and Students
 - c. Running Narrative Accounts
 - d. Evaluation of Teaching Instrument
 - e. Teacher Effectiveness Checklist

Sample Selection and Anonymity

The team was asked to visit schools in 3 zones, six regions, and twelve districts. The following table gives the original sampling design. An instrument testing was conducted in a semi-urban, rural district in Greater Accra, and the results from those instruments are also included, to give representation to Greater Accra. Schools in all the original sample, with the exception of the Jomoro District were visited. District directors, headteachers and teachers were promised complete anonymity, so no names will be found on any of the instruments, and the names of no schools are included in this report. Fictitious

names are attached to some schools, in order to give some indication of the setting and type of school

Every attempt was made to select schools that represent a range of the educational reality found in each region. With the assistance of the District Director, schools in a town or on a main road were chosen, along with extremely poor, rural schools, often several kilometers from a paved road. The sample includes what could be described as rural, semi or sub-urban, and urban schools. While concentrating on "public" schools, many of those visited had been started by, and some still received aid from religious organizations, including Catholic, Presbyterian and Methodist churches. Almost every visit was without prior knowledge of the headteachers, their staffs or students. This was to ensure that the visits would be representative of the "regular" reality of the school, and to obtain a portrait of the day-to-day reality of what happens in Ghanaian Primary and Junior Secondary schools.

Sample

Zone	Region	District	# of Schools
Northern	Upper East	Bongo	1
		Kassena/Nankena	1
	Upper West	Sissala	1
		Wa	1
Central	Brong Ahafo	Sene	1
		Sunyani	1
	Ashanti	Ahafo-Ano South	1
		Sekyere West	1
Southern	Western	Shama-Ahanta	2
		Jamoro	0
	Greater Accra	Amasaman	3
	Volta	Ho	2
		Akatsi	2

Data Presentation

We realize that many studies and research reports have not traditionally included "telling the story," that is including narratives and ethnographies. We believe that the richness and depth of classroom research is enhanced greatly through these "stories." In fact, the true reality of a classroom cannot be told by mere statistics. The radical inequities observed between the urban and rural schools truly shocked many of the observers, and for this reason, we have also included extensive photographs of what we observed in both settings.

Number of Schools and Teachers Sampled by Region

Region Visited	Number of Schools Includes mostly combined Prim/JSS	Number of Teachers and Headteachers Surveyed
Western	2	12
Greater Accra	3	33
Volta	4	37
Brong Ahafo	2	12
Ashanti	2	9
Upper East	2	13
Upper West	2	17
Total	17	133

Data Sources

Data Source	Number of Sources
1 Primary Headteacher Surveys	9
2 JSS Headteacher Surveys (Often also in charge of Primary School on site)	10
3 Teacher Surveys	133
4 Headteacher Interviews	14
5 Teacher Interviews (Formal)	47
6 Teacher Interviews (Informal)	25
7 Parent, Community Interviews (Formal)	37
8 Parent, Community Interviews (Informal)	76
9 Pupil Interviews (Formal)	137
10. Pupil Interviews (Informal)	276
11 Extended Classroom Observations	64
12 Informal Classroom Observations	141

Through the analysis of previous research, study of policy documents, and the interviews, observations, and questionnaires which formed this study, the chapters which follow, we believe gives a solid picture of the educational reality in Primary and Junior Secondary schools found in Ghana in 1995

Chapter Two: Ghanaian Education

Educational Statistics Quantitative Indicators

Numerous international reports from the World Bank, USAID, ODA and other agencies have documented the sharp deterioration in the social well being and economic welfare of Ghanaians during the 1970s and early 1980s. Between 1976 and 1983, public resources for education fell from 6.4% of GDP to 1.4%, and the government was unable to maintain existing facilities, build new schools, or purchase textbooks and other instructional materials for students or teachers. Enrollments actually fell during this period, and large numbers of the best trained teachers emigrated or left teaching for other sectors of the economy.

Since 1983, the people and Government of Ghana have been involved in a program of economic recovery and structural adjustment which is having an increasingly profound effect on the education system. Quantitatively, education has made major strides in the past decade. Through the assistance of the World Bank, USAID, CIDA, ODA, UNICEF, World Food Program, Norway and other binational and international governmental agencies and NGOs, over \$250 million has been provided to upgrade basic and technical education. The educational level of expenditures rose to 3.8% of GDP in 1993 and the recurrent budget rose from 17% in 1980/81 to nearly 40% in 1993. Basic education's share of the budget increased from 44% of the total education budget to 62% or more for every year since 1989.

Ghana has an area of approximately 238,500 square kilometers and a population of about 15 million people. The population is growing at an annual rate of over 3%, and approximately 45% of the population is under 15. With a majority, (over 65%) of the population living in rural areas, it was decided to concentrate the report which follows on rural schools, while not ignoring the fact that the country is rapidly urbanizing, particularly in the south.

The following quote from a CRIQPEG report summarizes well the historical and current reality facing Ghana today:

In the 1960's, Ghana had one of the most developed educational systems in Africa. The country experienced political instability from the mid-sixties and later plunged into a severe economic depression for about twenty years. Educational services were severely affected. Thousands of teachers left the country between the mid-seventies and mid-eighties and many primary school classrooms had no teachers. There was an acute shortage of basic textbooks and other instructional support facilities. Schools operated under extremely adverse conditions and naturally the quality of education deteriorated. Most of the victims of the deterioration in education are now between the age of 16 and 25. Many of them who have completed middle school can hardly read and write. (CRIQPEG Report, Undated)

Enrollments in primary education have risen from 1,467,074 in 1986 to over 1.8 million in 1991, with projections of over 2.45 million in the year 2000. The number of primary schools has risen from 9,494 in 1986/87 to over 11,000 in 1994. The need for this expansion is incontrovertible with approximately 82% of the primary age students enrolled and 51% of those of Junior Secondary School age (12-14). By age 20-24, tertiary education enrolls less than 1% of the age cohort.

Two-thirds of the total population remains functionally illiterate, with estimates of 40% of the illiterates resulting from poor quality instruction in the primary schools

The Educational Reform of 1987

An education commission report of 1973, popularly known as the Dzobo Report had been shelved at that time due to elite opposition, but resurrected in 1987 with four main objectives

- To reduce the inordinate length of pre-university education from the previous 17 years to the international norm of 12 years
- To improve pedagogic efficiency and raise the quality and relevance of educational outcomes through replacing the old curriculum, textbooks, syllabi and instructional materials, better building maintenance, training and retraining the teaching force, and preparing school leavers for the "real" world
- To contain and partially recover costs, through cutbacks in overstaffing of non-teaching staff and untrained teachers, the feeding and lodging costs of secondary and tertiary students, and cost recovery on textbooks
- To enhance sector management and budgeting procedures through the enforcement of physical and financial norms, better planning and budgeting, improved management, and better supervision and monitoring

In addition to the enrollment expansion and building of new schools indicated earlier, the school reform of 1987 shifted the structure of the system to six years of primary, three of junior secondary (JSS), three of senior secondary (SSS), and four years of tertiary education. The curriculum was reformed to be less theoretical and more relevant to Ghana, with Ghanaian languages and agriculture made compulsory. At the primary level, P1-3 are to be taught in the native language, with English taught 6 periods each week, and P4-6 and all of JSS and SSS to be taught totally in English. All JSS offer one pre-vocational subject to familiarize pupils with the use of hand tools, and SSS offer general arts and science and vocational options, half of them agriculture, and one-third technical options. The elective program options are to prepare children for a wide range of occupations and post-secondary education and training.

New textbooks were written at all levels, with accompanying teacher's handbooks, and syllabi were prepared in each subject area. Pre-service and in-service training reduced the proportion of untrained teachers to 30% at the primary level, 20% at JSS and 10% at SSS. Costs have been contained through a reduction in the percentages of boarding students in secondary education and through laying off untrained teachers. Food subsidies have been eliminated at both the secondary and tertiary levels, and school supplies are now sold at cost. There is a partial cost recovery for textbooks in basic education and full cost recovery at SSS. At the tertiary level, student loan schemes have helped to provide an element of cost recovery, despite its still being highly subsidized. Finally, sector management, planning, and budgeting have been improved through a unified planning, budgeting, monitoring and evaluation division, and professional staffs in line units have been built up.

Objectives of Basic Education in Ghana

- Provide all children of school-going age with a free and universal basic education of 9 years duration, consisting of 6 years primary and 3 years junior secondary education
- Shorten the unduly long statutory period of pre-university schooling from 17 to 12 years
- Increase vastly the quantities of educational materials, textbooks and equipment in the system.
- Improve the overall quality of the teaching staff
- Vocationalise education and offer the opportunity for practical skill acquisition by shifting emphasis from an academic orientation to a more problem-solving, technical one.
- Increase access to education at the Basic Education level (i.e. to increase the enrolment to exceed the population growth rate)
- Reduce unequal opportunities between urban and rural areas and between girls and boys
- Establish a decentralized educational system in which increased financial, managerial and operational authority is decentralized to the sub-regional levels, especially to the district and circuit levels
- Guarantee the sustainability and quality of the national educational programme through a) reduction of waste and costs of education and b) strengthening of vital units of the overall management and supervision of education so as to improve upon the functions of planning, budgeting, monitoring and evaluation

Stated Objectives of Primary Education in Ghana

- 1) Numeracy and literacy i.e. the ability to count, use numbers, read, write, and communicate effectively
- 2) Laying the foundation for inquiry and creativity
- 3) Development of sound moral attitudes and a healthy appreciation of Ghana's cultural heritage and identity
- 4) Development of the ability to adapt constructively to a changing environment
- 5) Laying the foundation for the development of manipulative and life skills that will prepare the individual pupil to function effectively to his own advantage as well as that of his community
- 6) Inculcating good citizenship education as a basis for effective participation in national development

The Education Reform Review Committee

Meetings: July-October, 1994

Report: June 5, 1995

The latest effort at school reform in Ghana is the work of the Education Reform Review Committee, which met in 1994, and whose report was finally printed in the Ghanaian Times on June 5, 1995. While the report examines all aspects of Primary, Secondary and Tertiary education in the country, we shall only refer to those recommendations which affect the primary and junior secondary schools. The major themes in the terms of reference for the Committee affecting Basic Education were as follows:

- 1 Linkages between the various levels of education
- 2 The number of compulsory, core subjects at each level
- 3 The maximum number of subjects at each level.
- 4 The content of the curricula, syllabuses, textbooks and instructional materials
- 5 The improvement of teaching and learning, supervision and community participation.
- 6 The modes of assessment.
- 7 To consider the report from religious bodies
- 8 To cost all recommendations
- 9 The availability and skills of needed teachers
- 10 To study existing Government Policy Guidelines

The Reform Commission made numerous recommendations. Among those affecting Basic Education were the following

- 1) Religious/Moral Education should stand on its own and be taught as a subject.
- 2) "The Child and the Environment" should be called "Environmental Studies" and should include Social Studies, Health Education, Science, Environmental Education and Life Skills
- 3) Cultural Studies should be integrated with the Ghanaian Language to ensure effective teaching and learning
- 4) Lower Primary Curriculum English, Ghanaian Language and Culture, Mathematics, Environmental Studies, Religious/Moral Education with physical activities of Physical Education, Music and Dance in the timetable
- 5) Upper Primary Curriculum. English, Ghanaian Language and Culture, Mathematics, Integrated Science (including Agric Science), Environmental Studies, and Religious/Moral Education, with P E , Music and Dance
- 6) Since 60% of JSS students will not go on for further education, the curriculum should help them prepare vocationally
- 7) Science and Agriculture should be taught separately
- 8) The Committee recommends 10 subjects for JSS, with the Top Rating going to Mathematics and English The Second Rating goes the Ghanaian Language and Culture, Pre-Vocational Skills, Pre-Technical Skills, Science, Social Studies, Religious and Moral Education, Agricultural Science The Third Rating was given to Music, Life Skills, French and Physical Education

Among the other recommendations for the Commission were

- 1) Concern about the rural-urban disparities staffing, materials, and buildings led to a recommendation of positive discrimination in favor of rural schools
- 2) The MOE must become more involved in building schools rather than waiting for District Assemblies
- 3) No child should have to walk more than 5 kilometers to a school
- 4) Toilets should be built for all schools
- 5) Standard building plans, including those for workshops, laboratories, stores, library and utilities should be developed
- 6) Workshops for vocational education should be sited centrally for several schools use
- 7) All schools should be supplied with proper furniture
- 8) The distribution of textbooks and stationery needs to be improved
- 9) Books are to be used, and teachers not punished if books are lost or ruined

Reasons for Educational Disparities and Poor Achievement in the System (Manu, 1993 World Bank, 1993, Interviews and Observations Kraft, 1994)

1. Economic hardship

Parents find it difficult to provide bread, much less send their children to school, pay textbook user fees, purchase school uniforms and pay other levies charged by the schools

2. Buildings and Equipment:

The vast majority of Ghanaian schools are in poor repair and are not maintained with any regularity. Many schools lack ventilation, roofs, desks, chairs, and blackboards. Thousands of children attend school out-of-doors and must sit on rocks and use slates as desks. In 1990, 23% of the schools had no classrooms sufficient to protect children and teachers from the rain. In 14 of 110 districts, more than 50% of the schools had no classroom facilities whatsoever

3. Geographical Remoteness

Roads and effective communication are unavailable in remote areas, so that teachers are not attracted or motivated to accept postings or transfers to such areas. The people in these settings are too poor to provide facilities for schooling

4. Economic Discrimination:

Parents cannot afford authorized and unauthorized school fees, uniforms, lunches and other associated costs of even primary schooling. Secondary school costs become prohibitive for most parents. Fees, levies and uniforms can now reach 4000 cedis at the lower levels and 5000 cedis at the higher grades, and has been a contributing factor to recent declines in enrolment

5. Gender Differentiation

In some communities parents prefer sending their boys to school, while girls are kept at home to help in domestic duties like cooking and washing clothes. Girls enrol at a lower rate than boys and are more likely to drop out

6. Religious Reasons

Some Moslem parents prefer to send their children to learn the Koran instead of the sending them to a regular school to learn to read and write in English

7. Poor Pedagogy

Rote memorization and copying off the blackboard tend to be the dominant mode of teaching, and students find this boring and repetitive

8. Teachers:

While significant gains have been made in training teachers, thousands remain untrained. Teachers are often absent, have poor morale, and are severely underpaid. Teachers often arrive late and leave early, and in rural settings may only teach a partial week

9. Official Instructional Hours

Single shift schools generally start at 8 00 a m and close at 12 35 p m, while double shift schools open at 7 30 a.m. and close at noon, open at 12.30 and close at 4 30. Currently 21% of primary school students are in double shift schools. The government has lengthened the school year from 36 to 40 weeks and is taking steps to increase the school day from 4 hours to at least 5 hours of instruction. In the research section of this document, we have laid out differences in length of school day and year in selected countries around the world

10. Instructional Time on Language and Mathematics"

The amount of time spent on the basics of language and mathematics is a critical factor in the achievement level of students. Using the suggested primary school timetable which follows, it is estimated that a maximum of 18, 30 minute classes or a total of 9 hours per week is given to teaching basic literacy and numeracy. A detailed discussion of the timetable and distribution of subject areas is given in the research section of this document.

11. Formal and Informal English Instruction and Use of Language

With English as the medium of instruction from fourth grade on and as the language of government and commerce, it is important to compare the amount of English instruction and actual time hearing and using the language that children in different cultures have. The following are estimates, but should be considered when looking of causes of success and failure by students. As can be seen from the rough estimate below, a poor Ghanaian child, with illiterate, non-English speaking parents, and no access to television or books, might hear, speak, read or write in English a total of only 760 hours by the age of twelve as compared to some 60,665 hours by the "average" child in the US /Canada/Australia or Great Britain. Children in the "developed" English speaking countries have 100 times the access to the English language as do children in Ghana and other countries where it is a second or third language. Despite that access, up to 1/3 of children in the US and other English speaking countries do not master reading and writing at a level which makes them functional in a modern society.

That the intellectual elite of Ghana master the English language is evidence of their tremendous ability, motivation, and drive to succeed. That there is massive failure to become literate in English on the part of a large majority of the population is neither surprising nor unpredictable. A detailed discussion and table of time spent in English is given in the research section of this document.

In addition to the limited amount of time that English is included in the formal timetable and curriculum is the fact that large numbers of teachers are themselves not comfortable in the language and so use only the native languages for much or all of the formal curriculum.

Access to books in English is almost nonexistent for most poor Ghanaian children, and while newspapers are available, most of the poor cannot afford them. Libraries, whether school or community-based, are extremely limited, and most children do not have enough mastery of English to make use of them.

The one hour added to daily instructional time is to be used for a new integrated curriculum area "Communication Skills" which will attempt to increase children's oral and writing skills largely in English. A teacher handbook is being developed to aid teachers in helping children express themselves and not just rote repetition.

12. Textbooks:

During the period from 1970-1987, textbooks were almost totally unavailable to students, and even teachers often had no access to them. By the beginning of the 1992/93 school year, there were approximately 2 pupils per textbooks, and it is planned that by 1995, that all pupils will have daily, regular use of their own textbooks. A detailed discussion of the current primary textbooks is given in the research section of this document.

13 Interruptions.

While recent government pronouncements have attempted to cut down on interruptions to the school day, week and year, there are still holidays, political rallies, sports events and other activities which cut into academic class time.

14 Administration and Supervision

The past three years has seen a major push to improve the administration and supervision of schools through a decentralization process providing one circuit supervisor and one circuit monitoring assistant for every 15-25 schools. Motorcycles are being provided to help them with transportation, and there is an active selection, recruitment, and training program underway. Local management committees are also being formed to improve this aspect of Ghanaian education. District education officers have been provided with vehicles, but even with the provisions of transportation for district and circuit supervisors, there appear to be a low frequency of visits to schools and the returns have been small.

15. Teacher Incentives and Sanctions:

Even though teachers received an 80% salary increase in 1992 and even though they have 12 weeks holiday (compared to 7 weeks for other government employees), and even though they often receive housing at a subsidized rate, teaching is not what can be considered a good paying or high prestige occupation. Unless and until the economy makes dramatic gains, this is likely to remain a hindrance to attracting the retaining the best and the brightest in the teaching corps.

There are a variety of mechanisms to impose sanctions on teachers for a range of misdeeds. "Minor" misconduct can lead to loss of 14 days pay or disciplinary transfer, while "major" misconduct can lead to dismissal. How often these sanctions are used for reasons of unexcused absence, tardiness, poor teaching or other things which affect the "quality of education" is not known.

16 Funding Per Pupil.

In 1975, there was spending of \$41 per pupil at the primary level, \$131 at the secondary and \$3,638 at the tertiary. This fell to a low of \$16 in 1983, but has risen to a current \$45, \$150, and \$1500 at the respective level in 1993.

17 Teacher Training:

While significant progress has been made to lower the numbers and percentages of untrained teachers, much remains to be done. The goal of providing 90% of all teachers with in-service pedagogical training has not yet been reached, but by the mid-point in PREP, the figure had risen from 51% to 66%. The Department of Primary Education has been formed at the University of Cape Coast to train undergraduate students in primary teaching methodology.

Chapter Three: The Teachers

"Educational research indicates that with classes over 40 students, achievement starts to suffer dramatically. The northern research team found one classroom in the north with 130 P1 and 66 P2 students, for a total of 196 children, enrolled with one teacher. Is this education?" (Research Team Member)

This report is dedicated to the teachers of Ghana, particularly those in rural areas, who for little pay, and in near unbelievable working conditions, continue to provide a basic education for hundreds of thousands of children. Teachers, while deeply concerned about their salaries, continue to list the most fundamental things as major priorities: student and teacher furniture, teaching/learning aids, textbooks, building improvements, recreation, library books, toilets, and drinking water top their list of their recommendations. As professionals, teachers need to have their basic needs and those of their children met, if they are to improve the quality of education in their classrooms.

While the data and narratives which form the body of this report are often critical of teaching behaviors of many teachers, we were astounded at the outstanding quality of education that many teachers provided under the most primitive of circumstances. Until such problems as overcrowding, lack of textbooks and instructional materials, furniture, water, food and sanitary facilities reach minimal standards, it is unlikely that the qualitative reforms recommended will achieve their full potential. We offer the following suggestions as fruitful areas of involvement with teachers:

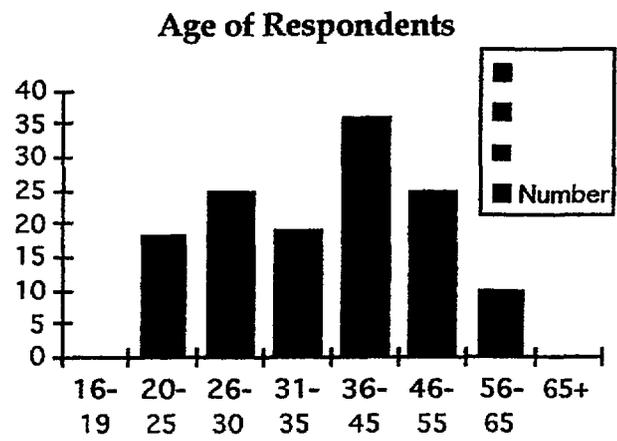
- 1) While national standards should be maintained to enter and be promoted within the system, experimental, local and district, **pre and in-service training programs** should be encouraged. Exceptional teachers should be released from teaching at times to conduct much of the training, and teacher resource centers should be strengthened. Subject matter associations and subject organizers could strengthen this effort. While pre-service is critical in preparing a cadre of the next generation of teachers, we believe that in-service education should receive the primary emphasis and will reap the greatest rewards in improving educational quality. Headteachers, if given appropriate training, should be a major component in the in-service training effort, through improved supervision of teachers in their schools.
- 2) **Teacher recognition** needs to be improved to help morale. While salary improvement continues to be a high priority for radically underpaid teachers, outstanding teachers at the building, district, region and nation should be chosen each year, with awards, possibly including cash to be given. Outstanding primary teachers should be included along with those in each specialty at the JSS and SSS levels.

- 3) The firing of "pupil teachers," particularly in the North has led to countless classrooms having no teacher whatsoever. Classrooms with no adult supervision were too common throughout our survey. **Substitute teachers, national service personnel, and community members** should be used to ensure that children do not sit in unsupervised, non-learning sessions for hours each week.
- 4) While recognizing the problems involved in sending **female teachers into the rural areas**, we strongly recommend the need to balance the number of women teachers to be found outside the urban areas. Girls in rural areas need educated female role models if they are to remain in school and contribute their skills to the society.
- 5) While **housing** is difficult for teachers nationwide, it is particularly difficult for those in the north. Accommodations for teachers should continue to be a priority, along with the possible purchase of bicycles for those who must commute more than 2 kilometers.
- 6) The problem of teacher absences could be confronted by greater use of national service personnel and local community members who could fill in as **substitutes**. In addition, teachers should be permitted a certain number of "personal leave" days, perhaps three a term, in addition to a regularized sick leave policy, after which punitive measures on salary would be imposed.

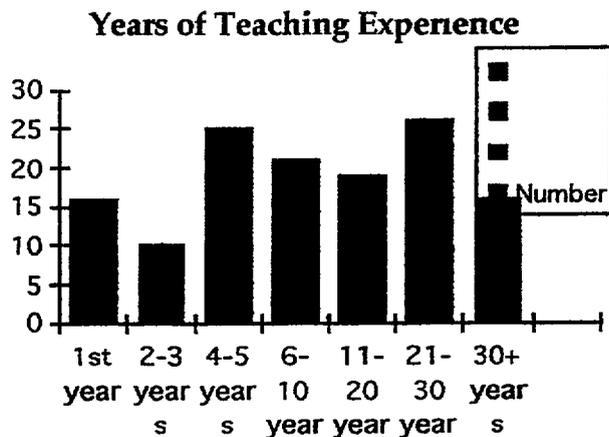
Research Question What is the Gender of the sample?

	Number	Percentage
Men	66	50
Women	67	50

Research Question What is the age distribution of the teaching force in Basic Education?



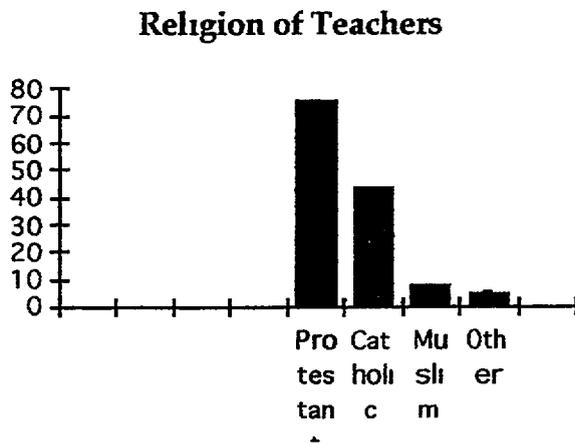
Research Question What is the distribution of experience in teaching?



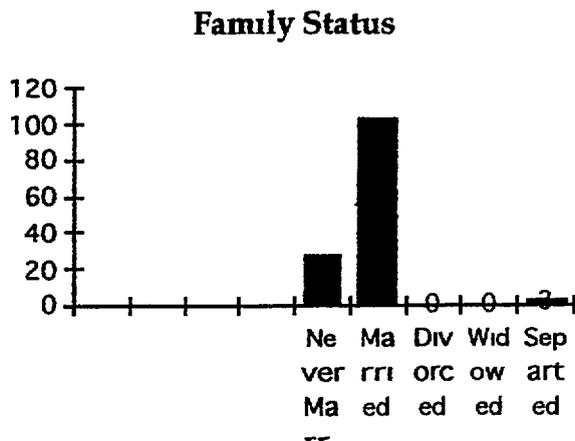
Sample by Number of Teachers at Each Class Level

Class	P1	P2	P3	P4	P5	P6	P7
#of Teachers	18	15	17	17	9	15	40

Research Question. What is the religious affiliation of teachers?



Research Question What is the family status of the teachers?



Research Question What are the academic qualifications of the teachers?

Academic Qualifications

Qualification	Number of Teachers
1 Middle School Leaving Certificate	18
2 School Certificate	41
3 Attempted School Certificate	18
4 Attempted GCE	4
5 Technical/Comm /Voc	14
6 GCE (O/L) 1-3 Subjects	13
7 GCE ((O/L) 4+ Subjects	46
8 Attempted GCE (A/L)	5
9 GCE (A/L) 1 Subject Only	3
10 BCE (A/L) 2 or more Subjects	8
11 Others	3

Research Question. What are the professional qualifications of the teachers?

Professional Qualification

Professional Qualification	Number	Percentage (due to rounding more than 100%)
1 Teacher's Cert B	1	1%
2 Teacher's Cert A (Post-B)	8	9%
3 Teacher's Cert A (4 yr)	63	47%
4 Teacher's Cert A (Post Sec	33	25%
5 Technical Teacher's Certificate	0	0%
6 Specialist Teacher's Certificate	2	2%
7 Diploma	9	7%
8 Other	7	5%
9 Unknown	10	8%

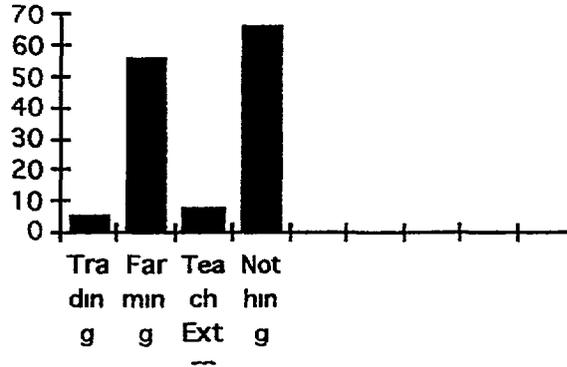
Research Question What is the rank of the teachers in the sample?

Rank

Rank	Number
1 Assistant Director	1
2. Principal Superintendent	12
3 Senior Superintendent	28
4 Superintendent	9
5 Assistant Superintendent	17
6 Other	66

Research Question: What, if anything to teachers do to supplement their income?

Teacher Income Supplements



Research Question: When have teachers last participated in in-service courses?

Year of Last In-Service

Year	1995	1994	1993	1991	1990 or earlier
	61	34	13	4	21

Research Question What are the Priority recommendations for School Improvement by Teacher and Headteachers?

