‘A STUDY OF LANGUAGE ALTERNATION IN THE GHANAIAN PRIMARY SCHOOL CLASSROOM’

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PhD
The University of Edinburgh
1998
DECLARATION

I hereby declare that this thesis was composed by myself and that the work is my own

.................................................................
ALHASSAN SEIDU
Abstract
'A STUDY OF LANGUAGE ALTERATION IN THE GHANAIAN PRIMARY SCHOOL CLASSROOM'
Alhassan Seidu

Although UNESCO 1953 recommends the use of students' mother tongue in education during the formative years, educators by no means agree on the extent to which local and international languages should be employed in primary school teaching. In Ghana language in education policy requires the use of L1 medium in the first three years, but prohibits the simultaneous alternating use of the target language (L2) and the learners' mother tongue (L1) in classrooms. However, classroom practice presents quite a different picture.

A major concern of this study is the examination of the classroom language of twelve primary school teachers with the aim of describing language alternation and its motivations in the classroom discourse of Ghanaian primary school teachers.

Through detail study using audio recordings, the study provides evidence to show that most teachers disregard the policy restrictions and alternate two languages in class. Teachers' actual classroom language use in the first three years is one of language alternation with a tendency to greater use of English. After the first three years (classes 4-6), where the policy requires the use of English, again the pattern is that of alternation between English and Ghanaian languages with emphasis on English irrespective of the status or locality of the school. A national survey of teachers' opinion about what language they use in classrooms, also confirms the use of language alternation with emphasis on the use of English at both levels. Interestingly, the alternation shows dual direction. Teachers switch from English into L1 (L2→L1) and from L1 into English (L1→L2).

The present study also provides some evidence that language alternation in Ghanaian primary classrooms may be educationally beneficial. In general terms, for example, it was found that the teachers' acceptance of pupils' use of the mother tongue in combination with loan words enabled some of the pupils to participate fully in classroom discussions and learning.

In conclusion, the study recommends that if primary education is to achieve any beneficial results of transferring school knowledge into home and community ones, then it is important that language alternation be recognised as a relevant pedagogic device for teaching and learning in Ghanaian primary schools.
ACKNOWLEDGEMENT

In putting this thesis together, I had the benefit of assistance from many people, institutions and groups whom I wish I could mention and thank individually. Unfortunately, this is not easy, nor given the nature of certain aspects of the study, prudent. However, my supervisors Dr Gibson Ferguson and Mr Anthony Howatt deserve special mention for patiently guiding and helping me throughout the project.

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Finally, I would like to express my gratitude to my family: my wife, Christina Asare and my two boys, Abudul-Wahabu and Osman as well as my brothers and sisters, for patiently enduring it all.
DEDICATION

This thesis is dedicated to the memory of my late parents, Mallam Seidu Dabilla and Abena Apppietsiwa, family, Christina Asare, my wife, my sons, Abudul-Wahabu and Osman

and

Also to three of my friends, Martin Miller, formerly of the Institute of Education, University of Cape Coast and Barry Sesnan and Sallie Buchanan, former advisers to the teaching of English in Ghanaian teacher training colleges.
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LIST OF ABBREVIATIONS USED IN THE TEXT

Bibliographical References
ADEA Association for the Development of Education in Africa
AILA Association Internationale de Linguistique Appliquée
ARAL Annual Review of Applied Linguistics
IRA International Review of Education
LPLP Language Problems and Language Planning
NAEP National Assessment of Education Progress

Functions of Code-Switching
ACK Acknowledgement
CON Content
DIR Directives
EXP Explanations
FEP Formulaic Expressions
MAN Management
QUE Questions
RFA Request for Action
SUB Substitutions
TRN Translations

Ghana Education Service Personnel and Institutions
ATGL Association of Teachers of Ghanaian Languages
CRDDD Curriculum Research and Division of the Ghana Education Service
DDG Deputy Director General of Ghana Education Service
DDG1 First Deputy Director General of Ghana Education Service
DDG2 Second Deputy Director General of Ghana Education Service
DG Director General of Ghana Education Service
GES Ghana Education Service
GESC Ghana Education Service Council
NFED Non-Formal Education Division of the Ministry of Education - Ghana

Miscellaneous
AEDP Accelerated Educational Development Plan
BIAS Brown Interactional Analysis Category
FIAC Flander's Interactional Analysis Category
IDA The International Development Agency
MLF Matrix Language Frame
Sect. Section
TTCs Teacher Training Colleges
VL Vehicular Languages.
Primary School Subjects
CS Cultural Studies
Eng. English
GL Ghanaian Language
LS Life Skills
MA Mathematics
Math's Mathematics
SC Science