Zone-% / Recommendations	South %	Central %	North %	Accra %	Total %
Total # Surveyed	49	21	30	33	133
1 Student/Teacher Desks and Chairs/Chalkboard	40 (82%)	13 (62%)	16 (53%)	17 (52%)	86 (66%)
2 Teaching/ Learning Aids	28 (57%)	18 (86%)	11 (37%)	24 (73%)	81 (61%)
3 Textbooks	27 (55%)	16 (76%)	14 (47%)	17 (52%)	74 (57%)
4 Building Improvements	22 (45%)	9 (43%)	22 (73%)	15 (45%)	68 (51%)
5 Teacher and Headteacher Accommodations	17 (35%)	10 (48%)	21 (70%)	10 (30%)	58 (44%)
6 Recreation/ Fields/ Sports	11 (22%)	14 (67%)	16 (53%)	12 (36%)	53 (40%)
7 Library/ Supp Readers	9 (18%)	4 (19%)	16 (53%)	12 (36%)	41 (31%)
8 Toilets/ Urinals	9 (18%)	13 (62%)	4 (13%)	11 (33%)	37 (28%)
9 Bookshelves/ cabinets	17 (35%)	12 (57%)	1 (3%)	5 (15%)	36 (27%)
10 Drinking Water/ bowls/ cups	13 (27%)	6 (29%)	12 (40%)	4 (12%)	35 (26%)
11 Bus/ Bicycles/ Motorcycle/ Funds Teacher/ St Transport	2 (4%)	7 (33%)	18 (60%)	7 (21%)	34 (26%)
12 Class Size	8 (16%)	6 (29%)	7 (23%)	6 (18%)	27 (20%)
13 Health/ Infirmiry/ First Aid	5	11	3	5	24 (18%)
14 Science/ Math Labs/ Equipment	9	6	5	3	23 (17%)
15 Electricity/ Clock/ Computer/ Lang Lab / AV	6	6	6	4	22 (17%)
16 PTA/ Parent Involvement and Visits	10	0	2	9	21 (16%)
17 Maps/ Globes/ Charts	4	4	10	3	21 (16%)
18 Teacher Guides	4	1	1	14	20 (15%)
19 Technical Wkshps/ Tools/ Sewing/ Draw Bds/	11	0	4	6	16 (12%)
20 Better Teaching/ Teachers	5	2	1	6	14 (11%)
21 Stationery/ Workbooks	3	4	2	6	13 (10%)
22 Staff/ Visitors Room	9	1	0	3	13 (10%)
23 Relationships Parents/ Teachers/ Pupils/ Heads	3	2	2	4	11 (8%)
24 Canteen/ Store/ Food	5	0	3	3	11 (8%)
25 Secure Windows/ Doors/ Walls	8	1	0	2	11 (8%)
26 Curriculum Improvement	1	3	2	3	9 (7%)
27 Maintenance/ Floors	6	0	0	3	9 (7%)
28 Teacher Salaries and Incentives	2	1	2	3	8 (7%)
29 Agric./ Gardens/ Tools	2	1	2	1	6 (5%)
30 Improved Supervision	0	0	1	4	5 (4%)
Total # Surveyed	49	21	30	33	133

Research Question What are the teachers' attitudes towards a range of school and community topics?

Perceptions of the School

Here are some observations about the school and the school system For each statement chose which of the following best indicates your opinion

5=Strongly agree 4=Agree 3=No opinion 2=Disagree 1=Strongly disagree

MEAN
SCORE

- 4.51 1 One-session system is preferable to two-session system
- 4.06 2 School makes good use of help from parents through the PTA or other organizations
- 3.08 3 Parents pay too much for their children's education
- 3.30 4 The standard of education in my school is high
- 4.00 5 The school takes action on student absences
- 3.65 6 There is a good mix of male and female teachers in our school?
- 3.78 7 The school-community relationship is good
- 1.57 8 The school imposes unauthorised levies on the children
- 2.64 9 Many parents have good reason to complain about school
- 3.96 10 The children are taught some useful practical skills
- 4.53 11 There is need for suitable accommodation for the teachers
- 3.58 12 The school ensures children receive medical/health assistance
- 1.60 13 The school engages pupils in unsupervised activities
- 2.47 14 The children are reluctant to go to school
- 4.11 15 The school operates a good mix of academic, sporting and cultural programmes
- 2.00 16 The quality of work at the school is rather poor
- 4.02 17 The school-community relationship needs improvement
- 2.20 18 The children are engaged in unauthorised work, (farming or childcare for teachers)
- 2.88 19 Parents are reluctant to send their children to school

Research Question How well prepared in mathematics and English are Primary teachers?

This question is difficult to answer, as Ghanaian university professors state that their students have difficulty with English until their third year, and since few primary teachers have attended any university classes, one can extrapolate that they are unlikely to have a real mastery of spoken or written English. Observations at teacher training colleges and teaching at a University, confirm this suspicion. A recent group of TTC students were given the P6 English and mathematics CRTs, and achieved the following scores. They appear

to have a fairly solid grounding in the formal grammar, vocabulary, comprehension and details of writing, but English educators in Ghana indicate that the spoken English and verbal comprehension levels of most primary teachers is still very low

Ghanaian Teacher Trainees' Performance on English Subtests

Subtest	Mean Percent Correct
Grammar	80
Vocabulary	88
Reading Comprehension	89
Writing (Sequence & Connectives)	83
(Punctuation and Spelling)	85

In mathematics the following scores indicate that they do decently on basic operations, but still have difficulty with geometry. From discussions with Math educators in Ghana, it appears that few Primary teachers have much of a conceptual understanding of mathematics or many skills in teaching it, even if they are capable of doing primary school mathematics

Teacher Trainee's Performance on Mathematics Subtests

Subtest	Mean Percent Correct
Basic Number Concepts	80.7
Basic Operations	80.5
Story Problems	81.5
Geometry	67.1

Recommendation

In addition to all the other language related recommendations in this evaluation, a kit should be prepared for each current and future teacher consisting of the textbooks for their Primary grade, the syllabus in each subject, the teacher's handbooks in each subject, and a range of teaching aids, letters of the alphabet, labels for classroom items, posters with names and words of things found in the community or at home, a puppet or instructions on how to make one, and at least one good children's story for their age child. A kit should also be prepared for each current and former teacher which would include not only the mathematics textbook, syllabus and teacher's handbook, but also a wide range of manipulatives such as blocks, number trays, logic blocks, balances, blackboard instruments, counters, geometric solids and other shapes

Chapter Four: Students

Interviewer "Why aren't half the children writing in exercise books?"

Teacher "Because they can't pay their fees, so they have to sit and watch the others work all day." (Interview in Western Region)

In the experience of at least one of the international members of the team, Ghanaian children are perhaps the best behaved children anywhere in the world. To watch a group of 7 and 8 year olds quietly waiting quietly at their desks for four hours for their teacher to come was an almost unbelievable experience. To have never seen a single child acting up in class, and only one small playground scuffle in two weeks of observation was eyeopening, to say the least. Most "developed" nations are struggling with ways to motivate, control and discipline their over privileged children, while Ghanaian children are patiently "waiting for teacher". These precious children can and will succeed at staggeringly high levels if only given the opportunity. *Ghana's educational challenge is not one of motivation, it is one of opportunity*

- 1 Many poor countries, often with the help of UNICEF or NGOs, have provided powdered milk and crackers to every P1-3 child. The educational and human payoffs of this minimal, cost-effective intervention, have been proven countless times.
- 2 No child should be denied the right to participate in class simply because they have been unable to pay their fees. Sliding scales for the very poor must be in place, so that even the poorest children have access to exercise books, pencils and other necessary educational materials. The same should be true of school uniforms, which are impossible for many of the poor in rural areas to afford.
- 3 While very high attendance, usually over 90%, was found in most schools in the south and central region, there appears to be a major problem in the north. Suggestions elsewhere about flexible school schedules, four day weeks, controls on sports days, etc, could help improve attendance all over.
- 4 Health is an issue for most rural children, and all too many in urban areas. Visiting nurses, clinics, and other health programs were a priority of many teachers and community members.
- 5 Distance to school is still a major factor in school attendance, retention and achievement. The government needs to continue in its drive to provide a school within five kilometers of every village.
- 6 In many schools, particularly in rural areas, the schools are seen as a baby-sitting setting for younger siblings. This leads to the absurdity of 196 children in one classroom. If P1-3 children are to have any possibility of success, strict age limits and class sizes must be imposed.

For example, in most nations, no child may enter P1 unless they have reached the age of six by August 1, October 1 or some other date. Secondly, P1-3 class sizes should be the smallest, preferably never over 30 students, in the whole school system. P1 is the most important class, and the best, most experienced teachers should be assigned to it, and along with sufficient instructional materials to make literacy and numeracy a possibility.

- 7 While our brief study did not find extensive discrimination against girls, the enrolment statistics indicate a growing number of girls drop-out as they move through the grades. In classrooms, we found a slight bias in favor of calling on boys, but not significant enough to make a major point of it. Suffice it to say, that more female role models are needed, particularly in rural areas, and schools should do everything in their power to encourage girls to continue as far as possible with their education.

Research Question: What is the reality of school life for children in rural schools?

“Waiting for Teacher What’s There to do in Riverdale but go to School?”

After an hour drive on a paved, but crowded highway, our four wheel drive vehicle turns off and heads towards the village. The slippery red clay makes it apparent that we will not only need four wheel drive, but the “extra power” option that our little Sportage features. We are soon stopped by puddles, two feet deep in places, left over from the previous night’s downpour. We pass the women of the village, many with babies on their backs, who are walking the 3-4 miles out to the main highway to sell bread, fish, cassava, bananas and anything else they or their families have been able to make, catch, grow. They look enigmatically at these visitors from the capital, who are visiting their village for the first time. Not noticing an elderly gentleman by the side of the road, our driver inadvertently covers him with red, muddy water, creating the need for a major apology. A few men are walking into the village, one of whom happens to be a teacher coming to school. On either side of the narrow, one lane path, were occasional fields of sugar cane or maize, otherwise it was thick with undergrowth. The village sits beside a river, not too far from the ocean, where some of the men go daily to fish. The brown colored, contaminated river is the only source of water for the village, and must be boiled at great length.

We need not have worried about arriving an hour late, shortly after nine a.m., as the Headteacher had not yet been able to make it through the mud on his prized bicycle and only three of the seven classes had a teacher present. We found some 150 children sitting quietly at their desks, waiting patiently in hope that a teacher would teach them that day. No classes had yet started in those rooms with teachers, and it wasn’t until shortly before 10 that the traditional scratching of the blackboards and unison repetition of words and phrases began in earnest. According to the posted schedule, 10:15 brought Break time, and with the sounding of the bell, the 23 children in the P2/3 class, who had been sitting quietly at their desks in their outdoor, but tin roof covered classroom without a

teacher, got up to go and play on the slippery red mud "playground" No vendors hover around the school selling anything to eat, and while a few head home to get something from their hut, most return to the classroom as hungry as they entered. The JSS students mingled around their classrooms, afraid to try out their limited English on the visitors from Accra. After assurances about anonymity and confidentiality, the teachers timidly agreed to fill out our questionnaires and permit us to visit their humble classrooms.

The Kindergarten and P1 classes were in an old mud walled building, in a state of terminal disintegration. Preschool children sat on small chairs or lay on the one bamboo mat, reciting patiently after their teacher the foreign sounding words 1,2,3,4,5, and trying to decode the strange symbols a, b, c, d. With little English ability, the younger woman and older, crippled gentleman teaching the Kindergarten class, children appeared to have no concept of either the basics of numbers or that the strange letters on the board could be connected in any way to form books or stories. Other than the dirt on the mud floor, there was nothing else in the room to make learning an inviting prospect, and it was therefore not unexpected that from some forty in the Kindergarten, the numbers by P2 were just 25 and by JSS 3 had been reduced to eleven. As the P1 children go out for Break, the ubiquitous goat family makes its way through the classroom to see if the children have left anything for them to eat. The neighborhood rooster also leads his brood in and out, leaving a few reminders of their presence on the floor.

The P2 class shares one end of the open-air second "building". While the tin roof provides shade and protection from gently falling rain, it does little when the wind blows sheets of rain onto the unprotected children. On this day with temperatures in excess of 90F and little wind, the open air classroom is actually more pleasant than either the mud walled early childhood building or the brick and wood JSS building, which go to make up the school compound. Still, the observers from the capitol sweat profusely while observing the phenomenon of 7-10 year olds sitting patiently "waiting for teacher". With nothing else to do in the village, perhaps it is not unusual for small children to sit patiently at their desks, but international observers in the group had never seen anything like it.

In the middle of the open classroom building, separated only by a large blackboard from the other children, the P3/4 class also awaits its teacher, who arrives at 10:45, just as the children are returning from their Break. Fifteen minutes are spent by the teacher writing the story of The Little Black Cat on the board. During the long unison reading and recitation session which followed, all students in both classes participate in the same lesson, with no attempt to differentiate those who may have participated in that part of the curriculum the previous year.

Research Question *How hard working, punctual and disciplined are Ghanaian students?*

Mean Score

- 2.02 How hard do your students study? 1) Very hard 2) hard 3) somewhat lazy 4) very lazy
- 2.46 What % of your pupils are always punctual? 1) 100% 2) 90% 3) 75% 4) 50% 5) 25%
- 2.02 How would you describe the behavior of your students? 1) excellent 2) good 3) neither good nor bad 4) bad 5) very bad

Research Question: What are the class sizes in Ghanaian Basic Education in the current study?

Means and Range

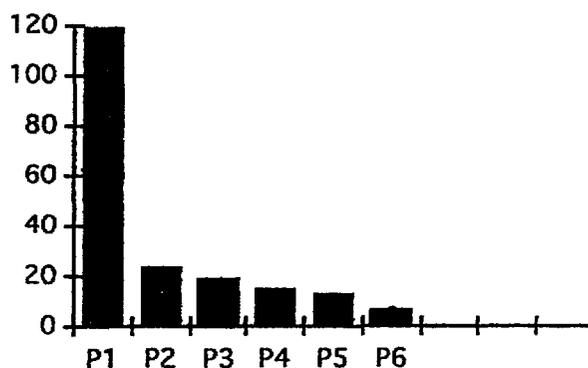
- 15.75 Average Number of Boys enrolled
- 13.87 Average Number of Girls
- 29.62 Mean class size
- 22-196 Range of Class size in the sample

The following table from Northern Zone schools in our sample indicate the dramatic range of class sizes and the pyramidal nature, with staggeringly high enrolments in P1, radically diminished by P6

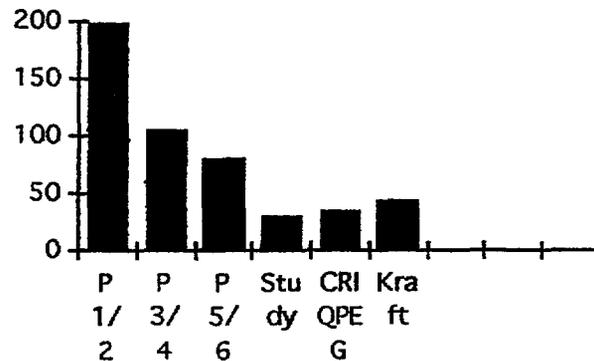
Class Size and Number of Teachers in Four Northern Schools

District	P1	P2	P3	P4	P5	P6
Kanga 4 teachers	119-One Teacher	23-Teacher/ HT	19-Shared Teacher P4	15-Shared Teacher P3	12-Shared Teacher P6	6-Shared Teacher P5
Natugnia 4 teachers	130-Shared Teacher P2	66-Shared Teacher P1	53-Teacher/ HT	52-One Teacher	48-Shared Teacher P6	30-Shared Teacher P5
Sakai 4 teachers	25-One Teacher	26-One Teacher	24-Shared Teacher P4	28-Shared Teacher P3	14-Shared Teacher P6	27-Shared Teacher P5
Wa	61-Two Teachers	64-Two Teachers	62-Two Teachers	55-Two Teachers	56-One Teacher	56-Two Teachers

Educational Enrolments at Primary School in Kanga P1-P6



Comparison Natugna Class Sizes with Overall Sample and Previous Research



Research Question *What effect does class size have on achievement and what are the class sizes in Ghanaian schools?*

Meta-analyses of class size by researchers at the University of Colorado provide strong evidence that class size is not a major determinant of student achievement, when that size is between 20 and 40 students, but that when it falls below 20, achievement can be improved greatly, but at great financial cost. Conversely, when the class size rises above 40, achievement takes a serious downward turn. This is particularly true at the early primary level, where experts recommend no more than 20 students per class. Our research found a mean and median class size of 48 pupils, but with some schools averaging well over 50 or 60 students.

Class size research (Glass and Smith, 1979) is quite persuasive that class size above forty begins to have negative effects on achievement. The six schools in the CRIQPEG study (Yakubu, 1993) in the Cape Coast Region found the following teacher pupil ratios:

- School #1 1 34
- School #2 1 44
- School #3 1 47
- School #4 1 19
- School #5 1 24
- School #6 1 35

Kraft's (1994) research was primarily in Accra, but with an outlying rural school, and also schools in Cape Coast found the following ratios:

- School #1 1 42
- School #2 1 34
- School #3 1 49
- School #4 1:22
- School #5 1 59
- School #6 1 37
- School #7 No class sizes available
- School #8 1 44
- School #9 1 46
- School #10 1 64
- School #11 1 36
- School #12 1 44

The range of class sizes in the Kraft study was from 7 students in P3 in a small rural, three grade primary to 69 in a large urban school with 18 classes in P1-P6. The mean or average class size was 48 and a median size of 48. These two studies appear to coincide with MOE claims of an average class size in the range of forty-five students.

Research Question *What are the repetition, absence, and retention rates in Basic Education*

**Mean #s
per class**

1.1	Number of Boy Repeaters
0.5	Number of Girl Repeaters
2.44	Number of students absent each day on average
0.61	Number of your students retained last year

Research Question. *What is happening as far as family planning education is concerned.*

"Singing the Praises of Popfle on the Frontier"

The beautiful sounds of rural children singing caught my ears, particularly the line that "teachers may go, teachers may come," and I thought how beautiful that children would sing about the Profe, a term I had heard used. It turned out that this along with the Ghanaian National Anthem, were the only songs that children in the community knew, and the song had nothing to do with Profe, but with Population and Family Life Education. Still, the poignancy of "teachers coming and going," but Popfle staying forever, raised some important questions about the staying power of the educational system, to say nothing of how and why this particular song was the only non-political song the children had ever been taught.

**Popfle, Popfle, Popfle, Popfle
Has a long way to go
But has come to stay
Programmes may change
New ones may come
Teachers may go, teachers may come
But the Popfle concept has come to stay
Popfle, Popfle, Popfle, Popfle
Has a long way to go
But has come to stay.**

Chapter Five: Infrastructure: School Data

Interviewer: "What are the men of the village doing?"

Headteacher: "They are rebuilding the thatched roof structure for the JSS3, which collapsed in the rains and winds yesterday, due to the rotting logs."

Teachers, headteachers and community members are unanimous in their placing buildings, furniture, toilets and other infrastructure issues as the top priority. To state that the infrastructure of schooling is in desperate need is to understate the problem. Half of the schools visited, not only had an inadequate building, they had no building whatsoever. In the "Photo Essay" accompanying this report, we have shown mud, tin, grass, fern, tree, and thatched schools, in addition to more conventional block, wood and brick buildings. Furniture was all but nonexistent in many rural schools, and if the children wanted to sit on other than a rock, they had to bring their own furniture from home. We observed hundreds of children, many of whom had had no breakfast, go six hours without a drop of water and nothing to eat. The bushes and trees surrounding many "schools" were a significantly cleaner environment than the disastrous toilets and urinals we photographed. Only in the best private school visited, was there any evidence of meaningful physical activities, sports, playgrounds, music or art. With the exception of a large dirt or grass area, occasionally with a goal or basket, most rural schools have no recreational facilities. Other than the strangely out of place "western" drum, schools were devoid of musical instruments. In the heat of the midday, children started to sleep and lose interest, to the extent that many headteachers just closed school at noon. Some thirty years ago, psychologist Abraham Maslow wrote of a hierarchy of needs, suggesting that until our basic needs, such as food, water and shelter, are met, we have a difficult time concentrating on higher needs. We unanimously concur that it is all but impossible for a hungry, thirsty, tired, hot, ill child to learn. When teachers lack even a chair or table, to say nothing of such "luxuries" as a book shelf or locked cabinet, it is safe to say that the teacher's basic needs have not yet been met, and until they are, it is unlikely that they will have the time or energy to become like the minority of creative, talented teachers who grace so many school settings in Ghana. These outstanding teachers somehow overcome extreme deprivation, but the less superhuman, need their basic needs met if they are to succeed.

- 1 If a source of **drinking water** is not nearby, a bore hole needs to be provided for every school
2. While working within obvious cost, climatic and other limitations, more appropriate school and furniture designs should be developed. Even the best classrooms are dark, dirty, and overcrowded, and the furniture painfully torturous in its comfort level
- 3 A basic recreational package for schools should be developed, including recreational field plans, easily and cheaply built playground equipment, and a kit with balls and games should be provided to each school

- 4 A national policy and standard on the **size, design, materials, quality etc. of school buildings** must be developed, and if there is already such a policy the current one needs enforcement. The current variability in buildings make the phrase "savage inequality" appear to be an understatement.
- 5 Not only are teachers too often without basic furniture in their classrooms, most have no **staff room** to go to "get away from the children," grade papers, or share time with their colleagues. All professionals need and deserve some such space.
- 6 A little known medical fact is that teachers suffer from more kidney ailments than any other profession. If this is true in countries with excellent sanitary facilities it is likely double true in Ghana, where most schools have absolutely abominable sanitary facilities. **Toilets and urinals** are fundamental and must be provided to every school.
- 7 As family and national wealth increases, school lunch programs, partially funded by government subsidies should begin to ensure basic **nutritional meals** for all children, but particularly the poor. The current private canteen system led to countless observations by the research team of poor children looking on while their wealthier classmates bought food and even drinks. This is inequity at the most fundamental level.

Research Question. What are the basic characteristics of Ghanaian schools?

Please fill in the information on each of the following items (Averages)

		(Averages)	
2.4 Km.	1 Distance school is from road (regularly used by motor vehicles)	2	8 Number of latrines
3	1 ms 2. Number of classrooms in school	1 2	9 Number of urinals
51m ²	3 Size of average classroom in m ²	6 6	10 Sports Equipment # of balls etc.
5.7	4 Total number of teachers	0	11 Number of tools in workshops
1 3	5 Number of female teachers		12 Number of typewriters in the school
109	6 Number of students total	1	13 Type of construction (brick, block, wood)
71	7 Number of non-textbooks in library	1	14 Number of sewing machines
	Other tools or machines List	None listed	15 Number of machine tool

Check each of the following which you have in your school. (%YES)

47%	1 First Aid Box	0%	Telephone
63%	2 Storage Room	0%	Typewriter
47%	3 Water source	0%	Motorcycle
58%	4 Good drinking water	5%	Electricity
53%	5 Food vendors	37%	Housing for Head
26%	6 File cabinet	0%	Housing for Staff
42%	7 Library	0%	Copy Machine
95%	8 Parent-teacher organization	0%	Computer
11%	9 Technical Skills Workshop	0%	Home science room
74%	Playing field	89%	School Farm
0%	Typing Classroom	53%	Wash basin

Research Question *What is the average size and range of sizes of the Junior Secondary Schools and the Gender makeup of the institution?*

Average	Range	
110	43-348	Total number of pupils in the school
40	18-123	Number of pupils in JSS 1
22	11-70	Number of boys in JSS 1
36	10-110	Number of pupils in JSS 2
21	2-59	Number of boys in JSS 2
34	10-113	Number of pupils in JSS 3
18	8-57	Number of boys in JSS 3

Research Question *What numbers of JSS 3 students take the examinations and what % passed?*

Subject of Exam	Total # taking the exam	Total # Passing
JSS#	31.4 average take exam	26.9 average passed

Research Question *What are last year's JSS students doing this year?*
(Approximately 300 total)

	# of Male Students	# of Female Students
Academic Sr. Secondary	48	18
Technical Sr. Secondary	13	1
Business Sr Secondary	5	3
Teacher Training	0	0
Repeating JSS 3	0	1
Trading	0	7
Family	23	15
Marned	0	2
Practcing JSS Voc.Skill	4	8
Unknown	76	76

Research Question *What are some indicators of community support of the schools?*

- 100% yes a Do you have a Parent-Teacher Association? Yes/No
 2 4 average b If yes, how many PTA meetings were held during the 1993-94 school year
 1 3 average c How many PTA meetings have been held during the 1994-95 school year?
 51 Av (0-200) e How many parents attended the last PTA meeting?
 53% yes f Does the PTA purchase things for the school Yes/No
 58% yes i Do parents visit the classrooms of their children? Yes/No
 25 Av (0-300) j If yes, how many parents have visited the school this year?

Research Question *How well do headteachers manage basic information on the school?*

- 100% yes a Do you keep daily student attendance records? Yes/No
 100% yes b. Do you keep daily teacher attendance records? Yes/No
 100% yes c Do you have an inventory of school materials? Yes/No
 % yes d Do you keep an accounts books? Yes/No
 100% yes e Do you conduct regular staff meetings? Yes/No
 5.7 Average f How many times a year do you have a staff meetings?

Chapter Six: Curriculum and Instruction

“Now copy what I have written on the chalkboard into your exercise books.” Observed in all 60 classrooms that were part of this study

The quality of teaching in Ghana, as in all countries, ranges from exceptionally good to extremely poor. The curriculum from P1-JSS3 is still crowded, and the time schedule overloaded with courses. Textbooks, while on average, are available to most students, the team found schools with almost none available, and an almost uniform lack of knowledge on the part of teacher on how to use the books which were too often locked up in the Headteacher’s cabinet. Instructional materials were lacking in all but the best schools visited, and supplemental reading books in English and Ghanaian languages were minimal, and seldom read in most settings. Classroom pedagogy was dominated by the teachers copying from the syllabus or the textbook onto the chalkboard, the students copying the materials, words, or numbers into their exercise books, followed by rote response questions on that material. This approach was a rational response in an era of no books, but is now highly counterproductive. One hundred percent of the classrooms observed used the same outdated pedagogy, although some teachers were more adept at it than others. Almost never were children read to or observed reading to themselves or their peers. Vocational and technical skills were almost non-existent in any of the primary or JS schools visited. The ubiquitous “board and T square” gave the appearance of skill training, but even the questionable skills from this course were limited by the inability of many rural children to obtain these basic tools. Basket making and block making were the only two skills actually observed. Technical, vocational and agricultural skills are still severely lacking in almost all schools. Children are thus completing primary and JSS predominantly illiterate and unskilled. Only one set of tools was found in any school, and most of these were never used. We never observed “meaningful” agricultural education being conducted. Children were occasionally chopping at grass, pretending to hoe the ground, or collecting wood for the headteacher, but nothing that could really be called learning to improve your farm was observed. Perhaps the major concern of our study group is the overwhelming emphasis on teaching and not on learning. Too many teachers teach with little or no apparent understanding of how, why or what their children might be learning.

- 1) **Multigrade classrooms** are a special challenge for many rural teachers and they need special training in this difficult task.
- 2) Now that **textbooks** are available in most settings, teachers need “hand’s on” training on how and how not to make best use of them. We would reiterate the importance of guaranteed distribution of texts, so that all schools have them. The current dominant pedagogy was perhaps appropriate when no instructional materials were available, but now puts a major drag on achievement levels of students, to say nothing of its inherently boring nature. Finally, the quality of the content, to say nothing of the printing and binding, could be improved to make them better learning tools. Textbooks are to be used, and if they are lost or destroyed, that is the price all nations

Research Question. *What methods of teaching are used to teach science at the JSS level?*

**“Vegetative Propagation or Children Vegetating in Farmingtown?
JSS 1 Science Class**

Thirty-two children sit at tiny benches and tables which they have brought from home. Of the original 15, bought for the school some five years ago, only 8 benches and tables are left, the rest having been stolen or destroyed. With no walls and only a thatched roof, it is impossible to fully protect the few possessions of the school. The observer from Accra sits on a bench, kindly raised up onto blocks so that he won't feel so uncomfortable. During the lecture, one of the blocks slips and to laughter of the children, but also with their grave concern, he falls into the soft dirt and sand that make up the floor of the classroom. With as much dignity as he can muster, he returns to listen to the rest of the lecture on Vegetative Propagation. In one hour, the teacher attempts to cover most of the plant biology of the region.

The lecture begins with great promise as the teacher shows students a range of plants that he has pulled from nearby fields, and asks them to identify them. It rapidly disintegrates into a frantic attempt to cover every plant known to that region of the country, with the teacher's categories of “runners, cutting, leaves, corn, Rhizome, maize, and shallot” being listed on one side of the board and plants, including “sweet potato, partulaca, plantain, hibiscus, cocoayam, seed, head, and bulb” listed opposite. In barely intelligible English, the teacher gives a spirited presentation, with the children sitting quietly attempting to understand the words, and memorize the words on the board. Unlike many other classes they were told that they should “not take any notes,” just “listen and memorize what I say and what I write on the board.” The lecture is regularly interspersed with questions and statements such as, “What do we plant before maize?” “Do you understand what I am saying?” “What is Bryophillum?” “Do you get what I am trying to say?” and “We want to be very fast, so let's get on to ”

Research Question *How do the hours of instruction in Ghana compare with those of other countries?*

**Average Annual Hours of National (Official) Language Instruction in 110
countries by GNP Per Capita**

(Kraft, 1994)

(Ghanaian figures are based on 40, 1/2 class periods, for either 36 or 40 weeks, and on English Literacy alone and combined with Ghanaian Language Study)

GNP per capita	Total	HOURS		Numeracy
		All Literacy	English	
Low Income	870	322	0-322	157
Lower Middle Income	862	293	0-293	147
Upper Middle	896	323	0-323	161
High	914	311	0-311	174
Ghana	720-1000	180	120	120

Research Question How do the Ghanaian curriculum coverage compare with that found in other countries?

Percent of Curriculum devoted to 10 major content areas and GNP per capita in the 1980s

(Benavot and Kamens (1989) Ghanaian Primary Timetable; Kraft, 1994)
(Ghanaian Figures are for P6)

Curriculum Content	Ghana	GNP per Capita Level			
		Low	Lower Middle	Upper Middle	High
Language	25%	37%	34%	36%	34%
Ghanaian	(10)				
English	(15)				
Math	15	18	17	18	19
Science	10	7	9	8	6
Social Studies	10	8	10	9	9
Moral		5	6	4	5
Music and Art (cult.st.)	12.5	9	8	11	13
Physical Education	5	7	6	7	9
Hygiene		1	2	2	1
Vocational Subjects		6	7	3	1
Agriculture	10				
Life Skills	12.5				
Other		3	3	2	3
Total	100%	100%	100%	100%	100%

Recommendation

The current schedule for primary schools calls for only 15% of the time given over to English and 10% to Ghanaian languages, and 15% to Mathematics. Most other nations have closer to 40 or 50% of the time (in the early grades) for the national language and 20% in Mathematics. With almost all Ghanaian children being second language learners of English, it is close to impossible to learn to read, write and communicate effectively in that minimal time given to the subject. Research from other countries indicates that only 1/4 of the time in school is actual "academic learning time". Research in Ghana indicates that due to tardiness, student and teacher absences, lack of instructional materials and a range of interruptions, the actual time given over to English and mathematics is even more severely limited.

Research Question How available are textbooks in Ghanaian Primary Schools?

The average number of copies of JSS textbooks for each subject and range

Subject	Average # of Copies of texts	Range of # of Texts
Average # Students	110	
English	78	0-350
Social Studies	102	0-400
Maths	116	0-410
Science	120	0-402
Cultural Studies	109	0-368
Physical Education	0	0-0
Technical Drawing	11	0-80
Technical Skills	58	0-180
Ghanaian Lang.	65	0-210
Agricultural Sc	109	0-372
French	0 2	0-2
Other Vocational	5	0-44

The MOE and USAID claim to have printed and distributed enough textbooks for about 60-70% of the current primary students. Findings from a 1994 study by one of the team members in Accra and Cape Coast indicate that this figure is approximately correct, but that the percentages are misleading, as one school had no textbooks whatsoever, while others had almost two books per pupil.

Availability of Textbooks in Ghana
(Kraft, 1994)

Subject	Average Availability	Range
Mathematics	80	0-2 86
English	69	0-1 90
Science	73	0-1 66
Social Studies	33	0-0 75 8 of 12 schools with 0 social studies books

Recommendation

In the short term, a tighter management and distribution system needs to be in place to assure that every child has each of the textbooks by 1995 as planned. The current range of school coverage is from 0% textbooks to 130%. As soon as possible, textbooks must also be made available for purchase, so that parents, teachers and schools that want to obtain copies can do so easily. As soon as is feasible, extra books should be printed for sale to the public, so that children can

have access to materials to do homework. An additional point made by Head Teachers is the importance of having one book for every child, so that there is greater accountability for loss or damage to books and so that children can take their own books home. There is currently no provision in most Ghanaian schools for children who are "below grade level" in their performance. Each classroom should be provided with multiple (2-5) copies of each previous years textbooks in both mathematics and English

Research Question: What is the quality of the current textbooks, particularly those in English and mathematics?

The questions which follow are based on Lewy's work for UNESCO (1977) on evaluating curriculum, on a range of instruments used by textbook analysts in the United States, and on a review of textbook research by Capper and Hensen (1994). It is obvious that some of the questions, such as readability, clarity and age appropriateness are more important than others, but the rating of Ghanaian texts on fifty dimensions should provide the reader with a comprehensive overview of their suitability for the schools at this time in the country's history. It was hoped to be able to have teachers, head teachers, and other administrators in the system rate the books, but since this is the first year of use for many teachers in our sample, several sample schools had very few or no textbooks, and because the teachers have had no other books with which to compare the current texts, it was decided to do an expert rating only. Ultimately all ratings have a high level of subjectivity and are based on a particular educational philosophy, but ratings and comments are an attempt to bring to best, current international thinking to bear on the Ghanaian books. Explicit details and suggestions are made in the chapters on Mathematics and English.

Rating scheme for the Mathematics, English and Other Textbooks						
1	2	3	4	5	6	7
Not at all			To a moderate extent		To a great deal	

Rating Question

2 Overall Rating of English, Mathematics and other Textbooks on a scale of 1-7, a judged on the following research based criteria

4 1 To what extent are the textbooks aligned or easily connected to the syllabi?

The English syllabus is split into three sections oral work, reading and writing/composition. This makes it very difficult for the teacher to align these three areas with each other and with the textbook. The detailed chapter on English, indicates in a Table/Chart format the various topics from the syllabus and how they relate to the textbooks at each level. The Mathematics syllabus is closely tied to the syllabus.

7 2 To what extent are the textbooks aligned with the teacher's handbooks?

The teacher's handbooks in both mathematics and English were obviously written with the textbooks clearly in mind, as the vocabulary practice, exercises and other suggestions are directly tied to each unit.

3 **3. What is the quality of writing?**

Like most primary readers, the words and sentences in the English texts tend to be "simple" enough for the children to understand. Regrettably, the stories are not very interesting, very didactic in nature, often on topics of little interest to that age student, and use very few rhymes or other literary devices to make them appealing. Other than the first year textbook in mathematics which contains pictures, the vast majority of the rest of the texts are given over to computation and symbolic abstractions, rather than to problem solving word problems.

1 **4. Are students capable of understanding the words?**

Ghanaian students evidence great linguistic capability by often being capable of mastering two or three native languages. If English were presented differently, they would certainly be capable of "understanding." Given the current textbooks, pedagogy, and lack of English language ability of most primary teachers, however, the vast majority of children are destined for failure. In our study, most P4-P6 students could read the words phonetically, but only one of 30 students tested could explain the meaning of the words (Kraft, 1994). Recent CRIQPEG (1994) research found that even P6 students could write only a handful of English words, nowhere near the approximately 2400 words found in the P6 readers. The CRT results (Sandman, 1992) reported average English scores of 26.7%, hardly better than chance, and only 2% are performing at grade level, further indication that few Ghanaian students are actually learning to read, write, speak and understand English.

Ghanaian linguists and mathematicians have begun to study mathematical concepts in several native languages and suggest that most Ghanaian languages are not precise, nor is it easy to express mathematical concepts in them. This immediately puts Ghanaian children at a major disadvantage, because they must begin the study of much of mathematics in a language other than their native tongue. It is likely that this is a partial, and perhaps major, explanation for the extremely low levels of mathematics achievement found on the CRT.

1 **5. Is the vocabulary age appropriate in the Ghanaian context?**

For the reasons given above, the current English textbooks are totally inadequate in the second/third language Ghanaian context. Unless linguists and mathematicians can collaborate on the creation of Ghanaian language mathematics texts, or there is massive improvement in English teaching and learning, only a small minority of Ghanaian children will be able to succeed in mastering difficult, abstract mathematical concepts in English. It is likely that large numbers of mathematically talented Ghanaian children are being lost to the system because of language ability, rather than inability in mathematics itself.

1 **6. Do the textbooks meet the stated objectives for the overall curriculum and help students achieve those objectives?**

Regrettably, there are no stated objectives in the English textbooks, syllabi or teachers handbooks, but most of the implied objectives appear to be appropriate for first language learners, but not for second and third language Ghanaian children.

In mathematics, the general objectives are having the ability to use math in daily affairs, reasoning logically, selecting and applying criteria for classification, understanding the process of measuring, developing an appreciation of the systems and instruments of measurement, developing the basic ideas of quality, quantitative relationship and numbers, and be able to apply them, acquiring knowledge of mathematical terms and symbols and be able to think and communicate, using these terms and symbols clearly and correctly, and developing an appropriate, dynamic, and systematic way of solving problems with some definite goals. Given the near total emphasis on computation and algorithms in Ghanaian mathematics classes, it would appear that few of the general objectives are being met, and that the textbooks contribute little to these broader goals.

2 7. Do the concepts taught match what is the current best thinking by current international standards?

No The English chapter indicates the numerous ways in which the current textbooks have little to do with good first or second language instruction, as we now understand it in the late twentieth century Whereas the look and say or phonic approaches have and continue to serve some children in learning to read and write, language experts now suggest that a Whole Language approach, utilizing the previous methods when appropriate, is a more successful strategy for a range of reasons outlined in the English chapter

The mathematics chapter details the National Council of Teachers of Mathematics standards which have now been adopted all across the world and the Ghanaian texts still tend to emphasize a range of topics now being suggested for postponement of decreased attention While a great deal of time is spent on reading, writing and ordering numbers symbolically, NCTM suggests more emphasis on number sense, place-value concepts, meaning of fractions and decimals, and the estimation of quantities Whereas the Ghanaian books, curriculum and practice emphasize paper and pencil computations, new standards emphasize the meaning of operations and operation sense, using mental computation and calculators New standards emphasize the selection of an appropriate computational method and estimation and the reasonableness of answers, more than addition and subtraction without renaming, isolated treatment of division facts, long division without remainders and other paper-and-pencil computations Whereas the study of geometry has tended to focus on naming geometric figures, new standards emphasize the properties of geometric figures, geometric relationships, and spatial sense Rather than the memorization of equivalencies between units of measurement, mathematics educators now seek to deal with the process of measuring, carrying out actual measuring, and estimating measurements Whereas mathematics has traditionally been a "stand alone" subject matter, newer thinking seeks to tie it into other subjects in the curriculum

Probability and statistics are only a very minor part of the Ghanaian curriculum and then only at the upper grades, whereas NCTM and other standards suggest these are fundamental and need to be explored from the earliest grades Pattern recognition, word problems, problem solving, manipulative materials, cooperative work, discussion, questioning, and writing about mathematics are being increased throughout the world, while rote practice and memorization, one answer and one method, written practice and teaching by telling still dominate the teaching of primary mathematics in Ghana

1 8 To what extent do they meet the varying needs of slow, average and gifted students?

The textbooks appear to be currently useful for only the very best students, likely those who come from English speaking families The vast majority of Ghanaian children could be capable of becoming good readers, writers, and speakers of English, or good mathematicians, if different materials and approaches were used Good textbooks provide for a broad range of abilities Ghanaian texts make no provisions, whatsoever, but appear to pretend that all children have the same ability to master English or can learn abstract mathematical concepts with little relationship to the "real" world

7 9. Are concepts and ideas factual and presently accurately?

Since this writer makes no claims to knowledge of Ghanaian history, culture and daily life, one must believe that the material presented in the English texts is factual and accurate The mathematics books, while deficient for all the reasons listed above and in the special chapter, appears to be solid factually and presented accurately

2 10. Do the materials promote self-directed learning?

While theoretically, students could read the stories, answer the end of unit questions, and do the exercises, we never observed this being done, and the CRIQPEG (1993) research indicates that almost all learning in Ghanaian primary schools is teacher directed. This is not necessarily the fault of the textbooks per se, but the limited number of readings (usually one per unit) and the type of questions and exercises at the end of the unit, tend to promote teacher-centered teaching.

2 11. Do they promote cooperative or group learning?

Once again, it is not necessarily the fault of the textbooks that little or no cooperative or group learning goes on in Ghanaian classrooms, but neither the textbooks nor the teacher's handbooks give many suggestions on how children might work together, and in our observation of classrooms in twelve schools, we saw only one case in which children appeared to be working in a group. Unless mathematics is seen in its broader societal context and related to the real worlds of children and their communities, it is unlikely that teachers will find ways to involve students in joint, cooperative, group learning approaches.

3 12. Are textbooks available and easily used by teachers?

Even though textbooks are now available to a far greater extent than at any time in the past two decades, there are many problems for teachers. As indicated elsewhere in this document, without one book per child there is little accountability for losing or destroying books. A long history of lack of textbooks makes many Head teachers keep them locked up in the office, and therefore difficult for teachers to use. The binding, particularly on those printed 2 or more years ago have tended to break down rapidly, and the books last only a year or two. All the management, supervision and distribution problems have not yet been worked out, so that some schools have a vast excess of textbooks, while others have none or very few. In wealthier schools, parents can and do buy books for their children, but in poorer institutions this is not an option. When there is a lack of storage or a safe, dry place to store the books, teachers are hesitant to use them.

2 13. Are they readily available and usable by students?

For the reasons listed above for teachers, students still appear to have a difficult time having their "own" textbook in each subject. Since the vocabulary levels are well above their ability, and they often lack writing materials (pencil and paper), the textbooks are seldom used to the extent they could or should be. It is critical that children have reading books to take home to practice their limited English and practice math problems if achievement is to be raised.

3 14. Are the textbooks interesting to students of that age?

Some of the stories appear to be appropriate to the interest level of young children, but particularly at the P5 and P6 levels, there are many "stories" that are really just geographic, historical, or environmental descriptions. While these are not inherently bad, and are certainly informative, they are not the type of writing that really hooks students on the desire to read, which is, after all, one of the basic purposes of a language arts textbook.

Even though there are a few story problems scattered throughout the various mathematics texts which attempt to tie abstract mathematical concepts and symbols to their lives, it appears that students neither have the grounding in mathematical understanding nor its relationship to the real world to be able to do more than manipulate symbols and do very basic computation. The failure of all but a tiny minority of P6 students to master anything above basic computation is one indication that they have probably lost whatever interest they had in this seemingly difficult and incomprehensible subject.

2 **15. Does the approach promote creativity, discovery learning and problem solving?**

Because of the didactic manner in which the stories and end of chapter activities are presented, teachers and students are not encouraged to "go beyond" the text, or to exercise much in the way of creative problem-solving. In other words, the texts appear to reinforce the traditional recitation and memorization approach to learning.

1 **16. Are they developmentally appropriate?**

For native speakers of English, the texts, while not the best in the world, are generally in line with what children should know at a given level of development. For second language learners, particularly ones who have never mastered reading and writing in their native language, the English texts are totally inappropriate.

The mathematics texts also suffer from the same problem, in that they are generally appropriate for native speakers, particularly ones with a good grounding in number sense, shapes, and patterns from playing with manipulatives or from learning at home or from television. Since few Ghanaian children have these opportunities or advantages, the current mathematics texts are not developmentally appropriate.

2 **17. Do they promote conceptual understanding as opposed to memorization of facts?**

No. While reading texts generally do not have as much conceptual writing as good social studies or science textbooks, there are many ways in which stories can be used to promote conceptual understanding of family life, cultural values, democratic behaviors, scientific understanding and other conceptual, abstract ideas. While some of these are embedded in some of the stories, neither the end of story questions and activities nor the teachers' handbooks promote this type of understanding, and classroom pedagogy reinforces the memorization approach.

3 **18. Are the exercises and end of chapter activities helpful to the learning process?**

Now that teachers and students have more access to textbooks than in the past, it is hoped that students will be able to use and be capable of using the texts themselves or in groups to answer the questions and do the activities. We have not yet observed this happening, but while not terribly creative as a pedagogy, it is preferable the current dominance of copying words, phrases and text off the board, with little or no understanding.

3 **19. Is there an appropriate variety of drawings, photos, graphs, tables and other illustrations?**

The drawings and photographs currently in the English textbooks are quite adequate, generally well done, and appropriate to the Ghanaian context. The reason for the lower rating on this dimension is their lack of appeal to small children. Illustrations in good children's literature are filled with color, mythical and magical figures, and help the children to develop and use their imaginations. Almost all the illustrations in the Ghanaian English texts are literal drawings or photographs, and leave nothing to the imagination or creativity of the child.

The mathematics texts have a fairly good variety of illustrations, but without block, rods, balances and other manipulatives, a plane, two dimensional drawing is insufficient to provide the mathematical grounding needed for success in the discipline.

4 **20. Are they graphically appealing to students?**

Since Ghanaian children have little access to printed material, other than the textbooks, one cannot be too over critical of the graphic standards. In addition, cost factors make quality graphics probably beyond the reach of the budget.

3 21. Is the print of appropriate size and readable for students of a given age group?

Given the cost of printing, there are no doubt limitations on what can be done, but primary children generally need contact with much larger print than is currently found in the P1-P3 textbooks. Until English letters and words are clearly imprinted and children are capable of recognizing and writing them, most textbooks provide for much larger print than is currently found in the Ghanaian books. "Big Books" with huge print, number lines, posters, alphabets with large letters and other such things can help to alleviate some of the problem with smaller print size in textbooks.

2 22. Do they encourage a range of teaching styles?

As with many of the comments in previous sections, it appears that the read, memorize and recite approach to teaching is promoted by the current textbooks, although nowhere is that explicitly stated.

4 23. Are they aligned with the books for earlier and later grades?

The books do a generally good job of providing the necessary vocabulary or computational skills to move on to the next level of text. However, this is dependent upon teachers finishing each of the textbooks and the students mastering the content in each before moving on. The overwhelming evidence from Kraft (1994) and CRIQPEG (1993) is that many teachers do not complete the texts or syllabus for a given year, and there is little or no assessment each year to find out what students remember from the previous year. Teachers in the next grade start with the new book, regardless of whether students have mastered the previous, often essential, skills. The results of the CRT indicate that by P6 a large majority of Ghanaian children are hopelessly lost. Without more age appropriate books, better pre and post evaluation of students, and better supervision of teachers in the teaching and coverage, the careful alignment of the curriculum becomes nearly meaningless.

4 24. Do the books provide a wide range of concrete as opposed to abstract examples?

If we mean by concrete examples from everyday life then the Ghanaian texts have done an adequate job of making presentation. Teachers, however, do not appear to try to tie the readers much into the lives of the children, but rather appear to have students copy letters, words and phrases off the board with little connection to how their lives outside of school might be related to what they are reading. In other words, there is not a lot of effort to promote genuine understanding.

As stated earlier, manipulatives are essential to a solid grounding in mathematics, and we never observed these anywhere in Ghana. While they no doubt exist in a few private or wealthier public schools, mathematics remains a hopelessly abstract set of ideas and concepts for most children.

5 25. Are they sensitive to the cultural setting of Ghana?

Both the English and mathematics books attempt to tie Ghana history, culture, and everyday life into the stories, word problems, and activities. Regrettably, it is done in English, which is a second, third or fourth language for most children, and a foreign, European one at that. This is the fault of no one, but it does make it much more difficult to be a culturally sensitive, as language and culture can never be truly separated.

6 26. Are they sensitive to the range of ethnic and tribal groups?

While a few stories in the English readers deal with different tribal groups, there is not much in the way of actual knowledge of language, culture and history of the various groups. No examples were found of insensitivity or of putting other groups down, but all the texts could perhaps do more to promote interethnic, intertribal understanding in a society as complex as Ghana.

- 5 **27. Do they use a variety of organizational signaling techniques to facilitate student learning e.g. paragraphing, headings, levels of subordination and type sizes, headings and subheading in a logical, hierarchical relationship?**
 The textbooks are comparatively limited in scope, when compared to texts in many other countries. When there is only one short story, there is generally not as much need for a range of signaling techniques. By the P6 level, however, when stories and narratives are getting longer, the text material could profitably be broken up with subheadings to promote better learning of the information.
- 3 **28. Is there a high interest level and a range of "seductive" topics or personally involving information for children?**
 This was somewhat dealt with earlier, and again I would reiterate that the stories, while factual and having some illustrations, are generally boring, not easily read, and have few "seductive" topics. It is hoped that a planned "folktale" workshop, will help to fill in the gap in both Ghanaian and English for Ghanaian stories that have genuine appeal to each age group of children.
- 7 **29. Are there typographical and spelling errors in the book?**
 Very few could be found in my review of the textbooks.
- 7 **30. Are there errors of fact?**
 None that were apparent. The "errors" are more errors of omission rather than commission.
- 2 **31. Is there a nice conversational tone and style?**
 No. While some educators would suggest that textbooks should be blunt and factual, rather than conversational or informal in tone, there is general agreement, that particularly at the lower grades, children do not like, want, or need to be preached at or be overloaded with facts.
- 2 **32. Is there vocabulary assistance for the teachers and pupils?**
 There is little or no help on vocabulary, except as the teacher might be able and willing to supply it. While a large majority of words on the vocabulary list are nouns and quite recognizable to native English speakers, there is strong evidence that many primary teachers, particularly in the rural areas, have a very limited command of English, and not only mispronounce words, but a limited knowledge of their meanings.
 In mathematics, teachers are often found trying to explain abstract conceptions in languages for which there are no precise words. To our knowledge there are few, if any native language dictionaries, which provide precise mathematical words and definitions, much less good bilingual dictionaries which do the same.
- 1 **33. Do the texts contain advance organizers to facilitate learning?**
 No examples of such were found in either the handbook or the textbooks. Generally the teachers and pupils jump into a topic with little or no preparation.
- 6 **34. Is there gender sensitivity?**
 No attempt was made to count the number of stories, photographs or drawings with males or females in them. The texts do appear to put men and women into their traditional gender roles in Ghanaian society, but it does not appear to be discriminatory or sexist in any way. On the other hand, the textbooks do not go out of their way to break down traditional gender roles by promoting girls in mathematics and the sciences, or women in traditionally male roles.

- 6 **35. Is there careful consideration of word choice and word order, particularly in mathematics story problems?**
While a few mathematics story problems appear to be a bit convoluted and some of the stories in the English readers have word patterns that appear a bit strange to American ears and eyes, they are generally within acceptable English patterns of speech and writing, and some are "just the way things are said" in Ghana, and are thus appropriate
- 3 **36. Do they promote retention of both facts and concepts?**
Most of the Primary textbooks are so limited in scope, size and content, perhaps due to cost and second language status, that students appear to be asked to memorize large parts of them. This does not promote problem solving, creativity, and reasoning skills, but does not appear to help or hinder students in the retention of facts. Conceptual understanding, however, is not well dealt with in the texts, and almost all activities, questions and activities in the handbooks, texts and the classroom itself are of a low level processing
- 1 **37. Are both process and product goals evident in the books?**
No. The unstated, but apparent approach to knowledge, is that of learning information and skills, with little help for either teachers or students on background information, conceptual understanding, the underlying principles, or the process by which one arrives at an answer
- 3 **38. Do the books relate to life outside the classroom?**
As mentioned earlier, the books do have some stories, and many facts about life in Ghana. It tends to be "adult" life, however, and thus somewhat divorced from the life of a six year old child. The mathematics books rapidly move out of meaningful contact with the economy or the mathematics of living, and into abstract computation and algorithms
- 3 **39. Do they include both expository and narrative text?**
As hinted at earlier, the mathematics texts have little expository text, and not narrative text to speak of. English texts are dominated by expository writing, which is certainly bad in and of itself, but to retain the interest of children, much more narrative writing need to be included
- 3 **40. Do they build on prior knowledge?**
Both the English and mathematics texts do attempt to build on prior knowledge from previous textbooks, at least as far as vocabulary, grammar, and computational skills are concerned. Regrettably, most Ghanaian children have been deprived of the necessary base in either subject prior to attending school to genuinely master these two basic subjects. In addition, many, perhaps most, teachers either don't complete the full text and syllabus for a given year, or move rapidly through it, seldom checking for understanding and mastery. In this way, the large majority of Ghanaian primary children are deprived of a genuine chance to succeed in either subject and are destined for failure
- 2 **41. Do the textbooks actively involve the students?**
Regrettably, a strong dependence on a textbook often inhibits active learning or involvement on the part of students. Texts and handbooks which suggest things to do and explore on the topic outside of class, however, can help students expand their knowledge and understanding of the topics. While there are a few of these in the handbooks, there is little or none of this in the textbooks themselves
- 2 **42. Do they teach the students "how" to think, rather than what to think?**
While learning how to think is a goal of most educational systems of the world, including Ghana, and there are textbooks which promote discovery, inquiry, reasoning and creativity, the textbooks under consideration here do not appear to have that as a major or even minor focus

1 43. Do the books promote “in-depth” learning as opposed to superficial coverage?

This one is hard to answer, as the scope of the books is so limited, that a case could be made that they are attempting to teach for depth. On the other hand large areas of knowledge that are covered in other countries are totally left out, so in a sense one could conclude that there is superficial coverage of a limited number of topics. Given the difficulties with second language learning, this is not necessarily all bad, but it does put most Ghanaian youngsters at a distinct disadvantage when compared to children in other countries.

2 44. Do they promote the student’s affective involvement as opposed to strictly cognitive development?

The texts certainly do not attempt to antagonize students, but on the other hand do not go out of their way to get the students to like or enjoy the subject matter at hand. The approach, style, and content are dominated by facts, memorization, information, and do not attempt to “seduce” the student to discover the joy of learning.

1 45. Is there evidence of the books being successfully utilized in of Ghana?

As has been suggested earlier in this section and in the chapters on English and mathematics, few classrooms are making good use of the textbooks that are now found in the schools. Students are seldom seen reading individually or in groups. Students are seldom permitted to take books home for further study, practice or homework.

2 46. To what extent are the ideas of the students encouraged or permitted by the texts?

The expository, didactic nature of the texts almost precludes the reader arguing with, going beyond, or creatively interacting with the textbooks. This, of course, is in large part due to the classroom pedagogy of the teacher, but the texts themselves encourage passivity and answering questions with low level factual response.

2 47. Do the books promote class discussion?

Nothing really precludes teachers from using the texts to promote class discussion, but the books themselves are filled with topics and approaches to topics that make discussion unlikely. Controversial issues or those with more than one point of view do not appear.

2 48. Are the illustrations appropriately labeled to promote learning?

In direct lessons on vocabulary, items are often labeled, but in both the mathematics and English texts large number of illustrations are included without any labeling, thus missing a proven approach to helping students learn the names of things, people, or other facts.

2 49. Is the content presented clearly?

Clarity is a difficult and subjective thing to judge. The writing is generally clear for a native English speaker, but as has been pointed out here and elsewhere, there is strong evidence that most of the concepts in math, English and the other curricular areas are hopelessly unclear to most Ghanaian primary children.

4 50. Can the books be printed at a reasonable cost?

The current textbooks can obviously be printed at a reasonable cost in Ghana. Whether a more attractive, expanded, revised, set of books could be printed for what the society can and is willing to pay is problematic, and can only be answered if and when the Ministry of Education, the Government of Ghana and outside funding agencies decide that the additional cost is worth the improved learning chances of Ghanaian children.

1 51. Are Supplemental Readers ever used and have children ever written their own texts?

As part of the Whole Language movement throughout the world, many countries are actually abandoning Basal Readers and even all textbooks. They have substituted supplementary books of interest to children and in many schools throughout the world, children are writing their own stories by hand, with the help of teachers and other adults, and when available, using computers.

Recommendation While the quality of the textbook might be considered barely adequate if all students were native speakers of English, they are severely limited for second language learner. In addition, while representing some fairly traditional views of teaching and learning, they do not meet current international standards and are not preparing Ghanaian students to compete in the international world of the 21st century. Plans should be put in place to have new textbooks ready for use, in conjunction with new syllabi and other instructional materials at the earliest date that it is feasible economically and with proper testing to do so.

Research Question: Are supplementary reading materials important to literacy and do such materials exist in Ghanaian primary school?

In our detailed discussions in the English chapter, it is abundantly clear that children cannot learn to read, without wide access to reading material, and the major key to successful literacy, is extensive and intensive reading. Regrettably, we found almost no supplementary reading material in any of the 108 classrooms visited in our study. An occasional child could be found reading from a textbook, and in one school, a locked library contained a few reading books.