Qualifications and Examinations
BECE Basic Education Certificate Examination
Cert. ‘A’ Teachers’ Certificate ‘A’
Cert. ‘B’ Teachers’ Certificate ‘B’
GCE ‘O/A’ General Certificate of Education: Ordinary and Advanced Levels

Questionnaire Response Options
A Agree
AE Always in English
AL Always in L1
D Disagree
ELE In English and L1 equally
EML In English more than L1
Freq. Frequency
L1 Language one/ Mother Tongue
L2 Second Language/ English
MLE More in L1 than in English
N Population/ total
NAND Neither Agree nor Disagree
SA Strongly Agree
SD Strongly Disagree

Schools and Grades
JSS Junior Secondary School
LPS Lower Primary School
P1 Primary Class One
P2 Primary Class Two
P3 Primary Class Three
P4 Primary Class Four
P5 Primary Class Five
P6 Primary Class Six
SSS Senior Secondary School
UPS Upper Primary School
Schools Used in the Study
Abo  Aborozo Primary School
Mak  Makaranta Primary School
WaP  Wa Para Primary School
Zon  Zongo Primary School

Teachers in the Study
TA  Teacher A
TB  Teacher B
TC  Teacher C
TD  Teacher D
TE  Teacher E
TF  Teacher F
TG  Teacher G
TH  Teacher H
TI  Teacher I
TJ  Teacher J
TK  Teacher K
TL  Teacher L

Transcription Conventions
Chd.  Child
Chn.  Children
ML  Matrix Language
Tr.  Teacher
CHAPTER ONE
GENERAL INTRODUCTION

1.1 Introduction, Aims, Scope, and Organisation

1.1.1 Introduction
The problem of what language to use for primary education in Africa is a difficult one. Some countries have tried to solve this by having bilingual instruction using indigenous local languages in the initial stages and changing over to the second language later. Others have opted for second language use throughout the curriculum. However, no matter which option is chosen the pupils’ performance is never satisfactory. There is also the additional problem of making the language policy match classroom practice. At independence in 1957 Ghana opted for the use of the second language, but in 1970 changed to a bilingual medium which involved the use of the indigenous local languages for the first three years and changed to English in Year 4. However, continuous dissatisfaction with pupils’ performance at all levels of education has led to the speculation that part of the problem might be due to the bilingual form of instruction at primary school. Most people complain about primary school teachers not following the policy on classroom language use. The complaint is that teachers alternate between different languages in the classroom and that they use local languages more than English, which the critics attribute as the cause of the pupils’ poor performance. Teachers, education authorities, and the general public are concerned and express negative opinions about classroom language alternation. Yet, language alternation is a common practice in Ghanaian multilingual society and why it should be stigmatised and frowned on in the classroom might be considered somewhat surprising. I was concerned about finding solutions to deteriorating pupils’ performance and the speculation that classroom language alternation might be a contributing factor to their poor performance. I set out to investigate the relationship between Ghana’s language education policy and the way teachers actually use language in the primary classroom. My thesis will be based on data collected from classroom
observation studies in four schools and a national survey using a questionnaire filled in by the participants. However the focus of the study is on teacher talk.

1.1.2 Aims of the Study
This study aims to investigate and describe language alternation in the Ghanaian primary school classrooms. It will also investigate the relative frequency of the use of English and Twi and the factors influencing this. It considers the functions, motivations and the directions of the alternations. The study will make recommendations for language planning, and teacher education in Ghana. It is hoped that the findings will make a contribution towards a closing of the gap between language policy planners and the realities of language use in the classroom. Policy planners will therefore be able to reconsider the present official recommendation for language use at the primary level. They might also consider introducing a language alternation component into:

(i) the 38 post-secondary teacher training colleges
(ii) teacher education in-service courses
(iii) and the B Ed pre-service at the University of Winneba

It is also hoped that the recommendations will lead to a reorganisation of teacher training programmes producing teachers for the primary schools and a more vigorous introduction of training schemes for mother tongue teaching.