**Supplementary Readers in Ghana Schools and Classrooms
(Kraft, 1994)**

Schools	Classrooms	Supplementary Readers
12	108	0

Recommendation

In addition to the school libraries recommended elsewhere, we recommend the development of a large body of interesting, well illustrated children's books in Ghanaian languages, in English, and even in a bilingual format where feasible. Classrooms must be filled with print, if children are to become fully literate. Almost any kind of printed word is better than no printed word in the classroom. Schools could begin collecting old newspapers, magazines, advertisements, and anything else which children could use to come into contact with printed English. These newspapers and other materials could be collected by children in an ecological recycling project or in many countries, newspaper companies donate copies of current or old papers to schools.

Research Question *What is the availability of workbook or exercise books in Ghana and what does research say about their effect on educational achievement?*

As often the only supplemental printed material in the classroom, the workbook or exercise book can be a positive factor in providing children with more practice on mathematics or other problems. When teachers become dependent upon them and fall into a pattern of reading from the textbook and children answering the workbook questions, it can have deadening effect on the learning environment. While we were able to buy copies of workbooks aligned to the textbooks, we saw a total of 7 workbooks among the several thousand students observed. It is likely that many were in desks, but we observed very few in use. Given their cost, it will probably be some time before all children will be able to have workbooks.

Workbook or Exercise Book Availability in Ghana
(Kraft, 1994)

Total Schools	Total Classrooms	Percent of Classrooms with Workbooks	Actual Total of Workbooks seen in Schools
12	108	4 percent	7

Recommendation

Despite the dangers that workbooks have proven to be in some countries, it is our recommendation that as soon as it is financially feasible, workbooks should be provided to children, and that if that is not possible, the MOE should at least provide a master copy to each teacher to use in preparing homework and other assignments for the children.

Research Question *How available are the Teacher's Handbooks?*

Teacher's handbooks are very scarce in most schools and classrooms visited. A few schools had one handbook to share with 2 or 3 teachers, but no school had all the handbooks for all grades, and most teachers had access to no handbooks whatsoever. A few had seen them at workshops, but could not afford to buy them and felt that they should be provided as part of their work as teachers.

Availability of Teacher's Handbooks
(Kraft, 1994)

Subject Area	# of Teachers/ Classrooms	# of Teacher Handbooks	% of Teachers with Handbook
Mathematics	108	10	9.3%
English	108	13	12.0%
Science	108	6	5.6%
Social Studies	108	16	14.9%

Recommendation

While we have critiqued the handbooks at some length in other chapters in this report, they are helpful in giving the teachers at least some help on how to teach a particular lesson. We recommend that every teacher be provided with the appropriate copies of each handbook, as soon as financially feasible.

Research Question *What is the quality of the handbooks and how well aligned are they to the syllabi and textbooks?*

From an alignment standpoint, we found that the handbooks followed the textbooks unit for unit. In fact, one could suggest that they followed them so closely and with such little variation, that they added to the tendency to use only a small variety of teaching strategies in the classroom. Since most teachers had little or no access to the handbooks, one cannot blame them for the current pedagogical approaches, but they are quite traditional, highly repetitive, and tend to force the teacher into one style of teaching in their suggestions to the teachers.

Recommendation

If Ghana goes into a syllabus and textbook revision, the handbooks will obviously have to be redone also, and it is then recommended that a much more detailed set of units, modules, assessment tools, teaching ideas, questioning techniques, worksheets, games, and other materials be included to bring about a true reform in teacher and student classroom behavior. Given the current textbooks, lack of other instructional materials, and the fact that most teachers have had little or no training in other teaching styles, it would be helpful if a supplement for each unit at each grade level could be prepared to help the teachers.

Research Question *Do school libraries exist and if so at what level?*

Only one school had what could be called a school library, that is a room with books. Regrettably, none of the books had been catalogued so were not available to teachers or students. Two other schools had a small cabinet with 10-100 small reading books, but the Head Teachers indicated that neither they, the teachers nor the children used the books.

School Libraries (Kraft, 1994)

Schools	# with Small Collection of Books	# with Library
12	2	1

Recommendation

A minimal school library could be purchased for each primary school in the country, with a carefully selected 100 children's books in national languages, where appropriate or in English. Initially, teachers could use them to read aloud to children, or during school hour children could read silently or out loud to groups. Eventually, PTAs or the government could move towards expanding these libraries so that children could borrow books to read at home.

Chapter Seven: Organization and Administration

Interviewer "Where is the P2/3 teacher?" Teacher "Oh, he never comes on Fridays, so the children come and sit all day " (Rural school in south)

Interviewer "Where are the students? Isn't this a school day?" Teacher "Yes, but they are all away on a sports festival today and tomorrow " (School in Ashante)

The headteacher had to ride 24 kilometers on his bicycle to pick up two registration books from the district office. After hours of riding the unpaved roads, he finally got them, but on his way home, the district supervisor drove up in his car to tell him he only needed one of them and took one back. (School in the north)

The research team found a wide array of challenges to the organization and administration of Ghanaian schools. The headteacher's manual produced in 1994 was found in the "offices" of several headteachers, and most of them were very consistent in keeping official records on finances, textbooks, attendance, and other matters. Supervision of teachers, however, appeared to be a major area of weakness, as many did not visit classes or offer real instructional leadership. In addition, there was an all too pervasive atmosphere of not assuring regular teacher and pupil attendance. This varied widely with a few schools running very "tight" ships, while others started late, ended early, and had high teacher and pupil absences. Although teachers and headteachers nearly unanimously denied it, parents, children and our own observations confirm that children are being used to collect wood for the teachers, work on their farms, and do a range of tasks in their homes.

- 1) National policies on total number of school hours should be passed, with local flexibility on length of school day, days per week, and related factors should be enforced to ensure that students receive a full 180 days, 1080 hours of school per year. The school year could be made flexible to accommodate different growing seasons and other things, but it is important that all children receive a full year of education. Some schools in other countries, particularly those in rural areas where children have experimented with a four day school weeks, with resulting higher student and teacher attendance and even slightly improved achievement.
- 2) **Headteachers** who have to teach classes in addition to their **administrative responsibilities** are greatly overloaded, often having to leave their own classes to take attend meetings, cover for absent teachers, supervise other teachers, and work with their communities.
- 3) Policies at the national, regional and district levels should be put in place to control **class size**. It is particularly critical to have small P1-3 classes, rather than teachers in those classes facing the largest classes.

- 4) Variations in the length of the school day should be considered, particularly for small children. Without breakfast, water, canteen or feeding, many children have a near impossible time learning after 11 a.m.
- 5) **Automatic promotion and retention** both have been proven to be of little value. Without meaningful **remediation programs** in place to help children who have not learned previous material, the majority of Ghanaian children will continue to fail to master the basic skills and remain functionally illiterate.
- 6) **Continuous assessment and examinations** are issues facing Ghana as in every other country, and it was obvious to the team that the current teachers still need extensive training and help in how to go about assessing students in their classrooms.
- 7) The case of the JSS is a special one. Too many of them in rural areas had only 3-6 teachers to cover the whole **curriculum**, and thus many courses were never offered, or given in a manner making it nearly impossible for students to pass the examinations. This must be confronted if quality is to be improved.
- 8) Strict policies and monitoring on the improper use of school children to do **private work for teachers and headteachers** must be put in place.
- 9) While we have mixed emotions about advocating strict adherence to a timetable about which we have many questions, it was obvious to us that Ghanaian children receive radically different amounts of education. It appears to be at the whim of the teacher as to whether the timetable is followed and we found countless incidents in which 30 minute classes went for two hours and many parts of the timetable were skipped altogether.

Research Question Do schools function a full school day, week and year? If not what are some of the reasons for their failure to do so?

"Rained Out in Frontierville"

The JSS2 class is sitting quietly under the thick spreading tree, due to the fact that their building blew down in the big wind and rain storm last week. No one was hurt, but what little shelter these children had from the elements had been taken from them. Community members were digging new post holes and putting up new cross beams, at their old classroom, to replace those that had rotted out over the past few years. Shortly before noon, the wind and rain came down in torrents, with the JSS children all taking shelter under the JSS3 thatched roof "classroom". The primary children were on break, when the clouds rolled in ominously, so a quick closing prayer was said, perhaps to the rain gods, and the children who lived in nearby Frontierville ran home, missing the final two hours of class.

The storm blew over within a half hour, but by then the few children who remained were sitting quietly in their thatched classrooms, surrounded by a sea of mud and water. The officials from Accra had retreated to their four-wheel drive vehicle to attempt to extricate themselves from the morass. On finally making it back onto the main road, it appeared that most of the villages had sent their children home at the appearance of the wind and rain, effectively cutting the school day by one-third.

Research Question: *How does Ghana compare to other countries in length of school year, and how does time affect achievement?*

A large body of research has begun to lead to an international consensus that school days and school years need to be lengthened in many countries of the world. The research is also quite strong, however, that it is not sufficient to just add hours or days, unless that time is spent in actual learning time.

Length of school year in hours/year in selected countries

(World Bank, 1993)

Country	1st year	6th year
Benin	1 080	1 080
Burkina Faso	1 290	1 290
Cameroon	1 024	1 024
Congo	900	900
Ethiopia	1 230	1 230
Ghana	800	800
Nigeria A	1 128	1 128
Nigeria B	666	666
Japan	1 440	1 440
USA	1 080	1 080

Use of Time in Schools

(Fisher, Berliner et al.)

Estimated Use of Time in a School Day and Year	Hour/ Day	Hours/ Year
Academic Learning Time	6-15	108-270
Engaged Time	1.5-3.5	270-430
Instructional Time	2-4	360-720
Allocated Time	4.75	855
Attendance Time	5.4-6.0	970
Total Available Time	6.0	1080

Recommendation

As the many detailed discussions in the main text indicate, there is strong evidence that not only do Ghanaian children spend less time in school than many other nations, but that the actual "academic learning time" is in the area of 2-3 hours a day maximum. Only through careful controls, monitoring, management, and a tightening up of the rules and regulations concerning absences, tardiness, and the lax administration of many schools, will the children have the same chance at an education that other countries give their children.

Research Question *What is the current timetable and how does it compare to those of other countries?*

While the timetable below gives 1994 estimates, the research team found that in almost every school visited, the posted, written timetable had little, if any, connection to what actually was offered in the schools. The three tables which follow are somewhat self-explanatory, but indicate, even with the recent move to combine many of the primary subjects that Ghana gives a significantly different proportion of its schedule to the basics of literacy and numeracy.

**Primary School Timetable and Allocation of Periods to Subjects Per Week in
Ghana**

Subject	30 minute Periods Per Week
Agriculture	3 in P1-P2, 4 in P3-P6
Cultural Studies	5 in P1-P6
Science	3 in P1, 4 in P2-P6
English	7 in P1-P2, 6 in P3-P4
Ghanaian Languages	4 in P1-P6
Life Skills	6 in P1-P2, 5 in P3-P6
Mathematics	7 in P1, 6 in P2-6
Physical Education	2 in P1-P6
Social Studies	3 in P1-P2, 4 in P3-P6
Totals	40 periods per week, with 35 in afternoon shifts

Chapter Eight: Language

"You are welcome Yes, Please No Sir "	
JSS 3 Interview with Eleven students	
(I=Interviewer, S=Students)	
I	"Do you like school?"
S	"Yes, Please "
I	"Why do you like school?"
S	No response-blank look.
I	"What is your favorite subject?"
S	"Yes, Please "
I	"Do you come to school everyday?"
S:	"Yes, Please "
I	"Are you often absent from school?"
S:	"Yes, Please "
I	"What do you want to be when you grow up?"
S	No response-blank look.
I	"Do you want to be lawyers, doctors or engineers?"
S:	"I want to be an engineer "
I	"Why do you want to be an engineer?"
S	"Yes, Sir "

The research team is unanimous in its view that language is the fundamental skill needing to be developed, and that the difficulties faced by Ghanaian children in learning to read and write in their native language **and** in English is **the** fundamental problem facing the system today Ghanaian children succeed at developing the informal, basic oral communication skills in their native language and often in two or more Ghanaian languages They obviously suffer from no lack of linguistic ability Research and observation point to the fact, however, that under the current Ghanaian language policy, they do not reach the cognitive threshold necessary for successful transfer to English by P4

Second language acquisition research is very clear Children who go through a lengthy period with the first language as the mode of instruction **and** complete much of their normal academic and cognitive development in that language will have much greater facility when learning the foreign language Few Ghanaian children, however, learn the decontextualized academic skills of reading and writing in their native language, and thus there is little or nothing to transfer over to English You cannot transfer nothing to something It has never been done, and Ghanaian children are suffering from the results of this impossible experiment That some Ghanaian children have mastered the "King's English" is a miracle That the vast majority of Ghanaian children learn to read and write well in neither their native language nor in English is a tragedy It is not their fault! Without changes in policy, pedagogy, and curricular materials, little will change in the foreseeable future

The memorization of the children's rhyme "Hello Brunu How are You? I am fine Thank You!" is cute, but not sufficient mastery of oral English to help children succeed in academic learning, to say nothing of competing in the global market place The vast majority of Ghanaian children are growing up functionally illiterate in both their native language and in English Without a careful review and major reform of the current national language policy, and

changes in the school curriculum, the many other recommendations made in this paper are futile gestures. It does no good to revise the curriculum, and rewrite the textbooks, syllabi and handbooks, if neither the primary teachers nor the students can read them.

Educational reform in this area is difficult, and we offer the following suggestions as the critical reform component

- 1) All children need to develop **fluency in English**. This does not mean that all instruction should be in English, but it does mean that children need to hear, read, and write English much more than is currently the case. **Newspapers, teacher and child written books, old magazines, radio and television program, old textbooks** from the US and England, and countless other means could be used to expand the quantity and quality of English which children hear.
- 2) All children need to develop **fluency in their native language**. This cannot be accomplished with the extremely limited number of books and other materials currently available in the schools. Without a basis of literacy in their native language, no transfer to English is possible. You cannot transfer to something from nothing. **Teacher workshops** could produce books in native languages, elders in the communities could tell the **stories** and these could be written down, and **children should be encouraged to tell and write** their own stories in their native languages. We observed the power of good instruction in native languages. It works when done well with sufficient material.
- 3) **Teacher training** in both native languages and English is absolutely essential. Primary and JSS teacher training should ensure that all graduates are fluent in written and spoken English, and that those who will be teaching P1-3 are fluent in both the native language of the children they are to teach and in English. In-service training of teachers already in the field is also critical.
- 4) Radios, with batteries, could be purchased for each school, in order to provide children with more opportunities to hear English and/or native languages. As the economy permits and electricity is expanded, small tape recorders and eventually television or language laboratories could be planned.

Research Question *What languages are spoken by Ghanaian children in the sample classrooms*

Languages Spoken by Students

Language	Number of Classrooms
1 Fanti	12
2 Twi	24
3 Multiple Languages	8
4 Ewe	36
5 Akan	6
6 Ga	15
7 Nankam	5
8 Issala	8
9 Gurune	3
10 Dagaare	10
11 Wali	3

Research Question *Do Ghanaian children have sufficient contact with spoken and written English to master it by P6?*

As shown in the table below, Ghanaian children, particularly in the rural areas, have only one percent of the contact hours that a child growing up in England or the United States might have. In addition, their teachers often do not speak or use English in their classrooms, and there are few, if any, books in English to read. The results of the CRT, SSS examinations and our own observations provide strong evidence that children do not have sufficient contact with English to gain the skills necessary to learn the rest of the curriculum.

Contact With and Usage of the English Language

(Kraft, 1994)

Contact with English Language in U.S./Canada/Great Britain	Ages 0-6	6-12	Total	Ghana
Television (3 hrs day English TV)	6570 hrs	6570	13,140	0-?
Educational TV (Sesame St etc)	2190	1085	3,275	0-?
Parents Reading to Children (5 each day)	1095	1095	2,190	0-?
Reading on Own in English (10 per day)	2190	2190		0-?
Instruction using English Lang (60)	7020	7020	760-2,400	
English, Lang Arts, Grammar Classes	(360)	(2592)	(2,952)	760)
Speaking/Hearing English- Family and Friends (10 hours Pre-sch. 5 hours P1-6)	21,900	10,950	32,850	0-?
Total Hours Listening, Speaking, Reading, and Writing in English	31,755	28,910	60,665	760-?

Recommendations

Educational Television Teachers and their children must hear and use English to be able to genuinely communicate in the language. Ghanaian Broadcasting Company could investigate the adaptation of Sesame Street and other children's programs from the U S A, Great Britain, Canada or Australia for use in Ghana. Recognizing that most homes do not have a television, preschool

and elementary children from a neighborhood could gather at a local church, school, or government building where a television might currently be located

Interactive Radio Interactive radio has proven to be a major success in Kenya and several other countries in the teaching of English and other languages. One-half hour or one hour of excellent daily language instruction by radio, under the supervision of the classroom teacher, is better than countless hours of instruction by persons with limited abilities in the language. Until all Primary teachers are fully competent in English, alternatives such as radio must be found and used.

Research Question *How well are Ghanaian students mastering basic English literacy and mathematical skills and understanding?*

The CRT results indicate that at least 95% of the P6 students are not achieving mastery of the basic skills in mathematics and English, and the recent SSS examinations found that 95% of the candidates who sat for the senior secondary school certificate examination could not qualify to take the university entrance examination. It is our opinion and that of many Ghanaian experts, that the low achievement in mathematics and other subjects is, in major part, a function of low achievement in English.

English Achievement in Ghana

(Criterion Referenced Tests CRT of P6 Students, 1992)

National Average	Standard Deviation	Sample Size(P6 Students)
29.2% (Scores)	10.03	11,586

Highest Score Gt. Accra Region	34.5%
Lowest Score Central Region	26.5%
Girls Average	29.5%
Boys Average	30.3%
Best Performance-Girls /Gt. Accra Score	34.7%
Best Performance-Boys /Gt. Accra Score	34.3%
Lowest Performance-Girls /Central Region Score	25.8%
Lowest Performance-Boys/Central Region Score	26.9%
Range	0-90
Mode	25.5%

Meeting the Pre-Determined Criterion of	Number of Students	% of
	Who met the Criteria	Sample
60% or Above	228	2.0%
55% or Above	307	3.3%
50% or Above	614	5.3%
40% or Above	1483	12.8%

National Clusters 55% of the scores falling between 20 and 30

Mathematics Achievement in Ghana
(Criterion Referenced Tests CRT, 1992, P6 Students)

National Average	Standard Deviation	No of Participants
Score 27 29%	8 94	11,488

Highest Score	Gt. Accra	30 6%
Lowest Score	Central Region	25 0%
Female Average		25.6%
Male Average		27 5%
Girls Best Performance in Gr	Accra Region	31.1%
Boys Best Performance in Gr	Accra Region	29 9%
Poorest Performance-Girls,	Central Region	23 9%
Poorest Performance-Boys,	Central Region	25 8%
Range of Scores		0-85
Mode		25

Meeting the Pre-Determined Criterion of	Number of Students	% of
	Who Met the Criteria	Sample
55% or Above Score	127	1 1%
50% or Above Score	241	2 1%
40% or Above Score	460	8 1%

Chapter Nine:

Classroom Teaching Behaviors

TIME MANAGEMENT CODING SHEET

Region _____ **District** _____ **School** _____ **Class** _____

Subject Area	Classroom Activities	Language Used by Teacher/If both used give percentage in each
1 Rdg =Reading Eng	1 T=Teacher Presentation	1 E=English
2 W=Writing-Engl	2 R=Recitation by pupils	2 G=Ghanaian Language
3 S=Speaking-Engl	3 D=Discussion by full class	
4 Sc -Science	4 I=Individual student work	On/At-Task Behavior (% of students on task during the lesson)
5 M=Mathematics	5 G=Group work	A=At task (raises hand, maintains eye contact, works on assignment)
6 PE=Physical Education	6 E=Evaluation/ testing	0=Off task (sleeping, playing, whispering, moving around, staring)
7 SS=Social Studies	7 C=Chalkboard work	
8 A=Agriculture	8 CT=Teacher Chalkboard	
9 Cu =Cultural Studies	9 CS=Chalkboard Student	
10 L=Life Skills		
11 Gh=Ghanaian Lang		
12 T=Technical Subjects		

Time of Day	# of Minutes	Subj Code	Act. Code	Lang Code	% on-task	Description of Activity

Classes Observed P1=13, P2=5, P3=10, P4=13, P5=5, P6=17, JSS1-1=10

Minutes of Class Observed. 4385 minutes, 73 minute average observation

Subjects Observed Reading=6, Writing=12, Speaking=4, Science=8, Mathematics=19, Physical Ed =0
 Social Studies=6, Agriculture=0, Cultural Studies 2, Life Skills=5,
 Ghanaian Languages=5, Technical Subjects=2

Classroom Activities Teacher Presentations=49, Recitation by pupils=30, Discussion by full class=7,
 Individual Student Work=19, Group Work=4, Evaluation/Testing=4,
 Chalkboard by Teacher or Student=21

Language Used In Class English=35, Ghanaian Language=8, Both Languages=17

Questioning of Males/Females Majority of Questions to Males=25, to Females=15, Even or not observed=20

At-Task Behavior 76% of Time

USE OF MATERIALS BY TEACHERS AND STUDENT

Region _____ District _____ School _____ Class _____

Directions In each box briefly note the amount time, the subject and how the materials are used by the teacher and the students Then use the code at the bottom of the page to describe the presence, appropriateness and effectiveness Note on back any materials in room not used.

MATERIALS	Lesson #1 Time/Subject/Use	Lesson #2-Time/Subject/Use	Lesson #3-Time/Subject/Use	Lesson #4-Time/Subject/Use
Teacher Uses Chalkboard	#classes utilizing 60 of 60 classes=100%			
Students Use Chalkboard	21 of 60=35%			
Teacher Uses Textbooks	13 of 60=22%			
Students Use Textbooks	11 of 60=18%			
Teacher Uses Teacher Guide	0 of 60=0 0%			
Students Use Exercise Bk	24 of 60=40%			
Teacher Uses Other Books	3 of 60=5%			
StudentsUse Other Books				
Teacher Uses Subjec-specific Equipment	4 of 60=6%			
Students use Subjec-specific Equipment	4 of 60=6%			
Teacher Uses LocalMaterial	9 of 60=15%			
Students Use LocalMaterial	7 of 60=12%			

*=Note which materials are possessed, even if not used by the teacher and/ or the student by putting a star in the box

A=Write an A in each box in which the material used is appropriate, and I= inappropriate use of the materials

E=Write an E in each box in which the instructional technique is effective, and N=Not effective use

EVALUATION OF TEACHING INSTRUMENT

Region _____ **District** _____ **School** _____ **Class** _____

In the Frequency Boxes in the center of the instrument mark a 1 each time the teacher uses either an effective or ineffective teaching behaviour
1=POSITIVE 2=NEGATIVE

Effective/Positive Teaching Behaviours	MEAN	Ineffective/Negative Teaching Behaviours
1 Begins instruction promptly, maintains instruction	1 25	1 Delays, interruptions
2 Handles materials in an orderly manner	1 13	2 Does not organize material systematically
3 Orients students to classwork	1 20	3 Fails to orient the students to the classwork
4 Conducts beginning/ ending review of lesson	1 35	4 Fails to conduct beginning/ ending reviews
5 Maintains academic focus	1 02	5 Uses talk/ activity unrelated to subject
6 Modulates speech	1 39	6 Uses loud/ grating/ monotone or inaudible talk
7 Use verbal and non-verbal to show interest/ enthusiasm	1 33	7 Uses sarcasm/ frowns/ glares/ disgust/ boring
8 Treats concepts, definitions/ examples/ non-examples	1 37	8 Gives definitions or examples only
9 Applies laws, rules, principles to the lesson	1 61	9 Presents material without any context/ application
10 Uses linking words (thus,therefore) to tie lessons together	1 59	10 Lesson doesn't tie together
11 Emphasizes important points of lesson	1 47	11 No difference of important and unimportant pts
12 Ask single factual/ information questions	1 11	12 Ask multiple questions-Hard to respond to
13 Asks questions about student experience	1 33	13 Ignores student experiences
14 Questions require analysis or reasoning	1 54	14 Questions are only factual
15 Recognizes/ amplifies/ gives corrective feedback	1 78	15 Ignores/ harshly responds to student talk
16 Gives specific academic praise	1 42	16 Overuses general praise/ non-specific praise
17 Provides for practice/ checks for academic comprehension	1 11	17 Extends lecture/ change topics/ no practice
18 Utilizes correct spelling/ grammar/ mathematics etc	1 02	18 Makes academic errors,spelling/ grammar/ mathematics
19 Clear, organized presentation/ discourse	1 09	19 Uses vague/ scrambled presentation/ discourse
20 Gives directions/ assigns/ checks comprehension-all work	1 17	20 Inadequate directions/ no homework check or feedback
21 Circulates and assists students consistently	1 45	21 Remains at desk, inappropriate circulation/ assistance
22 Stops misconduct promptly/ maintains instruction	1 08	22 Delays or does not stop misconduct/no instr momentum
23 Uses appropriate methods to stop misconduct	1 50	23 Uses repressive discipline on misconduct or mistakes

TEACHER EFFECTIVENESS CHECKLIST

Region _____ District _____ School _____ Class _____

Rate each characteristic of the teacher you are observing Circle a 4,3,2,1,or 0 using the scale of
4=Always/Consistently 3=Usually 2=Sometimes 1=Never 0=Not Observed or Not applicable

Mean Score

I Knowledge and Training

3 26 1 The teacher demonstrates **academic competence** in the subject being taught

2 48 2 The teacher is aware of and uses **new knowledge and techniques**

II Instructional Methods (Emphasis on Teacher's Actions)

2 75 3 The teacher **states objectives of lesson clearly**

2.66 4 The teacher provides **clear and lucid explanations.**

2 89 5 The level of **difficulty is appropriate** to the students

2 98 6 The instructional **methods are appropriate to the objectives** of the lesson

2 87 7 The class organization (**large/small groups, independent study**) is appropriate to the objectives

3 20 8 The lesson provides **learning opportunities beyond recall and memorization**

2 65 9 The teacher stimulates students' interest by the use of **effective questions**

2 51 10 The teacher stimulates students' interest by **encouragement**

2 19 11 The teacher stimulates students' interest by **acceptance of student ideas**

2.26 12 The teacher stimulates students' interest by using **rewards (praise etc)**

2 85 13 The teacher stimulates students' interest by his or her **enthusiasm**

2 82 14 The students are given **active roles** in the presentation of the lesson

2 41 15 The teacher shows **flexibility** in the pursuit of the stated teaching objectives

2.54 16 The teacher helps students to develop **efficient learning skills and work habits**

2 73 17 The teacher provides **appropriate assignments** for work in and outside classroom

2 31 18 The teacher uses **problem-solving methods?**

2.52 19 The teacher uses a **lesson plan/plan book** effectively?

III Implementation and Interaction (Emphasis here is on students' behaviour and responses)

2 88 20 The **purpose** of the lesson is apparent to most students?

2 94 21 The flow and pace of lesson activities are geared to **students' abilities**

2 94 22 The students are **paying attention** to the material presented

2 87 23 The students react positively to the **instructional strategies, methods, materials, media** used

2 68 24 The teacher handles issues with students **tactfully**

2 55 25 The quality and manner of the teachers' **questions motivate and challenge** students

2 32 26 The teacher makes allowances for **individual differences** among students

IV Evaluations of Teacher and Students

3 16 27 The teacher shows **poise, self-control and self confidence**-acting calmly and maturely

2 61 28 The methods and tools of evaluation that are **fair, valid, effective, positive** and supportive

2 72 29 The teacher uses **methods of evaluation** that are appropriate to the subject area

Describe any particularly notable incidents that you observed

Chapter Ten:

Narratives and Interviews

Observations of key patterns in Basic Education Resources

Research Question What are staffing patterns found characteristic of Primary schools in Upper East and Upper West Regions? What are some of the causes and consequences of these patterns?

Staffing levels

All three members of the team which visited schools in these regions are convinced that a critical factor in the present situation of ineffective schools is the understaffing of schools. All the rural primary schools we visited were forced to combine two sets of classes, usually P3/P4, and P5/P6. Many schools have only two or three teachers (some only one), and this can be with large classes in P1 and P2.

Apparently this has not emerged as such a problem in the schools looked at by teams in the central and southern sectors. Perhaps this is further evidence of imbalance of resources between northern and other schools - as with tendency to send less able newly-trained teachers to the north (since southern head teachers snap up the able ones, and able ones refuse to accept northern postings if these are made). There is also a severe problem of retaining newly trained teachers in post when they are sent to the north.

We wish to highlight the relationship between very serious understaffing of northern rural schools and the anticipatory over-implementation of the policy of removing untrained teachers which we found to have been employed in both the Upper Eastern and Upper Western Regions (and which has been adopted by at least some Districts in the northern region). In these three regions when the policy of replacing pupil teachers with trained teachers was first announced, the pupil teachers were removed all at once, without waiting for replacements. Since few additional teachers have become available this has left a major deficit in staffing of the less popular (more remote and less well-resourced schools). A further problem has been that the policy now is that teachers will be made available only as replacements for teachers, or pupil teachers, now in post. Since many pupil teachers were removed three or four years ago, the gap which resulted is no longer considered to involve 'replacement' but is treated as a request for a new post.

There are many issues involved here (i) the question of *why* Regional and District Directors of Education sought to 'over-comply' with the policy directive which only asked for *replacement* by trained teachers as these became available, and not for immediate *removal* of all untrained teachers.

(ii) GES refusal to treat as 'replacement' the provision of trained teachers in place of pupil teachers who were removed immediately the policy of employing only trained teachers was announced.

(iii) The unequal outcome for the northern Regions' schools of present policy for posting of newly trained teachers, as compared with outcomes for schools of other regions.

Data on LLIL project schools in Wa and Nadoli districts (Upper West) and Bole district (Northern Region)¹

75

<u>Class size/teacher</u>		<u>P1</u>	<u>P2</u>	<u>P3</u>	<u>P4</u>	<u>P5</u>	<u>P6</u>
Gonja schools							
Bole**	67	xxx	xxx	xxx	xxx	xxx	xxx
[6 teachers]	one teacher	one teacher	one teacher	one teacher	one teacher	one teacher	one teacher
Mankuma	47	xxx	xxx	xxx	xxx	xxx	xxx
[3 teachers]	shared teacher	shared teacher	shared teacher	shared teacher	shared teacher	shared teacher	shared teacher/HT
Birifor schools							
Baale	32	xxx	xxx	xxx	xxx	xxx	xxx
[2 teachers]		shared teacher				shared teacher	
Gboodaa	27	xxx	xxx	xxx	xxx	xxx	xxx
[2 teachers]	Two GES teachers, HT (seldom present) and a newly trained teacher, a southern youth Regular teaching is done by Gboodaa man who was a pupil teacher, but was removed four years ago He has not been paid since then by GES						
Wala schools							
Limanyiri**	70+	xxx	xxx	xxx	xxx	xxx	xxx
[?total teachers]	two teachers	? teachers	? teachers	? teachers	? teachers	? teachers	? teachers
Sing		23	xxx	xxx	xxx	xxx	xxx
[4 teachers]	HT	teacher	shared teacher	shared teacher	shared teacher	shared teacher	shared teacher
Loggo	43	xxx	xxx	xxx	xxx	xxx	xxx
[4 teachers]	shared teacher	shared teacher	shared teacher	shared teacher	shared teacher	shared teacher	shared teacher
Dagari schools							
Nadoli**	52	xxx	xxx	xxx	xxx	xxx	xxx
[6 teachers]	teacher	teacher	teacher	teacher	teacher	teacher	teacher
Charikpan	45	xxx	xxx	xxx	xxx	xxx	xxx
[3 teachers]	There are thee GES teachers - I am not sure how classes are divided among them						

**Wa is a regional and district capitol, Bole and Nadoli are district capitols The schools serve children of district officials, teachers etc The staffing patterns of these towns clearly differ from those of rural communities

¹ These figures are for the school year 1993-4 I can recall (pretty accurately) the enrollment figures for the P1 classes for which we provided teachers of reading and writing in the local languages I cannot do this for the other classes in which we were not teaching I have used 'xxx' to indicate 'numbers

Data on staffing in Upper East and Upper West schools visited

Class size/teacher

	<u>P1</u>	<u>P2</u>	<u>P3</u>	<u>P4</u>	<u>P5</u>	<u>P6</u>
K-- [4 teachers]	119 teacher	23 teacher /HT	19	15 shared teacher	12	6 shared teacher
N-- [4 teachers]	130 shared teacher	66	53 teacher /HT	52 teacher	48	30 shared teacher
S--* [4 teachers]	25 teacher	26 teacher	24	28 shared	14 teacher	27 shared teacher
Wa town [13 teachers]	61 two teachers	64 two	62 two	55 two	56 one	56 two teachers

*S-- had a separate teacher for P3 and P4 until end of autumn term when this teacher was transferred to the school in a nearby village which had only two teachers for the six primary classes, now they have three teachers, but S-- has had to combine two classes into one. The S--- HT teaches agricultural science in JSS (which has 3 full-time teachers)

It may be useful to augment this small set of schools with comparable information (so far as it is known) for the nine schools in the *Local Language Initial Literacy* project. These are all local authority schools (2 nominally under Methodist management, and one Catholic), chosen to represent communities of four language groups in northeastern Ghana.

Research Question What are effects on teaching of combining two classes?

Teachers were asked how they made their lesson plans when they had two different classes to prepare for. Answers were very consistent. 'You plan for the lower class, and then try to add to this for the children in the higher class who are familiar with the material.' Both teachers (e.g. K-- and S-- teachers of P3/P4) and circuit officers (S--) consider that this is the appropriate solution when a teacher has to teach two classes together. In K--- the seating (on cement blocks) under the tree shading P3 and P4 was in two groups with a lane between them. When I asked the teacher why there was this pattern she said 'So I can walk around more easily and see the children's work'. She said the P3 and P4 children do not sit separately, but are mixed together. However the P3 and P4 classes taught together in S-- are seated separately in two blocks of benches with a lane separating them. This teacher did write separate maths examples on the board for P3 (simpler, low numbers) and P4 (higher numbers). But he gave a single presentation on subtraction of whole numbers, and most of the examples were very simple. This is certainly the pattern I have found in Birifor schools where teachers teach two or three classes together. (It is perhaps overdetermined by the small spaces provided in classrooms made of swish.) In Baale the Head Teacher teaches P5 and P6 together in one end of a thatch-roofed mud structure which is separated by a low wall perhaps 3 feet high from the other end, in which the newly qualified trained teacher teaches the combined P3 and P4. The combined P1 and P2 sit on stones under a tree.

In some schools numbers of children in a single class are small, so that combined classes are also of a reasonable size. This is particularly so where the size of classes drops markedly in the higher grades. We found this 'pyramid' pattern of enrollment common in village schools K-- and N--. It is also characteristic of Birifor schools in Bole District, Northern Region, and in the village Dagari school in Nadoli District, Upper West. Where this pattern exists there are very large P1 classes (The Dagari school has 91 in the P1 class this year, K-- has 119, and N-- 130). But by the higher grades - P 5 and P6 - enrollment has dropped, often to single figures, sometimes only one or two pupils have reached P6. K-- has a combined P5 [12 pupils] and P6 [6 pupils] class. In N-- the 130 of P1 has dropped to 30 in P6. However here the combined P5 and P6 still totals 78 pupils.

The problems involved in teaching combined classes are clearly very different where there are only a few children in each class, and where each class contains 20 or 30 children (as in S--, K-- P3/P4 is marginal here with numbers of 27 and 17 respectively) It seems likely that in combined classes of less than 15 or 20, giving attention to individual students is still possible, and problems of discipline manageable However even in these smaller combined classes we did not find teachers teaching the two classes separately, covering different material. (Also true of P5/P6 in both K -- and S---). With the large combined classes it is possible to make a lively presentation and give effective feedback on characteristic errors to both classes (as in S-- P3/P4), but even this excellent teacher was not trying to teach different material to the two groups of children

It thus appears that where two classes are combined children are taught the same material for two successive years Where two sets of classes are combined, as is the case in K-- (P3/P4 and P5/P6), N-- (P1/P2 and P5/P6) and S-- (P3/P4 and P5/P6) then effectively the child is taught four different sets of material rather than six in the course of six years of primary school This was the pattern in three of the four schools we visited, the only exception being the town school in Wa The pattern of staffing the in the nine LLIL project schools looks very similar, with *all* the village schools having at least *two sets* of shared classes, and town schools having at least one teacher for each class, often more²

The staffing in the Wa town school which the northern team visited is an extreme contrast to that found in the villages, with two teachers for each class (except for P5) These teachers have a different problem, they have to decide how to share the work of teaching a single class between the two of them They split the nine subjects to be taught into two sets of four and five subjects, and swap sets each term Thus each teacher only has to prepare lesson plans for four/five subjects in a given term The classes are large (half over 60) and the Head Teacher would like to be able to divide each into two, under its own teacher However the school only has six classrooms so this is considered impossible. (Having just visited schools managing with no classrooms, with unroofed classrooms, and using a motly array of borrowed buildings, this constraint appears highly subjective It is nevertheless real for those involved)

² In Limanyırı I believe there are two parallel streams in the morning in all six primary classes, as there are in P1 If not the classes will be huge There are two shifts, morning and

Research Question What are JSS problems in relation to availability and staffing level of teachers in northern zone schools visited?

Both the JSS schools visited had only 3 teachers to cover all the subjects on the three years of the JSS curriculum. One teacher was absent from each school on the day we were there. In S-- this meant that the JSS 3 class had no science teaching and sat without doing anything for two hours. In N-- there were no classes due to number of pupils absent following first rain of planing season.

Apart from the very general problem of having too few teachers, observation of JSS classes shows that some teachers do not understand the material they are supposed to be teaching.

[One teacher gave a long lesson in Technical Drawing with the instruments he was supposed to be using still lying on the table, as he clearly did not know what to do with them. At the same time he was insisting to the class that it was vital to use these very instruments when doing this type of drawing. He even made the class repeat after him 'It is necessary to use a pair of dividers - why?' 'Because otherwise the drawing is not accurate.' 'Why is it necessary to use a pair of dividers?' 'In order to make the drawing accurate.']

The other major effect of shortage of trained JSS teachers in these schools was that there was no teacher at all who could teach any of the practical or vocational skills. This meant that the pupils were forced to concentrate only on the theoretical aspects of what was supposed to be practical knowledge. The schools also lacked any workshops for practical skills. But had there been teachers who know how to do the various activities, they could have managed to improvise so that the students could have had some practice in at least one or two practical activities.

Information from interviews with pupils

(Most interviews were with small groups of pupils (3-6)
of roughly the same ages)

Children from P1 - JSS

Total children interviewed·	P2-P3 = 34
	P4-P6 = 59
	<u>JSS = 29</u>
	ALL = 122

Total Interviews	P2-P3 = 9, South = 3, Central = 2, North = 4
	P4-P6 = 12, South = 3, Central = 5, North = 4
	<u>JSS = 5, South = 1, Central = 2, North = 2.</u>
	ALL 26 South 7 Central 9 North 10

Research Question What do school children eat before coming to school, and during the school day? Are they hungry while at school?

Nearly all children eat before they come to school only two children reported eating nothing Children eat a very wide range of foods before coming to school There is much less variation in the north, where responses tend to be 'everyone eats TZ (porridge from previous night's meal) In many schools there is no food sold during breaks, so children do not buy food while at school Even where food is sold, a number of children report not having money to buy it Very few children bring food to school from home (3 in all the interviews) In seven of the interview groups children said they were not hungry while at school, in 12 groups children said they were 'sometimes' hungry, or 'somewhat hungry', in 7 interviews at least one child reported being 'very hungry'

Q2 Are you ever hungry?

Very hungry·	3, 3, 1	(7)
Somewhat hungry	2, 3, 7	(12)
No, not hungry	3, 2, 2	(7)

5 of 7 'very hungry' interviews are from north, while 10/26 of all interviews are from the north There is a significantly greater proportion of children from the north who say they are 'very hungry' than from the other two zones of Ghana

Research Question What are Ghanaian children's favorite subjects, and how does this appear to relate to individual competence?

Reasons for favorite subjects, all pupils

It is easy, I understand it better. [34]

Maths (11), English (7), social studies (5),
technical drawing (2), cultural studies (2), reading
English (2),
science, life skills, writing, speaking English, Twi

I get good marks. [21]

maths (13), science (2),
English, life skills, agric science, social studies, Twi,
P E

It is exciting, enjoyable, I love the subject. [10]

English (3), Reading English (2), maths (2),
Fanti, cultural studies, sports,

To become somebody, be a success, go abroad [7]

sports (3), English, maths, science, cultural studies

It gives me information, ideas. [5]

science (2), reading, life skills, maths,

So I can speak English English (4)

*Easy to try it out (experiment), practice it. English (2),
science*

To be learned, knowledgeable: maths (2), English

It is useful maths, agric science

Teacher teaches it well. English (2)

Useful in intended future occupation agric science, English

The following reasons were cited only once, in relation to a single subject

Teacher does not use cane. social studies

I want to teach it English

I have a book in it: English

So I can write/read. English

I like solving problems. maths

I like doing practical things with my hands: technical skills

Individual competence as a factor in subject preference

If those reasons which reflect a sense of personal competence are combined, they account for 73% of the 99 different responses to the question "What is your favorite subject? Why?"*

The overwhelming importance of a sense of personal competence in children's subject preferences is very striking. It suggests that if we can find ways of enhancing the child's sense of competence in school subjects this could have a significant effect on motivation in the classroom. Teachers report that children 'really love' the classes in Ghanaian language. This is presumably due to their existing skills in this familiar medium. Unfortunately even in the first three classes, many teachers lack skills for teaching reading and writing in the children's local language. These skills do not appear to be taught in teachers' training colleges, and many have not acquired them during their own school years. Nor is there teaching material available for the primary grades in local languages. Where teachers used to expect to create their own teaching materials for reading in vernacular, the emphasis on government provided syllabi and texts now makes them feel inadequate for this task. Thus there is very little teaching in local Ghanaian languages in the lower primary grades. If these were taught, children could quickly develop literacy skills that would give them a sense of competence in reading and writing, and could serve as a basis for the much more difficult task of learning to read and write in English.

*Competence-related reasons

- It is easy I understand it better [than other subjects] 34
- I get good marks in it 21
- It is exciting, enjoyable, I love the subject 10
- Miscellaneous 7

82b

Research Question. What are the concerns and preoccupations of the headteachers?

Head Teacher Interviews
[Selected questions]

Q 1 "Could you tell me about your responsibilities as a Head Teacher?"

First-mention

Administration of school record-keeping (7)
Supervision of teachers (lesson planning) (6)
Welfare of teachers (Mentioned first by 1 HT)

Second-mention

Supervision of teachers (lesson planning) (5)
Ensure punctuality/regular attendance of teachers (3)
Welfare of teachers and pupils (2)
(A single Head Teacher mentioned each of the following)
- Supervise pupils, *in loco parentis*
- Deal with admissions and collect school fees
- Liaise with District Education Office and represent the Assistant Director of Education for Basic Education
- Act as coordinator between school and PTA
- Conduct in-service training for teachers

[One teacher I interviewed reeled of a whole list (in jargon form) which included all these 'responsibilities', and a few more. It is written down somewhere in great detail, and a well-indoctrinated HT knows exactly what to say. This makes more interesting the consistencies and variation in priorities.]

Q1/a What in-service training have you had as HT?

Training in record-keeping and administration (6)
Yes, but it is not clear in what skills (4)
Training in supervision of teachers' teaching skills (1)
Only had in-service training in specific teaching subjects (eg maths) (2)
"No such training exists" (1)

Q1/b Do you receive housing? Yes (3)* No (10)

* Two in new HT bungalows, one in religious community

Do you receive help on your farm? Yes (1) No (8)

No, help on farm is not allowed (1)

N A (question appears not to have been asked) (3)

Q 2 "What are your teaching responsibilities?"

None - Detached HT (3)
Teaches one primary class (7)
Teaches two combined primary classes (1)
Teaches in JSS (3)

Q 3 "In general, how well-prepared are your teachers?" 83
Well-prepared, very-well prepared (8)
Some prepare well, others not so well, 'average' (3)
'Poorly prepared' or some explicit ref to poor prep (1)
Very poorly prepared (0)
Those who have to prepare lessons for 2 combined classes have
difficulty (2)

Q3/a Are there teachers who do not attend regularly?
No, all teachers attend regularly (9)
YES (4)
Reasons not non-attendance
Teacher's illness 2
Child's illness (women teachers) 1
Distance teachers live from school creates problem in bad
weather (1)

*Numbers here refer to number of HTs giving this response, not
to number of teachers concerned*

[[Answers to both parts of Q 3 seem extraordinarily positive,
given what we know about teacher attendance. For instance, in the
Natugnia school I gathered that one teacher who lives some dis-
tance away is erratic in attendance, explaining this as due to
'trouble with his bicycle' The Natugnia HT answered "I have
never had a teacher who just sits in the house and sends a note
explaining [why he has not come to school]" I had to code this
as 'No teachers fail to attend regularly' on the basis of what
was written on the interview In fact, I did this interview, and
the HT seemed entirely sincere' (It was this 'distant' teacher
who never turned up while we were visiting the school, though the
others eventually came when word of our visit got around.)]

Q 4/a Is the curriculum meeting the needs of your students?
Curriculum is good as it is (3)

Many answers begin by saying 'The curriculum is meeting the needs
of our students ' But then go on to say that really it is not,
because of the following reasons:

NO, because
- There are too many subjects (8)
- The subjects are taught at too difficult a level (2)
- NA (1)

Q 4/b Do children learn what they are being taught?

YES (2)

- One of our students won a regional prize as the best student in 1992 (1)
- [This was given as an answer to the general case]
- trained teachers sent recently are improving level (1)

NO (10)

- No, there are too many subjects in curriculum (2)
- No, the curriculum is too difficult (2)
- No, 30 minute periods are too short to teach well (2)
- No, students have difficulty with English (1)
- No, School day is too long, and the younger students cannot concentrate (1)
- No, some have not attended kindergarten (1)
- No, there are no texts in some subjects (Social studies, Agricultural Science, Ghanaian languages) (1)

N A - (2)

Q 5/a Why do you have teachers' meetings?

- To remind teachers of their responsibilities (6)
- Teachers and pupils welfare (5)
- Academic matters - lesson plans, homework, etc (4)
- To convey information from GES (4)
- To discuss discipline (2)
- To keep things running smoothly (2)
- To deal with 'problems' (2)
- Organisational matters - allocation of classes, etc (2)
- One mention each for discussion of PTA, discussion of parents' complaints, illness or death of teacher or pupil

N A (1)

Q 5/b How often do you have teachers' meetings?

Three times a term (3)
 Twice a term (8)
 Once a term (1)
 No meetings held (0)
 N A (2)

Q 6/a Do you find it useful to supervise your teachers' classrooms?

NO 'I trust my teachers' (1)

YES but I don't have time to do it (2)

YES Observes each teacher every day (1)

Observes teachers at least once a week (5)

Observes teachers every two weeks (1)

Observes teachers 'occasionally', 'from time to time' (4)

Observes teachers at least once a week (5)
 Observes teachers every two weeks (1)
 Observes teachers 'occasionally', 'from time to time' (4)

Q 6/b Do you give feedback on observation of teachers

YES

- HT makes suggestions about teaching methods (6)
- HT corrects teacher's spelling, handwriting (2)
- 'I encourage them' (1)
- HT looks at students' work (1)
- HT gives feedback in unspecified way (4)

N A. (2)

Q 7 Records

[This question was answered in quite varied ways - I have not summarized them here]

Q 8/a. Do parents visit the school?

NO Parents do not visit school (3)

Yes.

- rarely, once in a while, only if invited (5)
- yes, but how often is not indicated (2)

N A (4)

Q 8/b Is there a PTA?

YES (12)

N.A (2)

Q 8/c What are parents concerned about?

Parents are concerned about their child's academic achievement (4)

Parents are concerned about the school building, furniture (3)

Parents are concerned about the standard of teaching in the school (2)

Parents are concerned about the child's behaviour, attendance (1)

N A (4)

Q 9/a How do you get textbooks to the school?

We collect from district office which is nearby/pays

T and T - we have no problems about collection (3)

We collect from District Office, but no T and T and this is a problem (3)

[Others did not answer this part of the question]

Q 9/b Do you have problems about the number or quality of textbooks supplied? ⁸⁶

Textbooks are inadequate in number, or not available for certain subjects, or not available on time (9)

Textbooks are of poor quality and have to be replaced each year because they disintegrate (2)

N A [including Question 9 not on form used] (3)

Q 10 How do you find out about government policies?

[Several HTs mentioned several sources]

- From District Education Office - circulars (10)

- From radio (5)

- From newspapers (4)

A single Head Teacher mentioned

- Ghana National Union of Teachers

- Seminars

One teacher spoke at length about the confused nature of government education policies, giving examples of contradictions

One teacher would only talk about particular policies, and now how s/he had heard about them

This question was not on two questionnaires

Q 11 What are your major concerns as Head Teacher?

- Lack of school buildings, severely damaged school buildings (16)

- Lack of textbooks (8)

- Absence or shortage of school furniture (5)

- Lack of accommodation for teachers (not HT) (5)

- shortage of teachers (4)

- Lack of transport to District office, or failure of district office to pay T and T (3)

- Frequent changes of textbooks (2)

- JSS needs building/roof (2)

- JSS has no workshop (2)

- Lack of teaching aids (2)

- Need supply of good water, or toilet facilities (2)

One Head Teacher mentioned each of the following

Lack of accommodation for HT, Problems with teachers' transportation to school (because they live in Accra), Unavailability of workbooks, HT needs to be detached from teaching duties, Children dropping out of JSS, School needs land for a school farm, Shortage of library books, Need to improve teamwork of teachers and their morale, HT's allowance should be raised to C20 000 a month [This is the only mention in anything I have read here of low pay']

Observations of key patterns in Basic Education Resources

Research Question What are the specific problems concerning provision of school buildings

The effects of low staffing levels is compounded by the inability of very poor communities and districts to meet needs for buildings and furniture as government policy requires them to. Of the four schools we visited, one had no buildings at all, but used the shade of trees; two were in old buildings (1951, 1959) in which roofs had blown off and been only partly replaced, making several classrooms unusable, or only partly usable. One end wall of the Natugnia school has fallen down, and the sides are in a dangerous condition. All three of these schools had just-completed bungalows for the head teacher, though none were yet actually in use (the Kanga HT was camping in one room unofficially). The fourth school, the Catholic primary in Wa town, is in a set of buildings built in 1988, to an exceptionally high standard.

There is a strikingly regular pattern in the first three of these schools of the PTA/community having worked very hard to raise money for new buildings. In two, Kanga and Natugnia, a structure of cement blocks had been begun, and in Sakai the building itself was completed, and door and window frames installed. In each case the project had collapsed because the community could not meet unanticipated, or augmented costs. One end of the Sakai new JSS block has fallen down, and the rest will soon follow if it is not possible to find money for roofing. This was originally promised as an incentive to the community's efforts to build the block, but never materialized. (The same promise was made to Baale people, and there too a completed, unroofed building is falling down.) These failed efforts represent a double tragedy. First, of course, the school buildings are lost to community which needs them badly. But perhaps even more serious is the fact that when a community has managed to work together, committing scarce resources in money and energy, the effort has very visibly been a failure. Will the next appeal meet with a positive response, or will people feel they don't want to waste resources again?

Narrative accounts of early primary classrooms in northern Ghana

These are accounts of rural classrooms, focussing on the way in which the language of instruction influences teaching and learning

Research Question What kind of learning takes place in rural classrooms when children who never hear English at home or in the community are taught solely in English?

English (L2) as the medium of instruction. No teaching of reading and writing in local language. Observation of P1/2, and P3/4 English classes in a Birifor village [B-- 1991]

B-- is a cluster of 10 compounds, each holding several farming families. The village was founded in 1926. The present elder of the community came then as a youth and is the oldest survivor of the pioneer settlers. The community has been the centre of dispersion for several other Birifor villages, and its historical precedence probably accounts for the fact that it had one of the earliest schools in a Birifor community, started in 1957.

The head teacher has found a room in the village to live in, and only goes to the district capital at weekends. This means on Thursday afternoon, since the market is every Friday, and it is accepted that 'no one goes to school on Fridays because of the market' (Hardly anyone else in B-- goes to Friday market, since this means a walk of 12 miles which is only undertaken if there is something to sell or to buy). As it is the rainy season there is usually one day a week when it is raining, or threatening to rain, and school is not held. Otherwise it is only when the children are needed to clear the school grounds, or in the head teacher's farm, that there is no school (no more than one day a week). During this year there was only one teacher in B--, the following year a newly trained teacher from Cape Coast, a Fanti speaker, was sent to join the head teacher.

The B-- school has been under two huge silk cotton trees since it was first founded. The children sit on poles supported by forked sticks, and lean elbows on another, higher pole which serves as a 'table'. The head teacher is a Gonja who does not speak Birifor, and so teaches entirely in English. The lower classes sit in the front row, and the upper classes behind, but a big boy who is in P2 sits on the higher pole with those in P5 and P6. The children in the front are mainly playing as the teacher is busy helping a P6 boy who is preparing for the final primary school exams. He is sitting on a stool under a different tree. There are no books visible, but this is not surprising since everything has to be carried back to the head teacher's room when school finishes at noon, and brought out again next day. (Some books and the blackboard were burned when the thatched room they were being stored in caught fire. Money for another blackboard has finally been collected.)

The teacher leads P1 and P2 in reciting the English alphabet, but makes no attempt to sound out the letters with them. He writes 'm', 'n', 'o', 'p', 'q', and 'r' on the blackboard, and tells them to practice these letters. Some write letters in the sand, and a few use pencils in tattered exercise books. The teacher now turns his attention to P3/P4.

It is time for English reading - there are three copies of the book for the eight children in this group. The teacher puts several words on the blackboard (are they new words in this lesson?) He reads the first word and the children repeat it after him, then teacher reads the second word, it is repeated, and so on. The teacher asks one of the girls to start reading. She falters after the first few words. He calls on another child who has no more success. The teacher now reads the passage. Next he asks the first girl to read again, and she does better this time. The words on the board seem to help. Each of the children in this group is called on to 'read' the same passage. (By now even I can remember it.) Now the teacher calls out one of the words on the board and the children are called on in turn to come up and identify which it is. The child points to the word, repeats it, and the rest repeat it after her. Finally the words are erased from the board and the children write them from dictation in exercise books. Three children do not have exercise books and they write in the sand. The teacher marks each child's work and writes the correct spelling on the board. Mistakes are erased and the word written correctly so that the exercise books contain only correctly spelled words.

By now none of the P1/P2 children are still practicing letters. Some girls have gone to kick a leaf 'ball' in a counting game. Boys are tossing a snail shell so that it spins on the point. If you don't get it to flip the right way up it won't spin and you lose your turn.

[There is no discussion of what this reading passage means, beyond the naming of the English words. No child asks a question. There are no exercises which let the children select words with appropriate meanings. The children do not put words together themselves into phrases or sentences. The emphasis is on being able to recognise words and speak them correctly. This is 'reading']

Research Question What kind of learning takes place in rural classrooms when the medium of instruction is a Ghanaian language different from the one children speak at home (L1)? What kinds of problems are created when the language of instruction is not a child's first language?

A different Ghanaian language (L2) as the medium of instruction: No teaching of reading and writing in local language. Observations of P1/2 and P5/6 maths classes in a Birifor school [Gb--1991]

The Gb-- school (three little low rooms) has been made of local swish by the community after long pleading and urging by one parent in particular. The roof of straw provides some shelter, but leaks both sun and rain. The furniture consists of two benches in each of the two classrooms used by P3/P4 and by P5/P6, while the smallest children in the third sit on mud blocks intended for strengthening the school walls. There is one blackboard which is moved between classes depending on where the teacher is. The space in front of the schoolroom has been beaten hard and swept clean, and is framed by low shrubs. The borehole is nearby, so clean water is plentiful.

There are two trained teachers assigned to this school. One is the head teacher, whom I will call Simon, who lives 7 miles away in the District capital. He comes from Lawra District in the Upper West region and speaks Dagari, a language of the same 'family' as the Birifor spoken by Gb-- folk. The other is a newly trained teacher from southern Ghana who stays in a town about two miles away. He speaks Fanti, which might as well be Greek to the Gb-- children, and so teaches entirely in English (which also might as well be Greek, since no one in the village speaks English, which is seldom heard in the district capital either). The head teacher comes by bicycle, and the younger one hitches a ride when he can, or walks.