1.1.3 The Scope and Organisation of the Thesis
Both English and GL are taught as subjects and also used as languages for instruction in Ghanaian primary schools. Therefore the pupils develop bilingualism as a matter of course. The teachers who have themselves gone through the same system are bilinguals in English and the relevant GL. They therefore alternate between English and GL in the classroom with their pupils. However, the policy on classroom language use insists on teachers using only one language in a lesson (MOE:EP439/11/221 undated, cited in The English Panel 1992). Teachers and their pupils have both been observed to alternate between English and GL in primary schools. However, this study is concerned with the teachers' language
alternation in both language and content lessons, namely English language, Ghanaian language, mathematics and science. It also considers the motivations, functions and the directions of the alternations in each subject. The study is not interested in the acquisition of code-switching and constraints on code-switching. Its major interest is in the social motivations for classroom language alternation in the primary school.

The thesis is divided into three parts: a literature review, the study itself and implications and recommendations. In the first part, chapter 1 introduces the problem, the aims, scope and organisation of the thesis. It covers the research questions, the theoretical perspective, the limitations, and the significance of the study. Chapter 2 reviews the literature on the language of education in African primary schools and also on language alternation. Chapter 3 describes the background and setting of the study.

In the second part, chapter 4 describes the research methodology which involves the design of the research, the sampling procedures, data collection techniques and analysis. Chapter 5 reports the results and discussions of the classroom observation study on the frequency of the use of English and Twi, ‘a Ghanaian Language’ which will henceforth be abbreviated as GL, and also classroom language alternation. Chapter 6 reports the results and discussions of the questionnaire data. It reports on the teachers' estimation of the amount of each language they used in class and their attitudes to English and GL. It also reports the results of an unofficial test conducted to get an estimate of the reading proficiency of class 5 pupils. This was used in assessing complaints of deteriorating academic performance of primary school pupils by the Ghanaian public.

In part three, chapter 7 summaries the work and discusses the implications of the results in relation to primary and teacher education curriculum development and gives recommendations for improving the curricula at both levels.
1.2 The Research Questions, Perspective and Limitations

1.2.1 The Research Question
The basic question that the research was designed to answer was: ‘What is the language of instruction for both language and content subjects in Ghanaian primary schools and to what extent does this relate to the official language policy?’ To answer this question data were collected on the languages that teachers and pupils used, when they were used, and for what purpose. This was then used to establish the relative frequency of the use of English and GL in lessons, the function of alternations from one language to another, and the motivations for the alternations.

1.2.2. Methodology: Approach and Rationale
This study uses a mixture of qualitative and quantitative methods for data collection and analysis. This approach was chosen largely because the study is non-interventional in character, but at the same time permits the selection of parameters for the study. Like most recent language alternation studies, it takes account of the social conditions that shapes the discourse and interprets data in relation to the meanings or interpretations given by the participants in the discourse. It also uses cues within the text to interpret the discourse. The study adopted this approach because it reveals how code-switching in bilingual discourse is shaped by the social conditions operating in different types of classroom. It was also seen as more appropriate for the Ghanaian context because it had been used and tested by other researchers such as Guthrie (1987) and Lin (1990) in a context similar to that of the current study. Both Guthrie (1987) and Lin (1990) used it with beginners learning English as a second language.

1.3 The Significance of the Study
The study is significant because its ultimate purposes are to describe teachers’ classroom language use and the factors influencing the choice of language in primary schools in Ghana where the knowledge of English for pre-school children
is generally poor. It also describes functions of language alternation amongst primary school teachers in Ghana and contributes to the language of instruction debate in Ghana. The study is significant in that it describes the use of language by primary school teachers in Ghana at an opportune time because issues of language use are likely to be highlighted by changes in basic education administration. Ghana has reorganised her teacher education, making teacher training programmes school-based, while placing administrative responsibility for primary education in the hands of local authorities who lack informed knowledge about the realities of language use at primary level. Therefore practical issues concerning the language of instruction in the primary classroom will be very important because parents who are keen on English might try to prevent teachers from using GL as a language of instruction. The findings of this study will therefore provide useful information to close the gap in Ghana between the teachers in the primary classroom and the decision-makers at the local level. It will also help reduce any tension between parents, and local leaders on the one hand and teachers on the other over the language of instruction. The study provides useful information for planners, curriculum developers and teacher trainers in Ghana and it will also serve as a guide for other researchers in this field of study.