There is a third man who teaches in the school, Gbolo, who lives and farms in Gb--. He was a pupil teacher there when the school first started in 1987. He has not been paid since pupil teachers ceased to be employed by the District Education authorities in 1989. However it is Gbolo whom one is most likely to find teaching, since he comes faithfully every day. This is as well, since the head teacher is there only one or two days a week (often being unable to leave the district capital, owing to the need to see to his farm, or collect his pay, or attend market every Friday). The trained teacher was faithful when he first came, but by February had not yet received any pay since taking up the post and became demoralized. He borrowed money to return home to the south where, he said, at least he would be fed.

"Like using first Spanish and then Hindi to teach geometry to French-speakers"

Observations of maths classes in P1/P2 and P5/P6

Simon is teaching maths to the combined P1 and P2 classes, about 25 children. He knew I would be coming to observe (since otherwise there would have been no GES teaching to see), and has brought several 'teaching aids' - two tins of different shapes, a cigarette box, a piece of string and a small ball, he tried to find a straight-edge or ruler but failed. The children stand up and greet me when I enter: "Good morning Madam". I ask (because I know they can answer it) "How are you?" Sure enough, they answer "We are fine, thank you." Now we can all sit down and relax. I go to back of room, very dark (no windows). Soon the children lose interest in me and either listen to the teacher or talk to their friends.

Simon speaks in Dagari. He holds up the two tins and asks if they are the same. Silence. He takes the ball and one tin and again asks 'Are these the same?' Silence. Simon sends a boy to bring the blackboard, and when it comes draws the shapes of the tin and the ball on the board. Are these [drawings] the same? Silence.

[Simon is trying to use these objects as examples of different shapes for a simple geometry lesson. But he cannot find a way of explaining what he is doing that the children understand. The children think he is talking about the actual objects, not their abstractable shapes. I sense that at least the older children (and some must be nine or ten), are embarrassed because it is so obvious that the objects are *not* the same, that *that* cannot be the answer that the teacher wants. But then what *does* he want them to say? I sit there wondering why the children do not ask any questions? And why Simon does not create any context for the separation of actual object from abstractable shape? I decide that teacher and pupils have a problem in talking to each other. The students can certainly understand some Dagari words, but cannot speak it, and feel awkward speaking Birifor since the teacher does not speak it at all. Simon knows the students can only understand very simple Dagari, and in keeping his presentation very simple has failed to get across the basic ideas necessary for an understanding of the lesson.]

Simon arrives at a partial solution which is to get one of the older boys to come and draw several different objects on the board. Then he calls another boy to do the same underneath. Now he can ask them to compare two sketches of the same object, and of different objects. He has arrived at 'the naming of shapes' - in English. "This is a square. Say it after me" (All) "This is a square" "Again" "This is a square", "This is a square" "Good" "Now this one This is a parallelogram" [Honestly - P1/P2] "Say it after me" "This is a parallelogram" (All) "This is a parallelogram", "This is a parallelogram" (And so on for circle and oval) The lesson ends on this note of declaiming in unison, much, I feel, to the relief of both teacher and students.

Later that morning Simon is teaching maths to P5/P6 (7 children). Only English is spoken during this class. He is at the blackboard, doing examples with the class which involve the calculation of distances travelled at given speeds in a given length of time. He has a textbook, but none of the children has one, nor do they handle the teacher's book (Problems must seem to come out of thin air). Simon explains how to do this sort of problem, gives an example, and writes the critical information - speed and time - on the board. He asks for volunteers to solve the problem. A youth volunteers, but has no real idea what to do. A second volunteers and also fails. Simon does a multiplication on the board, not explaining what the figures represent, and writes the answer. "Is this right?" Silence. "Is this right?" - Timid, "yes" Simon "Yes, that is right!" "Now do it in your exercise books and I will check it" (Several more problems were treated in the same way. On one Simon made a basic mistake, no one corrected him, and I was not sure whether he noticed or not. But it made the problem impossible to solve. Neither teacher nor students acknowledged this.)

The overwhelming feeling in this class was of lack of comprehension. It was not possible in one period to work out whether this was due to the students' failure to understand English well enough to follow the basic explanation. A brief attempt at conversation quickly reveals that both comprehension and speaking of English are rudimentary. Or the difficulty may lie in their lack of understanding of the basic arithmetic involved. Perhaps in this school the two problems are not separable, given the history of lack of comprehension, lack of ways of discovering why students are making mistakes, lack of any systematic feedback to students that would help them to correct mistakes. Indeed the problem seems to be an accommodation to failure by both teacher and students so that neither side considers it either unusual or capable of repair.

Research Question What kinds of learning take place in rural schools when literacy is first taught in the child's own language (L1)? What are effects on motivation? What are effects on facility in reading and writing?

Local language (L1) as the medium of instruction, Local language (L1) as the medium of initial literacy. Learning to read and write in Birifor [Gb-- 1994]

The *Local Language Initial Literacy* project (LLIL) is based on the use of local literates for teaching P1 and P2 children to read and write their own language. Because it has been established that young children learn very much better in small groups than in large classes we found two teachers for each P1 class in the nine schools of the pilot project. The teachers were asked to divide the class into two so that each would be teaching not more than 15 or twenty children. In Gb---- our teachers are Gbolo and Simwareju. Gbolo, as an experienced teacher, volunteered to take the younger group of children. Simwareju, who had just completed secondary school and was waiting for his results, was keen to take the slightly older P1 children and see how much they could learn. Because our agreement with the head teacher is always that we will not make additional demands on classroom space, the LLIL classes are usually under a tree. Gbolo works under one tree where the small children practice the Birifor alphabet by writing in the sand. At first there were 12 children in the younger class, but parents keep bringing more, and Gbolo is reluctant to send any away. By the end of the year there were 17 in his class (P1a). Every day they practice writing letters, and combining these into syllables and simple Birifor words. They like to 'play' with the sounds, and are proud that they can write.

Simwareju's class meets under another tree some distance away. This class, P1b, contains about 15 children. Benches are brought from the school if they are not in use, and the children sit in intent rows following the lesson (which is based on a Birifor primer written for adults by Mr and Mrs Koch of the Ghana Institute of Linguistics and Bible Translation based in Tamale). After the first practicing of letters in the sand and on slates, these children quickly began writing in exercise books. They have raced through Book 1, and had nearly finished Book 2 by July. They are extremely enthusiastic about their Birifor work, and proud that they can do it so easily. Simwareju has continued with them this year (they are now in P2 of the primary school). In January they wrote individual essays describing a Bagre festival they had attended in a neighbouring village. These essays are being typed on stencils and we will staple them into a little book for the school to use next year for P2 reading practice. The B---- children in the P2 Birifor class are also writing essays for a booklet, and the teachers plan to exchange booklets between B---- and Gb---- so each has two readers.

Research Question What are the conditions under which the use of English as the sole medium of instruction in early primary classes is effective in producing a fluent command of English? Evidence for the importance of skilled teaching and of home background: 'When is English not a second language?'

Narrative accounts of two English classes in a newly built town primary school English is the sole language of instruction in this school, beginning with P1

P1 - English spelling and word-building

There are two trained teachers in this class because there are so many children. The teachers share the teaching, each taking certain subjects. This morning the teacher is Sister Theresa who is teaching the phonetics of the English alphabet as the basis for forming syllables and words *in English*. This whole class is conducted entirely in English. First the children recite 'a-as-in-apple', 'b-as-in-box', 'c-as-in-cat'. Then the teacher puts two letters together to form syllables - on the board. She then gets children to combine these to form short English words - *may, cat*. This appears to be going over previous work.

Sister T now puts *oo* on the board and asks 'What sound is this?' '*oo*'. She then writes *book* on board. 'Who can sound this for me?' A boy volunteers - 'book'. T says 'You are right, but that is not what we want, we want to find the sounds that make it 'book'. Boy fails to do this. 'Who can sound it for us?' Another child sounds 'b-oo-k', book'. T 'Right! Clap for him!'

The teacher continues with '*ee*' '*b-ee*'. '*oa*' '*b-oa-t*'. '*ee*' '*sh-ee-p*'. As she builds words she goes to the alphabet that she wrote on the board as the children sounded the letters at the beginning of the lesson. She says 'Now I am going to 'lift' the '*t*' and carry it over and add it to '*b-oa*' so we have '*b-oa-t*'. What have we got now? *boat*, Right. Clap for yourselves, you have done well'. Children clap.

[This lesson continued for an hour during which the 60-odd children remained quiet and mostly attentive. Sister Theresa varied the activities around the learning of sounds of double vowels - her own active teaching, children coming to the board, writing in exercise books. I was particularly struck by her sensitive handling of children who made mistakes. She found ways of leading them into the correct response so they seemed to have discovered it themselves. Often this involved calling another child to answer a related question, and then helping the first child to see how this would change his own answer. When doing this she always called a girl to help a girl, or a boy to help a boy. 'Who can come and help Abu?' All quietly and without any indication that she was 'managing' anything other than spelling.]

Sister Theresa spent three months learning the Montessori method from a Nigerian sister who came to Ghana to train a few Catholic sisters. Her own language is Twi and she would like to become a Twi specialist, but otherwise to continue teaching reading by this method which she loves. The children in this class are mainly from middle class professional homes where English is familiar or even the main language. It is hard to see how the method would work unless children already have quite a wide English vocabulary so that they can recognise both the syllables and the words being built from them. But it would be easy to use this method to teach children to read in their own Ghanaian language. I have never seen this done.]

P2 children memorize and recite short poems

The children are reciting short poems in English that they have memorized. They are called to front of the class, one by one. Each child bows and says, "My name is _____ I am _____ years old. I am in Class 2. The title of my poem is _____", and then recites the poem. The teacher comments on loudness, and the correct order of the preliminary introductory information. Three times a child is sent back to his seat to correct his dress: tuck shirt into trousers, correctly button shirt, etc. The children speak very quietly and some are clearly shy. But among them they have memorized 6 or 7 poems (very probably more), and can render them with sense. They are encouraged to use appropriate gestures (it becomes clear that teachers suggested these). Shooting at 'bird-in-a-tree', etc. I.e. the teachers are emphasizing conveying the meaning of each poem.

After a child's recitation of a poem newly learned for today the teacher corrects his pronunciation and makes the class repeat several words in unison. For example
Teacher: Not 'dey' [the] but 'de' [the]. The teacher is *almost* saying 'th' but it still sounds like 'd'. When I look at her lips I see she is forming 'th', but it isn't audible as 'th'. The children must hear this as a correction of 'de' instead of 'dey'. Later in the poem the word 'rat' occurs and I hear the child saying 'lat' but the teacher does not correct this.

[It is difficult for teachers not alert to sound contrasts to help children learn correct English pronunciation.]

It is astonishing to hear so many 7-9 year old children - over half of a class of over 50 - speak a short poem all in English, clearly understanding the words. Most/many of the parents of children in this school are professional or government employees or teach at the Wa Secondary school across the highway. One child said in the interview with pupils that English was her favorite subject 'because it is easy to practice at home.'

Observations of key patterns in Basic Education, Northern Zone
Policy and practice of use of English and Ghanaian languages

Research Questions What are the patterns in use of Ghanaian languages as the medium of instruction in P1-P3 classrooms? What are the patterns of teaching the reading and writing of local Ghanaian languages in these lower primary classrooms?

Ghanaian language

It is Ghana government policy that the local Ghanaian language be used as the medium of instruction during the first three years of primary school. Reading and writing in the local language should also be taught as a basis for studies of literature and local history in the higher primary classes and JSS. It is intended that oral English should be emphasized during the early primary grades to provide a basis for learning to read and write in English and eventual fluent English literacy. What is classroom practice in schools in northern Ghana?

Ghanaian language as a medium of instruction

In the three village schools we visited, teachers of the early primary grades were from the same language community as their pupils, and they used this local language as the medium of instruction. However all teachers I spoke to emphasized that when teaching English, English was used as far as possible. I observed several classes in which maths was being taught in the local language, using English names for numbers. This appears to work very well, with children participating in a lively fashion. This is consistent with responses in pupil interviews from these schools, where several children say they like maths best 'because it is easy to understand' and 'because I get good marks in it'.

[Incidentally, where shortage of teachers leads to combining P3 and P4, the prescribed pattern, where the lower class should be taught in the local language, and the higher in English, cannot be followed. Clearly a teacher must choose one language or the other in addressing the combined class. Some teachers extend the use of local language through the fourth year (K---), while others begin the use of English in P3 (S---). In the N--- school P4 is taught on its own and English is the medium of instruction. The teacher apologised to me for shifting very briefly into *Nankam* to explain something in the maths lesson - 'but otherwise some of the children do not understand'. She seemed relieved when I said I could see this was necessary and perfectly all right.]

Both school policy and practice were quite different in the Catholic town school in Wa. There the Head Teacher explained that he had realized that the students' English was not good at all, and decided that the only solution was to use English as the medium of instruction starting in P1. All classes are taught in English, but in the first three years of primary school there is a teacher who can explain in Dagari if necessary. Sister Theresa, who teaches P1, was anxious that I understand that this would not be done until she had, in English, used examples and any teaching aids available. This must have been a comfortable pattern for her as she speaks Twi, but not Wala or Dagari which the children understand. This was not a problem in her class since the other teacher speaks Dagari, and could be called upon to explain if

necessary. Clearly English is the dominant medium in this P1 class; I did not hear any Dagari during my extended observation. With this background in P1, it is less surprising that the P2 children next door were, individually, reciting short English poems that they had memorized (with gestures suggested by the teachers). Thus by the last term of P2 these children can read/memorize and speak quite a lot of English. However it should be noted that these are middle class children from literate, very often professional, families in which English is heard at home. Indeed English may even be the language of the home, particularly if each parent is from a different language group.

The teaching of reading and writing in the local Ghanaian language

The teaching of reading and writing in a local language requires that the teacher has learned to represent in written form the sounds used in that language. This usually involves a few symbols for sounds not present in English. It also requires the (learned) ability to hear sound contrasts so that they can be accurately represented. Teachers who went to school during the 1950s and 1960s were usually taught in their local language for the first three years, and learned to read first in this language. They remember with pleasure learning from flash cards made by their teachers, and reading stories written out by them. Such teachers have no difficulty in teaching the local alphabet in early primary classes, and some take pride in creating materials to use for reading and writing. However for recently trained teachers, experience with Ghanaian language tends to be more academic, oriented to the passing of examinations in secondary school. Often they have not learned to read or write their own language easily, and feel awkward about trying to teach it. None appears to have been taught *how* to teach vernacular literacy. These are the teachers who say that they use the local language as a medium of instruction, but do not teach reading or writing in this language. They cannot, they say, because there are no materials, no syllabus, no teaching aids. (And in fairness to them, it is certainly the case that current emphasis on teaching for examinations puts pressure on the teacher to teach in approved ways, according to the prescribed syllabus.)

Research Question What are patterns of teaching English in the lower primary classes in the northern schools we visited? What are the conditions which make teaching English effective?

Even in the four schools we visited, there was a huge range in the methods used for teaching English, and in their effectiveness. In the village schools of K-- and N--, huge P1 classes made impossible the close involvement of children in the teaching/learning process. The K-- school had some P1 English 'picture readers' (enough for the perhaps 30 children present to share a book between two or three children - if all 119 children were present this would be, say, 8 children to one book). Standing in front of the children seated on cement blocks under a majestic silk cotton tree, the teacher took them through four pages, pointing to a picture and saying the name in English. The children then chorused the name after him - this was repeated several times for each picture. But the teacher then went to do something else, leaving the children to 'read' on their own. The P2 pupils

(also without a teacher) had now joined them, and clusters of children formed around each book, one child pointing at the pictures. This is much enjoyed. But few knew the names. Some tried to guess, and one boy took his book to ask the P3/P4 teacher whom I was interviewing nearby. She impatiently told him not to bother her (perhaps because she was talking to me). In a little while most children had wandered off, or were talking to their friends.

The same 'picture reader' was used in the P1 English class I observed in S--, but in an entirely different way. First the teacher led the class through pointing to and naming the pictures on several pages. This was clearly a review of previous practice. The children took an active role, and the teacher was ingenious in finding different ways to involve them. Then it was time for the short break (15 minutes). After break the teacher took up flash cards showing the English words for the pictures the children had been naming before. He asked children to name a card as he held it up (this too was clearly a repetition of familiar work). At first children seemed to guess at random, and were usually wrong. Gradually they seemed to find a way to recognize the word on a card, and eventually most of the children were giving correct answers (in English) to the 6 or 7 cards in use. [This class met in a classroom, though half the roof was off. The blackboard was in the dry end, and the English alphabet and a matrix of numbers 1--100 were permanently at either end of the blackboard. There was no sign of the *Issali* alphabet.] This teacher mixed Issali and English during this lesson, asking a child in Issali what an object was - and accepting an answer in Issali. One child identified the 'bell' as something which went 'clang, clang, clang' and everyone laughed (perhaps thinking of the bell that signals the end of classes in this school).

This teacher was succeeding in involving the children, securing attention and a high level of participation. The children obviously enjoyed the lesson. On the other hand the attempt to use pattern recognition of written English words was clearly not effective at this level of English vocabulary, since children gave virtually random responses (to what was familiar material) at first. Although the English alphabet is on the board, there is no other written material in this (rain-washed) classroom. I felt that the words written on the flashcards had an almost magical quality for the children. If you concentrated very hard, and looked at the teacher's face for a clue, you might get it right. But there was no evident framework of written material - stories, songs, let alone books or magazines - within which to fit these squiggles on the cards that the teacher held up. These are children of farm families in an almost entirely illiterate community. None of the members of the PTA executive is literate, (apart from the Head Teacher who is 'secretary'). They do not see books or magazines at home, there are no billboards or signs in their village (even on the fertiliser storehouses for Fascom and the Ghana Cotton Board). It is some kind of miracle that many of these children do learn to read and write in English. All 23 of the JSS3 students from the Sakai JSS who took the BESEC last year passed, and 15 have found places in secondary schools. But this small number represents students from several neighbouring villages who persisted through the 9 years of basic education. More effective teaching in the early primary years might significantly increase the proportion to make it through to the end.

At the other extreme from K-- P1 lies the English writing class of Sister Theresa (Town primary school, Wa) Children in this class are taught entirely in English for all subjects, and many/most come from literate, English-speaking families Sister Theresa is teaching how to write the sounds of some double vowels: *oo*, *oa*, *ee* She began the lesson by writing the full alphabet on the board as the children say the rhyme which gives the sound of each letter Now she writes these double vowels on the board, gets the children to sound them, and gets several children in turn to propose English words with these sounds in them Sister Theresa now goes to the full alphabet already on the board and (she says) 'borrows' the letter with the right sound to put in front of the vowel, and after it, to build the word *Bee* is made by borrowing '*b*' and adding it to '*ee*' Eight words are built in this way, and the children involved in reading them, in spelling them, in making sentences with them, and finally writing them in their exercise books Sister Theresa has written these words on the board with missing letters, so the children 'fill in the blanks' and copy the whole word into the exercise book The classrooms in this school contain posters and examples of children's work, books and pictures are part of the 'furniture'

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Appendix

**Questionnaires
Interview Protocols
Observation Instruments**

1.

1.

MASTER SHEET FOR EVALUATORS

Document	Test Site	School #1	School #2	School #3	School #4	School #5	School #6
2 Primary Headteacher Questionnaire							
3 JSS Headteacher Questionnaire							
4 # of Teacher- Headteacher Questionnaires							
5 Interview Headteacher							
6a Interview Teacher #1							
6b Interview Teacher #2							
6c Interview Teacher #3							
6d Interview Teacher #4							
7a. Parent Interview #1							
7b Parent Interview #2							
7c Parent Interview #3							
7d. Community Interview #1							
7e Community Interview #2							

1.

1.

8a Pupil Interview P1-3							
8b Pupil Interview P4-6							
9a Class P1 Observation							
9b Class P3 Observation							
9c Class P4 Observation							
9d Class P6 Observation							
9e Class JSS1 Observation							

KEY STATISTICS (Collect for each classroom observed Actual Counts)

Region _____ **District** _____ **School** _____ **Observer** _____ **1a.**

	Class__								
1 #Boys									
2 # Girls									
3 # Chairs									
4 # Desks									
5 M/F Teacher									
6 # English Texts									
7 #Science Texts									
9 #Maths Text									
10 #Social Stud Texts									
11 #Teacher's Guides									
12 # Syllabuses									
13 LessonPlans									
14 Grade Book									
15 #Ghanaian Books									
16 #English Books									
17 #Chalk									
18 # Pencils									
19 #Workbooks									
20 #Slates									
21 #Chalkboards									
22 #Children's Work on display									
23 Teacher's Chair									
24 Teacher's Desk									
25 #Bookshelves									
26 #Storage Boxes									
24 #Slates									

2.

Primary Headteacher Questionnaire

Region _____ District _____ School _____

Check One Primary _____ JSS _____ Both Primary and JSS _____

Please fill in the information on each of the following items

- | | |
|---|---|
| _____1 Distance school is from road
(regularly used by motor vehicles) | _____8 Number of latrines |
| _____2 Number of classrooms in school | _____9 Number of urinals |
| _____3 Size of average classroom in m ² | _____10 Sports Equipment # of balls etc |
| _____4 Total number of teachers | _____11 Number of tools in workshops |
| _____5 Number of female teachers | _____12 Number of typewriters in the school |
| _____6 Number of students total | _____13 Type of construction (brick, block wood) |
| _____7 Number of non-textbooks in library | _____14 Number of sewing machines, machine tools |

Check each of the following which you have in your school

- | | |
|------------------------------------|---------------------------|
| _____1 First Aid Box | _____12 Telephone |
| _____2 Storage Room | _____13 Typewriter |
| _____3 Water source | _____14 Motorcycle |
| _____4 Good drinking water | _____15 Electricity |
| _____5 Food vendors | _____16 Housing for Head |
| _____6 File cabinet | _____17 Housing for Staff |
| _____7 Library | _____18 Copy Machine |
| _____8 Parent-teacher organization | _____19 Computer |
| _____9 Technical Skills Workshop | _____20 Home science room |
| _____10 Playing field | _____21 School Farm |
| _____11 Wash Basin | _____22 Typing Classroom |

School Community Relations

- _____1 Do you have a Parent-Teacher Association? Yes/No
- _____2 If yes, how many PTA meetings were held during the 1993-94 school year
- _____3 How many PTA meetings have been held during the 1994-95 school year?
- _____5 What was the date of the last PTA meeting?
- _____6 How many parents attended the last PTA meeting?
- _____7 Does the PTA purchase things for the school Yes/No
- _____8 If yes, what do they purchase for the schools Specify

2.

- ___9 If they don't purchase things for the school, how do parents influence and support the school?
- ___10 Do parents visit the school? Yes/No
- ___11. If yes, how many parents have visited the school this year?
- ___12. What concerns or complaints do parents make about the schools? List them
- ___13. What are some of the reasons your teachers are absent?
- ___14 Do you have parent days? How often? Describe what you do on parent days?
- ___15 Describe your relationship with the community

Management Information

- ___1 Do you keep daily student attendance records? Yes/No
- ___2 Do you keep daily teacher attendance records? Yes/No
- ___3 Do you have an inventory of school materials? Yes/No
- ___4 Do you keep an accounts books? Yes/No
- ___5 Do you conduct regular staff meetings? Yes/No
- ___6 How many times a year do you have a staff meetings?
- ___7 What was the date of your last staff meeting?
- ___8 What are some of the topics or the agenda at your staff meetings?(Specify)
- ___9 Are your teachers appointed to fill certain roles? (e.g discipline, clean building etc) Specify those roles

Please make a sketch of your school showing school buildings, water sources and latrines, playing fields and motor roads

JSS Headteacher Questionnaire

Region _____ District _____ School _____

1. Please fill in the information on each of the following items

- | | |
|--|---|
| <p>____1 Distance school is from road
(regularly used by motor vehicles)</p> <p>____2 Number of classrooms in school</p> <p>____3 Size of average classroom in m²</p> <p>____4 Total number of teachers</p> <p>____5 Number of female teachers</p> <p>____6 Number of students total</p> <p>____7 Number of non-textbooks in library</p> <p>____ Other tools or machines List _____</p> | <p>____8 Number of latrines</p> <p>____9 Number of urinals</p> <p>____10 Sports Equipment # of balls etc</p> <p>____11 Number of tools in workshops</p> <p>____12 Number of typewriters in the school</p> <p>____13 Type of construction (brick, block, wood)</p> <p>____14 Number of sewing machines</p> <p>____15 Number of machine tool</p> |
|--|---|
-

2 Check each of the following which you have in your school.

- | | |
|---|---|
| <p>____1 First Aid Box</p> <p>____2 Storage Room</p> <p>____3 Water source</p> <p>____4 Good drinking water</p> <p>____5 Food vendors</p> <p>____6 File cabinet</p> <p>____7 Library</p> <p>____8 Parent-teacher organization</p> <p>____9 Technical Skills Workshop</p> <p>____10 Playing field</p> <p>____11 Typing Classroom</p> | <p>____12 Telephone</p> <p>____13 Typewriter</p> <p>____14 Motorcycle</p> <p>____15 Electricity</p> <p>____16 Housing for Head</p> <p>____17 Housing for Staff</p> <p>____18 Copy Machine</p> <p>____19 Computer</p> <p>____20 Home science room</p> <p>____21 School Farm</p> <p>____22 Wash basin</p> |
|---|---|

- ____3. Total number of pupils in the school
- ____4. Number of pupils in JSS 1
- ____5. Number of boys in JSS 1
- ____6. Number of pupils in JSS 2
- ____7. Number of boys in JSS 2
- ____8. Number of pupils in JSS 3
- ____9. Number of boys in JSS 3

3.

14. Timetable of classes for the JSS3 pupils

	Monday	Tuesday	Wednesday	Thursday	Friday
Period 1					
2					
3					
4					
5					
6					
7					
8					

15. Check which of the following JSS subjects are taught in your school and the number of copies of textbook for each subject.

Subject	Check subjects taught in your school	Check if there is a textbook	How many copies of the text do you have	List any machines you have for course
English				
Social Studies				
Maths				
Science				
Cultural Studies				
Physical Education				
Technical Drawing				
Technical Skills				
Ghanaian Lang				
Agricultural Sc.				
French				
Other Vocational				

16. Are there particular problems teaching any of these subjects? What are they?

17. From what other villages do your pupils come? \ ' ,

18. What are last year's JSS students doing this year?

	# of Male Students	# of Female Students
Academic Sr. Secondary		
Technical Sr. Secondary		
Business Sr. Secondary		
Teacher Training		
Repeating JSS 3		
Trading		
Family		
Married		
Practicing JSS Voc.Skill		
Other (Specify)		

19 School Community Relations

___ a Do you have a Parent-Teacher Association? Yes/No

___ b If yes, how many PTA meetings were held during the 1993-94 school year

___ c How many PTA meetings have been held during the 1994-95 school year?

___ d What was the date of the last PTA meeting?

___ e How many parents attended the last PTA meeting?

___ f Does the PTA purchase things for the school Yes/No

___ g If yes, what do they purchase for the schools Specify

___ h How else do parents influence and support the school?

___ i Do parents visit the classrooms of their children? Yes/No

___ j If yes, how many parents have visited the school this year?

___ k What concerns or complaints do parents make about the schools? List them.

___1 How often do you have ~~parent~~ parent days? Describe what you do on parent days?

___1a Describe your relationship with the community

20 Management Information

___a. Do you keep daily student attendance records? Yes/No

___b Do you keep daily teacher attendance records? Yes/No

___c. Do you have an inventory of school materials? Yes/No

___d Do you keep an accounts books? Yes/No

___e Do you conduct regular staff meetings? Yes/No

___f How many times a year do you have a staff meetings?

___g What was the date of your last staff meeting?

___h. What are some of the topics or the agenda at your staff meetings?(Specify)

___1 Are teachers in your school assigned different roles and responsibilities?
e g cleaning, discipline, etc

21 What are the main problems you have as a Headteacher of JSS?

3.

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22. Sketch your school compound and buildings

4.

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Teachers and Head Teachers Questionnaire

Region _____ District _____ School _____ Class _____

Check One Head Teacher _____ Teacher _____

Write the number of the response that best answers the question.

_____ a. Gender 1) Male 2) Female

_____ b. How old are you? 1) 16-19 2) 20-25 3) 26-30 4) 31-35 5) 36-45
6) 46-55 7) 56-65 8) More than 65

_____ c. How long have been a teacher? 1) 1st year 2) 2-3 yrs 3) 4-5 yrs
4) 6-10 yrs 5) 11-20 yrs 6) 21-30 7) 30+

_____ d. Number of Years in this school? 1) 1st year 2) 2-3 yrs 3) 4-5 yrs
4) 6-10 yrs 5) 11-20 6) 21-30 7) 30+

_____ e. What class do you teach? Please mark all classes you teach regularly
1) P1 2) P2 3) P3 4) P4 5) P5 6) P6 7) JSS 1 8) JSS 2 9) JSS 3

_____ f. If you teach in JSS, what subject(s) do you teach? Please mark all the
subjects you teach 1) English _____ 2) Social Studies _____
3) Maths _____ 4) Science _____ 5) Cultural Studies _____ 6) Physical
Education _____ 7) Technical Drawing _____ 8) Technical Skills _____
9) French _____ 10) Ghanaian Language _____ 11) Agricultural Science _____
12) Domestic Sciences _____ 13) Other Vocational Skills _____

_____ g. Religion (specify) _____

_____ h. Family Status 1) never married 2) married 3) divorced
4) widowed 5) separated

_____ i. Academic Qualification 1) Middle School Leaving Certificate 2) School
Certificate 3) Attempted School Certificate 4) Attempted G C E
(O/L) 5) Tech/Comm /Voc 6) G C E (O/L) 1-3 Subjects 7) G C E
(O/L) 4+ Subjects 8) Attempted G C E (A/L) 9) G C E (A/L) 1
subject only 10) G C E (A/L) 2 or more subjects
11) Others (specify) _____

_____ j. Professional Qualification 1) Teachers' Certificate-B 2) Teachers'
Certificate 'A' (Post-B) 3) Teachers' Certificate 'A' (4 yr)
4) Teachers' Certificate 'A' (Post Sec) 5) Technical Teachers'
Certificate 6) Specialist Teachers' Certificate 7) Diploma
8) Others (Specify) _____

4.

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_____ k. Rank 1) Assistant Director 2) Principal Superintendent 3) Senior Superintendent 4) Superintendent 5) Assistant Superintendent 6) Other

_____ l. Position 1) Headteacher 2) Classroom Teacher 3) Detached/Subject Teacher

_____ m. What is your home town? _____

_____ m Do you speak the same Ghanaian language as your students?
1) Yes 2) No

_____ n. What is the Ghanaian language spoken by your students? _____

_____ o. Do you have students from more than one Ghanaian language group in your class? 1) Yes 2) No

_____ p. How well do you read and write in your own Ghanaian language? 1) Very well 2) Some 3) Not at all

_____ q. Do you teach your students to read and write in the local Ghanaian language? 1) yes 2) no

_____ r. How much of the day do you teach in English? 1) 1/2 hour or less
2) 1/2-1 hr 3) 1-3 hrs 4) all the time

_____ s. How well do you read and write in the English language? 1) Very well
2) quite well 3) Some 4) Not at all

_____ t. Are you teaching in your home town? 1) Yes 2) No

_____ u. Do you now live in the town in which you now teach? 1) Yes 2) No

_____ v. How far from school do you live? 1) 1 Km or less 2) 2-4 km
3) 5-9 km 4) 10-15 km 5) 15 or more

_____ w. How do you go to school each day? 1) walk 2) bicycle 3) bus 4) car
5) truck 6) donkey 7) other

_____ x. What do you do to supplement your income? 1) Trading 2) farming
3) Teaching extra classes 4) Other (specify) _____ 5) Nothing

_____ y. In what year was your last in-service course? 1) 1995 2) 1994 3) 1993
4) 1991 5) 1990 or earlier

_____ z. How often does the headteacher observe and supervise you in your classroom? 1) weekly 2) monthly 3) every term 4) once a year
5) never

4.

- ___ **aa.** How often does the circuit supervisor or intensive inspection team observe and supervise you in your classroom? 1) weekly 2) monthly 3) every term 4) once a year 5) never
- ___ **bb.** Does the head teacher or circuit supervisor make helpful suggestions on your teaching? 1) yes 2) no
- ___ **cc.** Do you have plans for further education? 1) yes 2) no 3) not sure
- ___ **dd.** How satisfied with teaching are you? 1) Very satisfied 2) Somewhat satisfied 3) Dissatisfied
- ___ **ee.** How much has your school improved in the past five years? 1) a great deal 2) some 3) not much 4) it has gotten worse 5) it is much worse now
- ___ **ff.** How hard do your students study? 1) Very hard 2) hard 3) somewhat lazy 4) very lazy
- ___ **gg.** How often do you give homework? 1) every day 2) 2-3 times a week 3) once a week 4) once in a while 5) never
- ___ **hh.** How often do you mark the homework? 1) every time 2) sometimes 3) never
- ___ **ii.** What % of your pupils are always punctual? 1) 100% 2) 90% 3) 75% 4) 50% 5) 25%
- ___ **jj.** How would you describe the behavior of your students? 1) excellent 2) good 3) neither good nor bad 4) bad 5) very bad
- ___ **kk.** How satisfied are you with the administration of your school? 1) very satisfied 2) satisfied 3) it is all right 4) dissatisfied 5) very dissatisfied
- ___ **ll.** How would you describe your relationship with the headteacher? 1) Very good 2) good 3) all right 4) bad 5) very bad
- ___ **mm.** How would you describe your relationship with your fellow teachers? 1) very good 2) good 3) all right 4) bad 5) very bad
- ___ **nn.** How would you describe your relationship with the parents of your pupils? 1) very good 2) good 3) all right 4) bad 5) very bad
- ___ **oo.** Do you use textbooks outside what the government has supplied to your class? 1) yes 2) no

4.

- ___pp. Which of the following should be paid for by the community or parents and not by the national government You may list more than one.
1) teacher salaries 2) textbooks and materials 3) school buildings
4) equipment or furniture 5) stationery and pencils
- ___qq Do all the teachers attend school five days a week? 1) yes 2) no
- ___rr. If you or your students have problems with the textbooks, list the numbers of those which of the following are problems 1) relevance of the material 2) level of difficulty 3) printing or binding 4) interest level
- ___ss. In which of the following subject textbooks are there problems for your or your students? You may list more than one 1) Maths 2) Social Studies 3) English 4) Science
- ___tt. Which of the subjects on the time table pose problems for you to teach? You may list more than one 1) Maths 2) English 3) Ghanaian language 4) Science 5) Social Studies 6) Agriculture 7) Physical Education 8) Life Skills 9) Music and Art
- ___uu. How helpful are the teacher's guides to you 1) Very Helpful 2) Helpful 3) Not much help 4) Not available
- ___vv. How helpful are the syllabuses to you 1) Very Helpful 2) Helpful 3) Not much help 4) Not available

Classroom Data

How many of the following do you have in your classroom?

- ___1 Boys enrolled
___2 Girls enrolled
___3 Number of Boy Repeaters
___4 Number of Girl Repeaters
___5 Age Range
___6 Number of students absent each day on average
___7 Number of your students retained last year

The total number of each item you have in your classroom. If you are responsible for more than one class put the textbook totals for the second class after the item.

- | | |
|------------------------------|---|
| ___1 Windows | ___8 Pieces of chalk |
| ___2 Desks | ___9 Slates |
| ___3 Chairs | ___10 Maps |
| ___4 English Textbooks___ | ___11 Posters or Charts |
| ___5 Social Studies Texts___ | ___12 Exercise books (personal, school or teacher supplied) |
| ___6 Science Textbooks___ | ___13. Pencils (personal/school/teacher) |
| ___7. Maths Textbooks___ | ___14 Supplementary Books |

4.

Check the box if you have the following item(s) in your classroom

- | | |
|---|---|
| <input type="checkbox"/> 1 Chalkboard | <input type="checkbox"/> 5 Homemade maths/science materials |
| <input type="checkbox"/> 2 Storage box | <input type="checkbox"/> 6 Bookshelf |
| <input type="checkbox"/> 3 Arts and Crafts materials | <input type="checkbox"/> 7 Teacher's desk or table |
| <input type="checkbox"/> 4 Children's work on display | <input type="checkbox"/> 8 Teacher's chair |

Check each syllabus which you have a personal copy of in your classroom.

- | | |
|---|--|
| <input type="checkbox"/> 1 Maths | <input type="checkbox"/> 6 English |
| <input type="checkbox"/> 2 Ghanaian Language | <input type="checkbox"/> 7 Life Skills |
| <input type="checkbox"/> 3 Science | <input type="checkbox"/> 8 Music and Art |
| <input type="checkbox"/> 4 Social Studies | <input type="checkbox"/> 9 Agriculture |
| <input type="checkbox"/> 5 Physical Education | |

Check each teacher's guide which you have a personal copy of in your classroom.

- | | |
|---|--|
| <input type="checkbox"/> 1 Maths | <input type="checkbox"/> 6 English |
| <input type="checkbox"/> 2 Ghanaian Language | <input type="checkbox"/> 7 Life Skills |
| <input type="checkbox"/> 3 Science | <input type="checkbox"/> 8 Music and Art |
| <input type="checkbox"/> 4 Social Studies | <input type="checkbox"/> 9 Agriculture |
| <input type="checkbox"/> 5 Physical Education | |

Perceptions of the School

Here are some observations about the school and the school system. For each statement choose which of the following best indicates your opinion

5=Strongly agree 4=Agree 3=No opinion 2=Disagree 1=Strongly disagree

- 1 One-session system is preferable to two-session system
- 2 School makes good use of help from parents through the PTA or other organizations
- 3 Parents pay too much for their children's education
- 4 The standard of education in my school is high.
- 5 The school takes action on student absences
- 6 There is a good mix of male and female teachers in our school?
- 7 The school-community relationship is good
- 8 The school imposes unauthorised levies on the children
- 9 Many parents have good reason to complain about school
- 10 The children are taught some useful practical skills
- 11 There is need for suitable accommodation for the teachers
- 12 The school ensures children receive medical/health assistance
- 13 The school engages pupils in unsupervised activities
- 14 The children are reluctant to go to school
- 15 The school operates a good mix of academic, sporting and cultural programmes
- 16 The quality of work at the school is rather poor
- 17 The school-community relationship needs improvement
- 18 The children are engaged in unauthorised work, (farming or childcare for teachers)
- 19 Parents are reluctant to send their children to school

4.

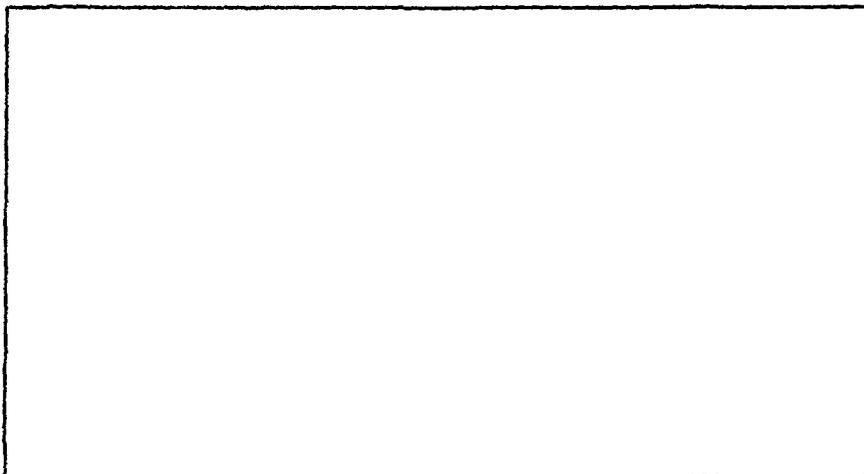
List 10 things that you believe would improve your school and classroom.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

Write Your Timetable for this week here.

Time of Day	Monday	Tuesday	Wednesday	Thursday	Friday

Draw a picture of your classroom including the location of your desk and chair, door, windows, chalkboard, childrens' desks and chairs, bookshelves and anything else in the room.



5.

Headteacher Interview

Region _____ District _____ School _____

1 Responsibilities and benefits as a headteacher

Could you tell me about your responsibilities as a headteacher?

What in-service or other training have you had to be a headteacher?

Do you get any extra pay?

Do you receive housing? Do students help you with farming?

2. Your teaching responsibilities

Do you also have to teach classes?

Which classes are you responsible for?

Time each week?

Preparation time?

3 Teachers' Motivation, Attendance and Preparation

In general, how well prepared are your teachers?

Are there teachers who don't attend regularly? How many? Why?

4. Curriculum and Learning

Tell me about how well the curriculum is meeting the needs of the students in your school? Do the children actually learn what they are being taught?

5.

5 Teachers' meetings

Do you have teachers' meetings? Why and how often?

6 Supervision

Do you find it useful to observe your teacher's classrooms? How frequently?
What feedback do you give?

7 Records

We know it is not always easy to keep many records and it would be helpful to see how headteachers manage this problem. What kind of records do you keep on finances, inventory, student cumulative records or other information?

8 Community

Tell me about the community from which your students come? Do parents come to visit the school? Do you have a PTA? What are some of the concerns about schooling of parents in the community?

9. Textbooks

How do you get textbooks to your school? Have you had problems? How could they be solved?

10 Policy

How do you find out about government policies? What is the latest educational policy change that you have heard about recently?

11 Other concerns or problems

What are your major concerns as the headmaster?

6.

TEACHER INTERVIEW

Region _____ District _____ School _____
 Class _____ (P1, JSS etc.) Male/Female _____ Age _____
 Number of Students in your class _____

- 1 **Language** Could you tell me about the Ghanaian language in your community and school? Your own language? Student language(s)? Use in school? Materials? Do you teach reading and writing in the local Ghanaian language?

Tell me about English language teaching in your classroom and the school

2. **Lessons** Do you still find it necessary to plan your lessons? May I see your lesson plans? Tell me about your preferred teaching methods? Testing? Homework? Innovations? Changes in the curriculum?

- 3 **Preparation to teach** What kinds of training do you wish you had had or wish you could get now to help you be a better teacher? Tell me about In-service or pre-service training?

- 4 **Parents and the community** What is the relationship between the parents and the school? Tell me about the PTA? Parent visits? Parent complaints and concerns? Your relationship with parents? School fees? Homework?

- 5 **Policy** How do you hear about policies on teaching and learning? What was the latest policy change you have heard about?

6.

6 Materials What instructional materials would you like to have that would most help you improve your classroom and teaching? Tell me about Textbooks? Maps? Maths manipulatives? Syllabuses? Teacher's guides?

6 School Do you have teachers meetings? How often? Have you been involved in making any decisions about the school this past year? (Time table, daily schedule, fees etc) Tell me about Relationships with the headteacher? With fellow teachers? If you need help with your teaching to whom do you go?

7 Students Tell me about your students Are they hardworking? lazy? disciplined? do their homework?

8 Drop outs What are the reasons some students drop out of school?

9 Student Work. May I see some of your student's work? Cumulative records? Student marks?

10 Attendance and Punctuality In the past year have you had to be absent for any reason? How often? Why was that? In some schools many teachers are late to school Could you tell me how well teachers here do?

7.

PARENT INTERVIEW

Region _____ District _____ School _____

- _____ a Gender
- _____ b Language _____
- _____ c Age in years
- _____ d Religion _____
- _____ e Marital Status 1 ever married 2 married 3 divorced 4 widowed
5 separated
- _____ f Occupation _____
- _____ g Education (Indicate the type and level of education attained)
1 illiterate 2 mass education 3 primary 4 middle 5 junior sec
6. Koranic 7 secondary 8. Tech/Comm/Voc 9 Post-sec
training (e.g Teaching, Nursing) 10 Sixth form 11 Polytechnic
12 University or other tertiary
- _____ h Community Status 1) Traditional office hours 2) Elder 3)
Community office holder 4) Official 5) Household leader 6)
Community member
- _____ j Total Number of own children for whom you are responsible?
- _____ k Number of Children of school-going age?
- _____ l Number of Children of school-going age in school

1 School

If you could change some things about your school what would they be?

Are you satisfied with what your children are learning?

2 Teachers

What do you think of the teachers and head teacher in your school?

Do the teachers come regularly and on time?

What do you think of the discipline in your school?

Are the teachers well prepared each day? Do the teachers really work hard to help each child learn?

7.**3. Visits**

When was the last time you visited the school?

Why did you visit?

Who did you talk to?

Did you feel welcome?

4 PTA or Other Community Organization or Meetings dealing with School Matters.

What are the ways parents influence and contribute to the school?

Is there a parent teacher organization at your school? _____

Do you attend the meetings? _____

How many parents attend _____

Who runs the meetings? _____

What do you do in the meetings? Topics? Agenda?

5 Parent Involvement

Do parents get to participate in any decisions about the school? What decisions?

What do parents do if they are worried about something at school?

6 Fees

How much money do you pay each year in school fees and for what?

How do you feel about paying the fees?

7 School Drop Outs

Why do some of the parents in your town take their children out of school?

8. Community.

Tell me about your community Clinic? Early childhood programs? Water? Sewer? Community organization? What are the major problems in your community? Could the school help deal with them?

8.

PUPIL INTERVIEW

Region_____District_____School_____

Class(es)_____Age(s)_____

1 What is your name? How old are you?

2 What do you eat before you come to school? Do you buy food at school? Do you bring something from home? What do you eat for lunch or snack? Are you ever hungry?

3 What do you like about school?

4 What do you like to do best in school? What is your favorite subject? Why?

5 Do you come to school everyday? On time? How often do you miss school and why? How do you come to school? (walk, bicycle, bus)

6 You bring your own desk and/or chair to school?

7 Do you have your own textbooks or workbooks? Pencils? Slate?

OBSERVATION PROTOCOL SHEET

Region _____ District _____ School _____

Class _____ Observer _____

Check when observation is completed

- _____ 1 **Time Management Coding Sheet** (Code throughout the full 2 hour time block of observation. Every time the subject matter, activity, language of instruction or level of student interest appears to change, re-code)
- _____ 2 **Use of Materials** (Code throughout the full 2 hour time block, everytime the subject, presentation, or instructional materials change)
- _____ 3 **Running Narrative (First Lesson)** (Select 15 minutes to do a detailed narrative) Make special note of gender, language, and interaction between teachers and students
- _____ 4 **Evaluation of Teaching Instrument** (Read early in the observation and complete throughout the full 2 hours)
- _____ 5 **Running Narrative (Second Lesson)** (Select 15 minutes to do a 2nd detailed narrative, preferably a different subject)
(At end of narrative, circle all narratives involving girls)
- _____ 6 **Teacher Effectiveness Checklist** (Complete at the end of the 2 hour observation)

TIME MANAGEMENT CODING SHEET

Region _____ District _____ School _____ Class _____

Subject Area
 Rdg =Reading Eng
 W=Writing-Engl
 S=Speaking-Engl
 Sc -Science
 M=Mathematics
 PE=Physical Education
 SS=Social Studies
 A Agriculture
 Cu =Cultural Studies
 L=Life Skills
 Gh=Ghanaian Lang

Classroom Activities
 T=Teacher Presentaton
 R=Recitation by pupils
 D=Discussion by full class
 I=Individual student work
 G- Group work
 E Evaluation/testing
 C Chalkboard work

Language Used by Teacher/If both used give percentage in each
 E-English
 G-Ghanaian Language

On/At Task Behavior (% of students on task during the lesson)
 A -At task (raises hand, maintains eye contact, works on assignment)
 O Off task (sleeping, playing, whispering, moving around, staring)

M=Each time a male student asks/answers/participates
 F=Each time a female student ask/answers/participates

Time of Day	# of Minutes	Subj Code	Act Code	Lang Code	% on-task	Description of Activity	M-F Frequency Questions/Interactions

9b.

USE OF MATERIALS BY TEACHERS AND STUDENTS

Region _____ District _____ School _____ Class _____

Directions In each box briefly note the amount time, the subject and how the materials are used by the teacher and the students Then use the code at the bottom of the page to describe the presence, appropriateness and effectiveness Note on back any materials in room not used

MATERIALS	Lesson #1 Time/Subject/Use	Lesson #2-Time/Subject/Use	Lesson #3-Time/Subject/Use	Lesson #4-Time/Subject/Use
Teacher Uses Chalkboard				
Students Use Chalkboard				
Teacher Uses Textbooks				
Students Use Textbooks				
Teacher Uses Teacher Guide				
Students Use Workbook				
Teacher Uses Other Books				
Students Use Other Books				
Teacher Uses Subject-specific Equipment				
Students use Subject-specific Equipment				
Teacher Uses Local Material Teacher Made				
Students Use Local Material				

*=Note which materials are possessed, even if not used by the teacher and/ or the student by putting a star in the box

A=Write an A in each box in which the material used is appropriate, and I=inappropriate use of the materials

E=Write an E in each box in which the instructional technique is effective, and N=Not effective use

9c. The purpose of a running narrative account is to capture a picture of the interaction within a classroom during an extended period. Try to do two running narrative accounts of 15 minutes each from two different lessons

1 Before you begin be sure you record the school, class, teacher and number of pupils. Make a simple sketch of the classroom, note time and lesson to be taught

2 (i) Our subject' is the teacher-in-relation-to-the-students the teaching/learning process
(ii) Focus on *behaviour* of both teacher and students, and try to describe whatever is influencing this behaviour

(iii) Be as accurate and complete as you can about what each person says, does, and responds to within the situation

(iv) PUT BRACKETS AROUND YOUR COMMENTS AND INTERPRETATIONS SO THAT THEY ARE CLEARLY SEPARATED FROM DESCRIPTIONS OF WHAT IS HAPPENING []

(v) Include an account of how things are said and done - loudly slowly hesitantly in a droning voice with eyes averted, eagerly - - - Try to be concrete and if you make an inference put it in brackets - []

(vi) For every action report the steps in the order in which they happen "Teacher goes to desk, sits down, picks up class list and calls on 'Seidu' to come to the board " etc

(vii) Describe what was done - and not what was NOT done

(viii) Do not worry about full comprehension of languages used. If you do not speak the language(s) be sure to have someone who does sitting next to you to give a whispered explanation as you need it. Much of what happens will be clear. Even if you miss some things this detailed qualitative record provides important information

3 After completing the running record take five minutes to write comments on what seemed to be happening. Note these are separated from running account, and intended to include inferences.

ANECDOTAL ACCOUNTS

It will be valuable if you write an anecdotal account of episodes which stand out as interesting and/or significant during your periods of observation. Do not worry if this causes you to interrupt a formal observation if it seems important. You can note on formal observation protocol that it was interrupted at a given time and resumed at the time indicated.

Anecdotal accounts are brief sketches that capture something as it happens - perhaps a teacher's confirmatory response to a student's spontaneous ideas perhaps interaction among students that reflects their involvement in something quite apart from classroom process

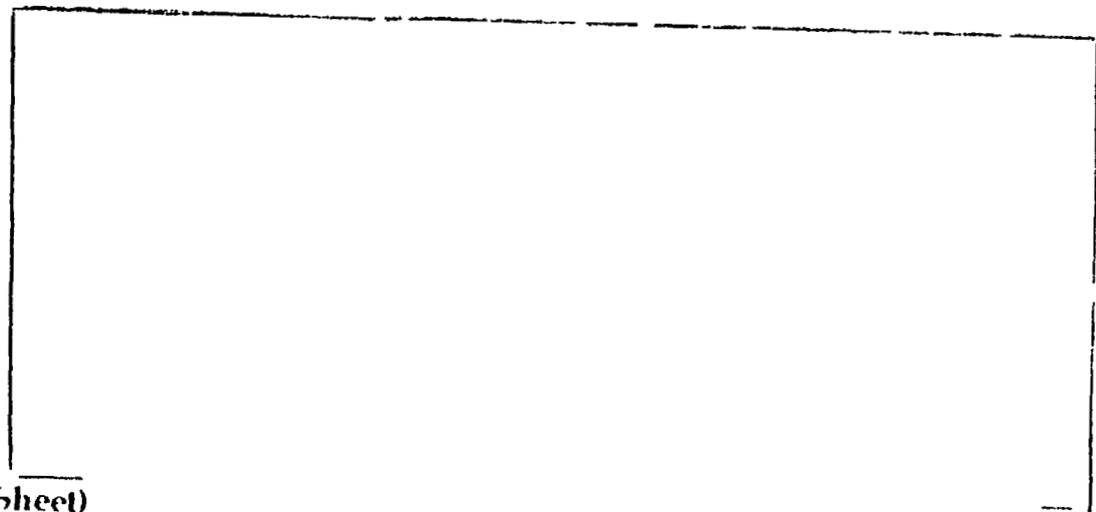
We hope to be able to use running records and anecdotal accounts to write pictures of each classroom that taken together can give an important sort of profile of the school

RUNNING NARRATIVE ACCOUNT (Circle whether 1st or 2nd observation)

9c.

Region _____
District _____
School _____
Class _____
Teacher _____
of Students _____
School _____
Observer _____

Sketch of Classroom



Time of Start

(Continue on Back of Sheet)

EVALUATION OF TEACHING INSTRUMENT

9d.

Region _____ District _____ School _____ Class _____

In the Frequency Boxes in the center of the instrument mark a 1 each time the teacher uses either an effective or ineffective teaching behaviour

Effective/Positive Teaching Behaviours	Frequency	Frequency	Ineffective/Negative Teaching Behaviours
1 Begins instruction promptly, maintains instruction			1 Delays, interruptions
2 Handles materials in an orderly manner			2 Does not organize material systematically
3 Orients students to classwork			3 Fails to orient the students to the classwork
4 Conducts beginning/ ending review of lesson			4 Fails to conduct beginning/ ending reviews
5 Maintains academic focus			5 Uses talk/ activity unrelated to subject
6 Modulates speech			6 Uses loud/ grating/ monotone or inaudible talk
7 Use verbal and non verbal to show interest/ enthusiasm			7 Uses sarcasm/ frowns/ glares/ disgust/ boring
8 Treats concepts, definitions/ examples/ non examples			8 Gives definitions or examples only
9 Applies laws, rules, principles to the lesson			9 Presents material without any context/ application
10 Uses linking words (thus, therefore) to tie lessons together			10 Lesson doesn't tie together
11 Emphasizes important points of lesson			11 No difference of important and unimportant pts
12 Ask single factual/ information questions			12 Ask multiple questions-Hard to respond to
13 Asks questions about student experience			13 Ignores student experiences
14 Questions require analysis or reasoning			14 Questions are only factual
15 Recognizes/ amplifies/ gives corrective feedback			15 Ignores, harshly responds to student talk
16 Gives specific academic praise			16 Overuses general praise/ non-specific praise
17 Provides for practice/ checks for academic comprehension			17 Extends lecture/ change topics/ no practice
18 Utilizes correct spelling/ grammar/ mathematics etc			18 Makes academic errors, spelling/ grammar/ mathematics
19 Clear, organized presentation/ discourse			19 Uses vague/ scrambled presentation/ discourse
20 Gives directions/ assigns/ checks comprehension-all work			20 Inadequate directions/ no homework check or feedback
21 Circulates and assists students consistently			21 Remains at desk, inappropriate circulation/ assistance
22 Stops misconduct promptly/ maintains instruction			22 Delays or does not stop misconduct/ no instr momentum
23 Uses appropriate methods to stop misconduct			23 Uses repressive discipline on misconduct or mistakes

TEACHER EFFECTIVENESS CHECKLIST

1

9f.

Region _____ District _____ School _____ Class _____

Rate each characteristic of the teacher you are observing Circle a 4,3,2,1, or 0 using the scale of
4=Always/Consistently 3=Usually 2=Sometimes 1=Never 0=Not Observed or Not applicable

I Knowledge and Training

- 4 3 2 1 0 1 The teacher demonstrates academic competence in the subject being taught
- 4 3 2 1 0 2 The teacher is aware of and uses new knowledge and techniques

II Instructional Methods (Emphasis on Teacher's Actions)

- 4 3 2 1 0 3 The teacher states objectives of lesson clearly
- 4 3 2 1 0 4 The teacher provides clear and lucid explanations
- 4 3 2 1 0 5 The level of difficulty is appropriate to the students
- 4 3 2 1 0 6 The instructional methods are appropriate to the objectives of the lesson
- 4 3 2 1 0 7 The class organization (large/small groups, independent study) is appropriate to the objectives
- 4 3 2 1 0 8 The lesson provides learning opportunities beyond recall and memorization
- 4 3 2 1 0 9 The teacher stimulates students' interest by the use of effective questions
- 4 3 2 1 0 10 The teacher stimulates students' interest by encouragement
- 4 3 2 1 0 11 The teacher stimulates students' interest by acceptance of student ideas
- 4 3 2 1 0 12 The teacher stimulates students' interest by using rewards (praise etc)
- 4 3 2 1 0 13 The teacher stimulates students' interest by his or her enthusiasm
- 4 3 2 1 0 14 The students are given active roles in the presentation of the lesson
- 4 3 2 1 0 15 The teacher shows flexibility in the pursuit of the stated teaching objectives
- 4 3 2 1 0 16 The teacher helps students to develop efficient learning skills and work habits
- 4 3 2 1 0 17 The teacher provides appropriate assignments for work in and outside classroom
- 4 3 2 1 0 18 The teacher uses problem-solving methods?
- 4 3 2 1 0 19 The teacher uses a lesson plan/plan book effectively?