1.4 Limitations of the Research

This research involves a study of classroom practices in Ghana in four subjects of the primary school curriculum namely English language, mathematics, science and GL. The study used only twelve teachers, four schools, and primary schools classes 3, 4 and 5 for data collection on classroom language use. It is limited by collecting data largely through systematic classroom observation using a simple tape recorder. The use of an audio video recorder if available, could have provided more information. The study was also limited to the use of only forty-five lessons because of poor sound recorder.
CHAPTER TWO

REVIEW OF LITERATURE:

THE MEDIUM OF EDUCATION IN AFRICAN PRIMARY SCHOOLS.

2.1 National Policies on Language and Education in Africa

2.1.1 Introduction:
This section reviews national policies on language and education in Africa. It traces the historical development of language policies and gives a brief description of the present situation. It argues that the present practices in Africa are a reflection and a carry over from the colonial past. It also reviews factors influencing the choice of a language for use in education in African primary schools.

2.1.2. National Policies on Language and Education in Africa
The study of the use or non-use of indigenous African languages in education should start from the policy level, because the place allotted different languages in education, whether African or European, depend on political considerations (Spencer 1963:3). Education in African countries, as it is presently constituted, or what is in Africa commonly referred to as ‘formal western education’ was introduced by missionary and colonial powers in the seventeenth century. At independence the colonial experience continued to shape and define policy practices. Bamgbose (1991) commented that:

‘Thus, while it would seem that African nations make policy in education, what they actually do is carry on the logic of the policies of the past. Nowhere is this more in evidence than in the very languages selected, the roles assigned to them, the level at which languages are introduced and the difficulty of changing any of these’ (Bamgbose 1991:69).
Evidence of the colonial practice is clearly shown in education where African countries neatly divide into two groups to reflect the colonial practice of foreign language use. In all the former French colonies in Africa French is used from the first day of school. This is in accordance with the colonial educational policy of the French who discouraged the use of mother tongue because of the policy of assimilation. In the British colonies the mother tongue was encouraged except in Sierra Leone, which explains her use of English from the beginning of schooling. In countries such as Ghana, Nigeria and Uganda English is introduced at some point in the primary school which is also a reflection of the colonial past. Although the Belgians encouraged mother tongue in present day Zaire, the country has opted to use French as the language of instruction. The only two countries breaking away from this colonial past are Somalia and Tanzania which have respectively introduced Somali and Swahili as the languages for primary education and the colonial language is introduced in the secondary schools. This is the prevailing situation in Africa today. Where mother tongue education was practised during colonial times, its function, role and place in education has not changed. That is, ‘mother tongue education’, is still limited to initial literacy, language for instruction at the lower level or a subject at primary schools and higher grades. Therefore, throughout Africa the national language and the language of education includes a colonial language. Cameroon presents a unique picture. English and French are both national and educational languages because Western Cameroon was a British colony and the East was a French colony (Bamgbose 1976:17-20, 1991:69).

The language policies adopted by African countries are largely shaped by the role and function of the languages in the community. This in turn influences what role or function the language will have in education. Since multilingualism involves a multiplicity of languages, there must be a choice. This however depends on a number of sociolinguistic factors such as the status of the language, the number of speakers and whether the language has written material. Ideally, a language considered as a national or an official language will have a prominent place in education. This explains the prominent role of English or French in most African educational systems. There is also the recognition that when a language has a large
number of speakers it is likely to have a greater role in education than one with fewer speakers. However, in spite of the size, if the language has no orthography and the one with fewer speakers has material for education available then it might be the obvious choice (Bamgbose 1991:71-72, Banjo 1997:308).

2.1.3 The Choice of National Language and Language for Instruction in African Primary Schools
The choice of a national language for instruction is not an independent activity but one intrinsically linked with the question of status planning. This involves the choice of a national or an official language(s). Invariably the chosen national language or official language becomes the national language of instruction. This explains why to this day, in most African countries, the language of the former colonial power is always the language of instruction and also the national or official language. However, for the political choice to be effective, and beneficial to the individual and society, it should be based on well informed educational thinking and also on sound educational, social, and political parameters. Questions that should be raised include:

- What should a national language of instruction do?
- Can a second language be a national language of instruction?
- What should a national language be?
- How can its inclusion in the national school curriculum be justified?
- What practical factors have to be considered?

(a) What should a National Language of Instruction do?
According to Trappes-Lomax (1990) a national language should enable the individual to become educated by being able to relate to teachers and colleagues usefully, and express himself in an ‘educated manner’. The individual should also be able to think and learn to think in the language and receive and impart educational information. For the society, the language of instruction should make it possible for the society to achieve its educational, political, and socio-cultural goals. These should be achieved universally and equally for all citizens and in an
economic and efficient manner (Trappes-Lomax 1990:95). If these principles are applied to Ghana, the sad observation is that I do not think they are achieved at all.

(b) What Should a National Language of Education Be?
A national language for education, Trappes-Lomax (1990) points out, should have objective and subjective characteristics. Under the objective characteristics, the language should be a codified standardised language in order to minimise non-functional variation. It should also be elaborated to enable it cope with a wide range of functions and it should have orthography or written form to ensure literature is available in it. Its subjective characteristics, should make it acceptable to all concerned as being suitable for its assigned role (e.g. parents, teachers, pupils, and the society at large). It should also be teachable to appropriate standards and have an adequate number of competent and proficient teachers. In addition, it should be native or used in the community (e.g. native, second or additional language) (Trappes-Lomax 1990:95). Although English in Ghana is used as an additional language (Judd 1989:38), it is not known whether its use for instruction in the primary school is really effective.

(c) Choice of a Subject in a National School Curriculum
Donoghue and Kunkle (1969:1) suggest that every subject on the school curriculum must justify itself on three counts. It must be a means for preparing pupils to face the real world, to perform other tasks, and to have personal fulfilment.

The application of these three criteria to multilingualism of Africa in general and to Ghana in particular does not give a straight forward answer. Although it has the potential to prepare pupils to face the real world if it is effectively used, relatively few pupils in primary schools ever reach the stage where the second language can effectively serve to prepare them for life. The use of the second language in the primary school is not an effective way of preparing the child to face the real world. It is not a tool for the primary school child to perform other tasks and it is certainly
not a means of attaining personal fulfilment because pupils leave the primary school without acquiring fluency in the second language. Many can neither speak, read nor write properly in the second language. One possible way to ensure that the second language may meet the three criteria mentioned above is to combine it with the mother tongue until the pupils have learnt and acquired enough of the second language to benefit from its sole use before a switch is made to the use of the second language only. Language alternation may be used initially to facilitate the comprehension of the second language. By this approach, it is likely that the second language can in future meet the three roles mentioned above.

2.1.4 Language Education Policies in Africa

(a) Statement of Policy
Bamgbose (1976) cautions that language policies in education of many African countries are fluctuating and inconsistent between policy and practice, and are often ambiguously stated. The best way to pin-point a country's language policy, is to observe what actually goes on in the system (Bamgbose 1976:18). The ambivalence which Bamgbose mentions is designed to avoid embarrassing the political elite, because the confusion in the policy statement allows for different interpretations in different localities. For example, in Ghana, although fifteen GLs are officially recommended to be used in education (Bamile 1995:11), in practice there is no GL that is not used in education. Those without an orthography are used orally by native speaking teachers and those with orthography, but are not officially recognised, are equally used by native speaking teachers with or without literacy development. Those with orthographies, resources, and which are officially recognised are used either as the language of literacy or for oral teaching.

(b) Policy Implementation
Okombo and Rubagumya (1996:7) argue that two important factors determine the successful implementation of linguistic policies, but which are lacking in most African countries are the need to set clear objectives and the need to create an environment that promotes successful implementation. They further argue that the
functions the chosen language must fulfil should be clearly defined and the policy objectives must be well publicised together with clear instructions on the hierarchy of personnel for implementation. In addition, they also argue that it is important to carefully plan the implementation activities and indicate which organisations are responsible for particular roles. The creation of the organisations for implementation goes hand in hand with publishing. For example, they noted that in Mali computer-assisted publishing facilitated the production of affordable local teaching material (Okombo and Rubagumya 1996 *ibid.*).

### 2.1.5 Typology for Designing Language Policies

Banjo (1997:314.) argues that the most realistic language planning policy would seem to be trilingualism because a typology he offers requires that every product of primary education, acquires the mother tongue, a foreign language, and the indigenous national language (for those which it is not a mother tongue).

Banjo (1997) observes that:

> 'Any meaningful language policy in anglophone West Africa must recognise the presence in the sub-region of two categories of languages, namely, the indigenous languages,... and a powerful and dominant exoglossic language, namely, English, which may be said at present to hold these countries internally together, providing an official language and a fast-growing *lingua franca* ' (Banjo 1997:310).

In line with his observation, he concludes that:

> 'A realistic assessment of the situation must lead us to the conclusion that, at least for the time being, English must continue in this role while, ... an indigenous language is groomed to take over in the long run. This would appear already to be the feeling throughout West Africa... ' (Banjo 1997:loc.cit.)