III Implementation and Interaction (Emphasis here is on students' behaviour and responses)

- 4 3 2 1 0 20 The **purpose** of the lesson is apparent to most students?
- 4 3 2 1 0 21 The flow and pace of lesson activities are geared to **students' abilities**
- 4 3 2 1 0 22 The students are **paying attention** to the material presented
- 4 3 2 1 0 23 The students react positively to the **instructional strategies**, methods, materials, media used
- 4 3 2 1 0 24 The teacher handles issues with students **tactfully**
- 4 3 2 1 0 25 The quality and manner of the teachers' **questions motivate and challenge** students
- 4 3 2 1 0 26 The teacher makes allowances for **individual differences** among students

IV Evaluations of Teacher and Students

- 4 3 2 1 0 27 The teacher shows **poise, self-control and self confidence**-acting calmly and maturely
- 4 3 2 1 0 28 The methods and tools of **evaluation that are fair, valid, effective, positive** and supportive
- 4 3 2 1 0 29 The teacher uses **methods of evaluation that are appropriate** to the subject area

Describe any particularly notable incidents that you observed

Spreadsheet from Headteacher and Teacher Questionnaire

(Only the first six pages of the twenty four in the spreadsheet are included here
Interested researchers should consult USAID-Accra for access to the computer disc)

#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	#14	#15	#16	#17	#18	#19	#20	#21	#22	#23
1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2
1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2
6	4	7	7	5	3	7	7	1	7	4	7	7	6	2	7	7	7	7	7	7	7	3
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
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2	3	5	4	2	6	2	5	2	5	5	4	5	3	4	5	4	2	3	3	5	6	2
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56	2	2	34	1		1	1	2	2	3	3	4	4	5	6	6	4567	Class
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2	1	1	2	2	1	2	2	2	2	2	2	2	2	2	2	2	3	l Position
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	m1 Home Town
1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	0	m2 Ghan Lang
8	9	9	9	9	10	10	10	11	11	10	10	10	10	10	10	10	11	n St Ghan Lang
1	2	2	2	2		1	1	1	1	1	1	1	1	1	1	1	1	o More Gh Lang
1	1	1	2	1	1	1	1	2	2	2	2	2	2	1	1	1	1	p Well rd/wr Gh
1	1	1	1	1	1	1	1	2	1	1	1	1	1	2	2	2	1	q Teach Gha
2	2	2	2	3	2	4	4	2	4	3	4	4	4	4	2	4	1	r Eng Teach
1	1	1	1	1	1	1	1	1	3	2	2	2	1	2	1	2	1	s Well Eng
2	1	1	2	1	2	1	2	2	2	2	2	2	2	2	2	2	2	t Teach HomeT
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	u liveTownTeach
2	1	1	1	1	3	2	2	2	2	2	2	2	2	1	1	1	1	v Dist Sch
2	1	1	1	1	7	2	1	2	2	2	2	2	2	2	2	2	2	w MeansTravel
2	5	5	2	2	5	5	5	4	5	5	5	5	5	5	2	2	5	x IncomeSupp
1	2	2		2	1	2	2	2	4	2	3	1	1	1	1	1	5	y InServ Crse
1			5	2	5	1	1	1	1	1	1	1	1	1	1	1	1	z Supervision
3	3	3	5	3	5	3	3	3	3	3	3	3	3	3	3	3	3	aa CircuitSupv

**Spreadsheet of Results from JSS and Primary
Headteacher Questionnaires**

Region	1	1	2	2	2	2	3	4	4	5	5	6	6	3	4	6	6	4	5		
District	1	1	2	2	3	3	4	5	6	7	2	8	9	10	8	11	12	13	7		
School	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
1 1Dist Rd	3	5	0	0	0	5	10	1	0	0	0	2	0	5	8	9	0	2	0	5	0
1 2 #Classrooms	3	3	3	0	9	0	3	4	3	3	24	6	5	3	3	6	3	0	6		
1 3 SizeRooms	62	46	35	0	90	0		100	80		53	100	24			90		0	120		
1 4#Teachers	7	4	7	5	13	4	5	4	3	5	26	6	4	4	6	13	4	4	8		
1 5#Fem Tcher	2	0	4	1	1	0	2	0	0	3	20	2	1	3	3	7	1	1	7		
1 6#Students	82	51	130	79	348	84	107	64	105	42	1335	181	192	117	133	353	150	182	181		
1 7# non-texts	109	162	43	0	304	56	70	0	100	0	3	23	49	156	161	75	0	41	0		
1 8#Latrines	0	0	1	0	1	1	1	0	0	0	2	0	0	0	0	1	0	0	0		
1 9#Urinals	2	2	2	2	6	3	2	0	0	3	0	2	0	0	2	1	4	2	3		
1 10SportsEquip	2	0	0	0	0	0	1	0	2	1	8	2	0	1	0	2	2	1	1		
1 11#tools	0	0	0	0	30	0	39	56	0	0	0	0	0	0	0	0	0	0	0		
1 12#Typewriters	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
1 13Construct	1/2/	1	1	0	2	0	1	2	3	2	2	1	2	2	2	1	2	2	2		
1 14#SewingMach	1	1	0	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0		
1 15#machinetools	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
1 16 OtherTools	0	0	0	0	65		10	2	0	2	1	0	0	0	0	0	0	0	0		
2 1 First Aid	2	2	1	2	1	2	1	1	2	2	1	1	1	2	2	1	2	2	1		
2 2 Stor Room	1	1	2	2	1	2	1	1	2	2	1	1	1	1	2	1	1	2	2		
2 3 Water	2	1	2	2	1	1	2	1	1	2	1	1	1	2	2	2	1	2	2		
2 4Good Drinking	1	2	1	2	1	2	2	1	1	2	1	1	1	2	2	1	1	2	1		
2 5FoodVendors	1	2	2	1	1	2	1	1	2	1	1	2	1	2	1	2	2	2	1		
2 6FileCabinet	1	2	1	2	1	2	2	1	2	2	1	2	2	2	2	2	2	2	2		
2 7Library	2	2	2	2	1	2	1	1	2	2	2	1	1	1	2	1	2	1	2		
2 8PTA	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1		
2 9Tech Wkshp	1	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2		
2 10PlayField	1	2	2	1	1	1	1	2	1	1	2	1	1	1	1	1	1	2	1		
2 11TypingRm	2	2	2	2	2	2	2	2	2	2	2	2	2	1	2	2	2	2	2		
2 12Telephone	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	2	2	2	2		
2 13Motorcycle	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2		

2 15 Electrcity	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2 16HousingHd	2	2	2	2	2	1	2	2	1	1	2	2	1	2	2	2	1	1	1
2 17HousingStaff	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2 18CopyMach	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2 19Computer	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2 20HomeScRm	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2 21Farm	1	1	1	1	1	2	1	1	1	2	1	1	1	2	1	1	1	1	1
2 22WashBasin	1	1	1	1	1	1	1	1	2	2	1	1	2	2	2	2	2	2	2
3#TotalSt Pop	82	51	130	79	348	84	107	64		43									
4#Stud JSS1	31	18	36	30	123	21	43	34		20									
5#BoysJSS1	20	11	14	16	70	13	21	21		15									
6#StudJSS2	20	21	58	28	110	30	35	16		10									
7#BoysJSS2	11	16	37	16	59	15	20	12		2									
8#StudJSS3	30	13	36	21	115	34	29	14		12									
9#BoysJSS3	19	8	14	17	57	21	12	8		9									
12#TakeExam	28	19	33	22	113	22	35	10	22	10									
12#PassExam	28	12	22	14	107	16	30	10	22	8									
Eng Offered	1	1	1	1	1	1	1	1	1	1									
Eng Text	1	1	1	1	1	1	1	1	1	1									
#Eng Text	55	0	105	52	350	71	57	19	0	75									
Soc St Offered	1	0	1	1	1	1	1	1	1	1									
Soc St Text	1	0	1	1	1	1	1	1	1	1									
#Soc St Texts	74	0	150	66	400	136	89	22	0	85									
Maths Offered	1	1	1	1	1	1	1	1	1	1									
MathsText	1	1	1	1	1	1	1	1	1	1									
#MathsTexts	120	51	162	103	410	89	118	27	0	81									
ScienceOffered	1	1	1	1	1	1	1	1	1	1									
Sc Text	1	1	1	1	1	1	1	1	1	1									
#ScienceTexts	108	45	163	125	402	127	104	21	0	100									
Cult St Offered	1	0	1	1	1	1	1	1	1	1									
Cult St Text	1	0	1	1	1	1	1	1	1	1									
#Cult St Texts	63	45	190	52	368	119	111	29	0	108									

PE Offered	1	1	1	1	1	0	1	1	1	0										
P E Text	2	1	1	1	2	0	0	0	1	0										
#PE Texts	0	0	0	0	0	0	0	0	0	0										
Tech DrawingOff	0	0	1	1	1	1	1	1	1	1										
TechDrawText	1	0	1	1	2	0	0	1	1	1										
#TechDrawTexts	0	0	9	3	0	0	0	15	3	80										
TechSkillsOffered	1	0	1	1	1	1	1	1	1	1										
TechSkillText	1	0	1	1	1	1	1	1	1	1										
#TechSkillsTexts	43	0	180	55	0	67	75	41	24	90										
Ghan LangOff	1	1	1	1	1	1	1	0	1	1										
Ghan LangText	1	0	1	1	1	1	1	0	0	1										
#GhanLangTexts	24	0	162	95	210	46	0	0	0	110										
Agric Sc Offered	1	0	1	1	1	1	1	1	1	1										
Agric Sc Text	1	1	1	1	1	1	1	1	1	1										
#Agric Sc Texts	48	45	164	25	372	120	120	34	114	50										
FrenchOffered	2	0	1	2	1	0	1	0	0	0										
FrenchText	2	0	2	2	2	0	0	0	0	0										
#FrenchTexts	0	0	2	0	0	0	0	0	0	0										
OtherVocOffered	1	0	1	0	1	1	0	1	0	0										
OtherVocTexts	1	0	2	0	2	0	0	1	0	0										
#OtherVoc Texts	1	0	1	0	0	1		44	0	0										
Acad Sec male	6	4	6	3		5	9	4	10	0										
Acad Sec Female	1	0	5	0		0	6	1	4	1										
Tech Sec Male	3	3	3	0		0	2	1	0	1										
TechSec Female	0	0	0	0		0	0	1	0	0										
Bus Sec Male	0	0	2	2		0	1	0	0	0										
Bus Sec Female	0	0	3	0		0	0	0	0	0										
TeacherTrng Male	0	0	0	0		0	0	0	0	0										
TeacherTrng Female	0	0	0	0		0	0	0	0	0										
ReptgJJS3Male	1	0	0	0		0	0	0	0	0										
ReptgJJSFemale	0	0	0	0		0	0	0	1	0										
TradingMale	0	0	0	0		0	0	0	0	0										

TradingFemale	0	0	7	0		0	0	0	0	0									
FamilyMale	0	0	8	9		0	0	0	6	0									
FamilyFemale	0	0	8	7		0	0	0	0	0									
MarriedMale	0	0	0	0		0	0	0	0	0									
MarriedFemale	0	0	2	0		0	0	0	0	0									
PracticingSkillMale	4	0	0	0		0	0	0	0	0									
PracticingSkillFem	5	0	3	0		0	0	0	0	0									
19a PTA	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
19b #PTA 93-94	4	0	3	1	2	0	6	2		5	3	2	3	2	0	2	2	1	5
19c #PTA 94-95	3	1	2	0	1	1	2	2		0	0	0	7	0	1	2	1	1	0
19d Date PTA	13/4	31/3	3/31	3/94	28/2	26/1	10/4	25/5			0	7/94	6/95	9/94	4/95	2/95	2/95	4/95	0
19e #ParentsPTA	30	50	45	20	168		5	7			0	200	10	35	5	167	34	48	0
19f PTAPurchase	1	2	1	2	1	1	2	1		2	1	2	1	1	2	1	1	2	2
19i Parents visit	1	2	1	1	1	2	2	2		2	1	1	1	2	2	1	1	1	1
19j #ParentsVisit	20	0	10	4	300	0	0	0		0		5	18	1	0	50	11	10	0
20a St Attend Recs	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
20b Tch Attend Recs	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
20c Inventory	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
20d Accts	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
20e StaffMtgs	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
20f #StaffMtgs	9	6	6	6	2	6	6	9	9	6	10	6	3	3	6	6	2	2	6

**Spreadsheet of Results from Classroom
Observation Protocols**

Region	1	1	2	2	2	3	1	1	1	1	4	4	4	4	4	4	4	1	1	1	1
District	1	1	2	2	2	3	1	1	1	1	4	4	4	4	4	4	4	5	5	5	5
School	1	1	3	3	4	5	1	6	6	6	7	7	7	8	8	8	8	9	9	9	9
Class/s	34	1	1	6	6	6	56	34	6	6	1	4	6	1	3	4	6	1	3	4	6
Minutes	40	90	100	65	110	30	110	150	80	90	80	90	80	90	80	120	50	70	70	60	50
Subject	5	5	123	2	5	71	52	9210	10	102	510	10	27	5	24	57	4	35	14	12	1
Activity			12	214	1	1247	289	124	1386	1348	1658	16	18	1824	842	149	145	14	1897	8142	27
Language	1	1	1	1	1	1	12	21	21	21	12	21	1	21	12	21	1	12	12	1	1
% on Task	80	90	50	70	85	90	90	90	85	85	95	80	90	85	80	90	70	85	85	70	95
M/F Questions	1	2					1	1	2	2	1	1	-	-	1	2	2	1	2	1	1
TEACHER CHKBD	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Student Ckbd	1	1			1	1	1	1		1	1		1	1		1			1		
TeacherTextbk	1						1		1						1		1		1		
StudentTxtbk					1		1		1							1					1
TeacherGuide																					
Stud Wkbk			1	1					1		1			1	1						
Teacher Oth Bks					1		1		1												
TeacherEquip											1										
Stud Equip											1										
TeacherLoc Mat		1										1			1	1	1	1			
StudentLocMat		1														1	1	1			
1 PROMPT	2	1	1	1	2	1	1		1	1	2	1	1	1	2	1	2	1	2	2	1
2 Materals	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1
3 Orlents	1	1	1	1	1	1	1	1	1	2	1	1	1	2	1	1	1	1	1	2	1
4 Reviews	1	2	1	2	1	1		2	1	1	1	1	2	2	2	1	1	2	1	2	2
5 Academic	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6 Speech	2	2	1	2	1	1	2	2	2	2	2	2	2	2	1	1	1	1	2	2	1
7 verbal/non v	1	2	2	1	2	1	2	2	2	2	1	1	1	2	2	1	1	1	1	2	
8 concepts	1	1	1	2		1	2	2	1	1	2	1	1	1	2	1	1	1	1	2	2
9 laws/rules	1	1	2	2		1		2	2	2	1	1	1	1	1	1	1	1	1	2	1
10 Inking words	1	2	1	1		1		2	1	1	2	2	2	2	2	1	1	2	2	2	
11 Impt Points	1	1	1	2	2	1		2	1	1	1	1	1	1	2	1	1	1	1	2	1

53	6	6	6	6	6	6	6	6	6	6	6	7	7	7	7		region
	8	8	8	9	9	9	9	9	9	9	9	10	10	10	10		District
	15	15	15	15	15	16	16	16	16	16	16	17	17	17	17		School
	1	2	3	4	6	7	7	1	34	56	56	4	1	34	12		Class/s
	45		150	45	40	45	70	60	100	45	75	50	30	110	80	4385	Minutes
	2		51	2	5	12	9	1	51	4	5	5	5	5	5		Subject
	12		462	124	1237	4	214	21	124	21	1274	124	12	124	127		Activity
	1		1	1	1	1	1	21	1	1	1	1	2	2	2		Language
	12		60	100	95	65	75	90	95	50	90	100		50	70	76 2413793103448	% on Task
	1		2	1	2	1	1	2	2		1	1	1	1	1	1 39024390243902	M/F Questions
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		60 TEACHER CHKBD
									1		1			1	1		21 Student Ckbd
					1		1	1				1	1	1			13 TeacherTextbk
			1		1								1				11 StudentTxtbk
																	0 TeacherGuide
	1		1	1	1		1	1	1		1	1		1	1		24 Stud Wkbk
																	3 Teacher Oth Bks
														1			4 TeacherEquip
					1				1								4 Stud Equip
															1		9 TeacherLoc Mat
															1		7 StudentLocMat
	1		2	1	2	2	1		1	1	1	1	1		1	1 25490196078431	1 PROMPT
	1		2	1	1	2	1		1	2		1	1	1	1	1 13725490196078	2 Materals
	1		2	1	2	2	1		1	2		2	1	1	1	1 19607843137255	3 Orients
	2		2	1		2	1		1	2	1	2	1		1	1 34693877551020	4 Reviews
	1		2	1		2	1		1	2	1	1	1	1	1	1 06122448979592	5 Academic
	1		2	1		2	1		1	1	2		1	1	1	1 38775510204082	6 Speech
	1		2	1		2	1		1	2		1	1			1 3333333333333333	7 verbal/non v
	1		2	2		2	1		1	2	1	2	1			1 37209302325581	8 concepts
	1		2	1		2	2		1	2	1	2				1 60975609756098	9 laws/rules
	2		2	2		2	2			2						1 59375	10 linking words
	2		2	2	1		1		1	2						1 475	11 Impt Points

1	1	1		1	1		1	1		1	1	1	1				1		1	1		1	1
2	1					1	1										1				1	1	1
2	1			1			2	1			2						2					1	1
2	1			1	1	1		1			2	1	1				2		1	1		1	1
1	1			1	1	1		1	1	1	2	1	1				2		1	1		1	1
1	2			1	1				1	1	1	1					2		1			1	1
1	1			1	1						1	1					1		1	1		1	1
1	1			1	1	1	2			1		1					1		1	1		1	1
2	1	1		1	1		2				1	1	2				1		1			1	1
1	2				1			2	1	1	1	1	1				12		1	1		1	1
		1						1		1							1		1	1		1	1
								2									1		1	1		1	1
2	3	4		3	4	3	2	2	1	2	4	3	3				3		3	3	2	3	2
	3	4		2	4	2	1	2	1		2	2	3				2		3	2	2	3	2
3	3	3		3	3	2	1	2	1			3	2				3		4	3	3	4	3
2	3	3		3	3	2	1	1	1	3	3	2	3				2		4	4	4	4	2
2	3	3		3	4	3	2	2	1	3	2	3	3				1		4	4	3	3	2
2	3	4		3	4		2		1	4	3	3	3				2		4	4	4	4	4
3	3	3		3	4	3		2	2	3	3	2	3				2		4	4	4	4	2
2	3	3		3	4	3	1	1	1	3	2	3	3				1		4	2	3	3	2
	2	3		3	4	3	1	1	1	3	3	2	3				2		4	4	4	4	2
	3	2		3	4	3	1		1	2	3	2	4				2		4	2		3	3
				3	4	3	1		1	4	3	2					2			2	2		2
2	2			1	4	2	1	1	1			2	4				2		4	2		2	3
1	3	3		2	4	3	1		1	2	3	2	4				22		4	3	3	3	3
3		4		3	4	3	1	2	2	3		3	3				1		4	4	4	4	4
		3		3	4	2	1		1	2		3					2		4	3	2	3	2
		3		3	4	2	1		1	3	2	2	3				2		4	3		4	3
3	2	4		3	4	3	1		1		3	2	2					4	3		1	4	3
				3	3				1								2			2	2	2	2
				2	3		1		1		2	2											
3	3	4		3	3	2	2	2	2	3	2	3	3				2		4	4	4	4	2

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12 Single Factual	1	1	1	1	1	1	1		1	1	1	1	1	1	2	1	2	1	1	2	1
13 Quest St Exp	1	2	1	1	1	1		1	1	1	1	1	1	2	1		2	2	1	1	1
14 Question analy	1	2	2	1	2	1	2	2	2	2	1	2	2	1	2	1	1	1	1	2	2
15 Feedback	2	1	2	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1		1
16 Acad Praise	2	1	1	1	1	1		2	1	1	2	1	2	1	1	1	1	1	12	2	1
17 Practice/Comp	1	1	1	1	1	1	1		1	1	1	1	1	1	1	1	2	1	1	1	2
18 Correct Sp/Gram	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	
19 Clear/Org	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1		1	1	1	1
20 Directions	1	2	1	1	1	1	1	2	1	1	1	2	1	1	1	1	2	1	1	1	1
21 Circulates	1	1	1	1	1	1	1	1	1	1	2	1	2	2	1	1	1	1	2	1	1
22 StopMisconduct	1	1	1	1	1	1	1		1	1	1	1	1	2		1		2	1		
23 Meth Misconduct	1	1	1	1		1	2		1	1	1	1	1	1		1		1	1		
1 ACAD COMPTNCE	4	3	4	12	4	4	3	3	4	3	4		3	3	2	4	2	4	4	2	3
2 New Knowledge	3		4			4			2	2	3		2	2		2	3	2	3	2	
3 States Objtvs	2	3	3	3	2	4			3	3	2		1	3	2	4	3	3	2	1	3
4 Clear Explan	2	3	1	3	3	4	3	3	3	3	3		2	3	2	4	1	3	3	2	3
5 Difficulty Approp	3	3	1	1	3	4	3	3	3	3	3		2	4	2	4	2	4	3	2	3
6 Methods Approp	3	3	1	2	2	4	4	2	3	3	3		2	3	2	4	2	4	3	2	2
7 Large/Small Group	3	4	3	2	3	4	3	2	3	3	3		2	2	2	4	2	2	2	2	2
8 Beyond Recall/Mer	4	4	2	2		3	3	3	1	3	2		2	3	3	4	3	3	2	1	
9 Effective Quest	3	3	2	2	3	4		2	3	3	3		3	2	2	4	2	3	3	2	2
10 Encouragement	1	2	1	2					2	2	2		2	4		4	2	3	1	1	
11 Accept St Ideas	2		2	1	2	3			2	2	2		2						3	1	
12 Rewards	1	2	2	2	2	3		3	3	3	2		1	3			2	3	2	2	2
13 Enthusiasm	3	1	3	2		4			1	1	3		2	1		2	2	3	3	1	
14 Active Roles	3	3	3	2		4			3	2	3		3	3			3	3	3	1	2
15 Flexibility	3	1	3	2		3			2	2	3		2	2		2		3		1	
16 Skills/Wk Hab	3		3	2	2	3	3	2			3		1						2	1	2
17 Assignments	3		3	3	2	4	3	2			3				2		2	3	3	1	2
18 Problem-solv Mtr	3	3	2	2			3		2	2	2			2		3		3		1	
19 LessonPlan	1	3	3		2	4			3	3	3		2	2	2	3		4	2	2	3
20 Purpose	3	3	2	3	2	4	3	3	3	3	3		3	2	2	4	3	3	3	1	3

1		2	2	1	1	1				1	1	1	1	1	1	10638297872340	12 Single Factual
2		2	2	1	2	2			2		2	1				1 33333333333333	13 Quest St Exp
2		2	1			2			1	2		2	1	1		1 53846153846154	14 Question analy
1		2	1	1		2			1		1		1	1	1	1 177777777777778	15 Feedback
1		1	1			1			1		1		1			1 41860465116279	16 Acad Praise
1		1	1			1			1	2	1	1	1	1	1	1 11363636363636	17 Practice/Comp
1		1	1	1		1			1	1		1	1	1		1 02380952380952	18 Correct Sp/Gram
1		2	1	1	2	1			1		1	1	1	1	1	1 08695652173913	19 Clear/Org
1		1	1			1			1				1			1 17073170731707	20 Directions
1		1	1			2			1			2	1			1 45238095238095	21 Circulates
1		1	2			1			1				1			1 07692307692308	22 StopMisconduct
1		1	2			1			11				1	2		1 5	23 Meth Misconduct
4		3	3	2	3	3	3	4	3	3	3	4	4	4	4	3 26415094339623	1 ACAD COMPTNCE
4		2	3		1	2	3	3	1		2	4	3	2		2 47619047619048	2 New Knowledge
4			4	3	1	4	2	4	2	3	2	4	3	3		2 75	3 States Objtvs
4		3	3	2	1	4	1	4	2	1	2	4	3	3		2 66037735849057	4 Clear Explan
4		3	4	3	1	4	4	4	2	3	4	4	3	3		2 88679245283019	5 Difficulty Approp
4		3	4	3	1	3	4	4	2	2	3	4	3	4		2 98039215686275	6 Methods Approp
4			3				4	2	2	3	3	4				2 86956521739130	7 Large/Small Group
4		3	4	2	3	1	4	3	2		2	4	2			3 20408163265306	8 Beyond Recall/Mer
2			3	3	2	4		3	1	2	2	4	2	2		2 65306122448980	9 Effective Quest
4			3	3	1	4	4	3	2	2	2	4	2	3		2 51162790697674	10 Encouragement
1			2	2	1	4		4	1							2 19354838709677	11 Accept St Ideas
4		2	2	2	2	4	3	2	1	2	1	4	2	2		2 26086956521739	12 Rewards
3			2	2	2	3	3	3	2	2	2	4	2	2		2 84782608695652	13 Enthusiasm
3		3	4	3	1	2	4	3	1	2	2	4		2		2 82222222222222	14 Active Roles
3			3	2	1	2	3	3	2		2	4	3	2		2 41025641025641	15 Flexibility
4		3	4	2	2	2	3	3			2					2 54054054054054	16 Skills/Wk Hab
4		3	4			3		3		2	2	4	3	2		2 725	17 Assignments
3			4		1	1	3	4	1	2	2	4	2	2		2 3125	18 Problem-solv Mth
		4								3				3		2 52	19 LessonPlan
4		4	4	4	2	3	2	3		2	3	3	3	2		2 88461538461538	20 Purpose

21 Flow/st abil	3	3	1	3	3	4	3	3	2	2	3		3	3	2	4	3	3	3	2	3
22 Pay attention	3	3	2	2	3	4	3	3	3	3	3		3	3	2	4	2	3	3	2	3
23 Instruc Strat	2	3	3	2		4	2	2	3	3	3		2	3	2	4	3	3	3	1	2
24 Tact	3	3	2		2	4		2	3	3	2		3	3		4	2	4	1	1	2
25 Questions Motiv	2	3	2	2	2	4	2		2	2	3		2	2	2	4	2	2	3	1	2
26 Indiv Differ	1	2	2	2		4			2	2	1		3	1		4		2	1	1	
27 Poise/self conf	3	3	4	3	4	4	4	2	3	3	3		3	3	2	4	2	4	3	2	3
28 Eval Fair,valid	3	3	1	2	3	4	2	2	3	3	3		0	3		3		3	2	1	2
29 Eval Approp	3	3	1	2	3	4	3	1	3	3	3		0	3		3		3	3	2	2
#####	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21

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	3	4		3	4			2			2	2	4				3		4	4	4	4	2
	3	4		2	3	3	1	2	1				2				2		4	4	4	4	3
	2	4		3	4	3	1	2	1		3		3				2		4	4	4	4	2
		4		3	4	3	1	2	2		2		3				1			2		4	3
2	3	4		3	4	3	2	3	2	1		3					3		4	4	3	4	4
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4		3	4	4	1	3	4	4		2	3	4	3	3	2 94117647058824	21 Flow/st abil
3		3	4	4	2	2	4	4		2	3	3	3	2	2 94	22 Pay attention
3		3	4	3	2	2	3	3		2	2	4	3	3	2 86956521739130	23 Instruc Strat
4		2		2		3		3		2		3	2	3	2 68292682926829	24 Tact
3			3	3	2	2	3	3	1		2	4	2	2	2 55319148936170	25 Questions Motiv
4			3		1	3	3	3	1		2	2	2	2	2 31578947368421	26 Indiv Differ
4		3	4	3	2	4	4	4	3	2	3	4	3	4	3 15686274509804	27 Poise/self conf
4		3	4			3		3		2	3		2	3	2 60975609756098	28 Eval Fair,valid
4		4	4			2		3		2	3		3	3	2 72093023255814	29 Eval Approp
46	47	48	49	50	51	52	53	54	55	56	57	58	59	60		#####