This observation is as true for anglophone West Africa as it is for francophone West Africa and perhaps is also true for the rest of former colonial countries in Africa.
2.2 The Medium of Instruction Issue in Primary Education

2.2.1 Introduction

The debate about what language to use for instruction in primary schools in Africa has been a moot point. One school of thought thinks it is advantageous to use the mother tongue during the initial stages. Another believes in the early introduction of a foreign language which will eventually be used in the higher grades. Since language without doubt is the most important factor in the learning process for the transfer of knowledge and skills, in the primary school, where children start learning new concepts and ideas different from their home experiences, it seems appropriate to start instruction in a language the children already understand. This is however not so in most African countries. Rubagumya (1993) notes that the problem in most African countries is the continued use of a foreign language as the instructional medium despite repeated observation of its ineffectiveness to function as such. Also English will not be used by most of those who graduate from these levels of education in disseminating information and communicating with the masses (Rubagumya 1993:11).

2.2.2 The Medium of Education at Primary Level: The Mother Tongue Debate in Africa

(a) The concept of Mother Tongue

The term ‘mother tongue’ is elusive and difficult to define precisely. However when most people use it they mean the home language, the native language, or the first language. Pattanayak (1986:52) however, suggests that when mother tongue education is applied in a multilingual context it has very little meaning. In India many children, as in Ghana, come to school already knowing two, three, or even four languages. These languages have often been acquired simultaneously by the children. It is not possible for both the children and their parents to tell which of the languages was acquired first. Even the idea that the mother tongue is acquired from the parents is questionable. The findings of Serpell (1989) in Zambia are also true for Ghana.

"Zambian babies have very, very privileged physical access to their mothers during the first twelve to eighteen months of life, ...but when the next baby comes along that privilege access
is abruptly cut off, and from the age of two or so most Zambian children [just like Ghanaian children], spend more time in the company of other children than their mother or father" (Serpell 1989:97).

From the age of two, the group of children the child interacts with determines the child's linguistic repertoire.

(b) The Mother Tongue as the Language for Instruction

The term generally used to refer to teaching in the child's home language is "mother tongue education". It is the use of the children's vernacular as a means for teaching in the school. This can be for some or all of the content subjects, or it may be for part or the whole of the child's school life (Le Page 1964:18-21; Bamgbose 1976:11; Skutnabb-Kangas 1981:215 and Fasold 1984:293). This study argues that in some countries two languages may be used in education simultaneously. Both languages may be native to the country or one may be indigenous and the other foreign. For example, Ghana uses English and a relevant Ghanaian language. However, the relevant Ghanaian language may be used in school where it is either a foreign or a second language. For example, in some parts of Ghana, especially in the Brong Ahafo region, Akan, which is used as GL, is not the native language of the people. The native language may be Nchumburu or Mo. So the school language may be native to the country, but it may not be the mother tongue of the pupils. Educators do not agree about mother tongue education. However, there is general agreement that children should be educated in their mother tongue especially during the formative years, not withstanding the practical difficulties that sometimes threaten such a venture' (Boadi 1976:83).

2.2.3 The Debate on Foreign Versus Indigenous language of Instruction

In most African countries bilingualism or multilingualism is a common practice among the population. This may involve either two indigenous languages or a foreign language and an indigenous language. Yet, when it comes to deciding language for education, this fact is often ignored and the choice is either a foreign language or an indigenous one but never both (Bamgbose 1991:74). Okombo and Rubagumya (1996) argue that although research evidence has demonstrated that
the use of foreign language in African classrooms results in cognitive and pedagogical difficulties the practice nevertheless persists.

'Linguists and educational psychologists agree that the use of the mother tongue as the language of instruction in the early years of education has proven advantages, especially where the development of cognitive faculties is concerned. Conversely, it has been demonstrated that classroom language use of a language which is not the language spoken by the child, results in cognitive and pedagogical difficulties' (Okombo and Rubagumya 1996:5).

One of the earliest debates on what language should be used for primary education in Africa was the Phelps-Stokes Commission, the British Educational Policy in Africa (1927) which recommended the use of indigenous languages in education (Boadi 1976:88). More recently, the UNESCO (1951) Committee of Experts Report (1953) proclaimed that:

'On educational grounds, we recommend that the use of the mother tongue be extended to as late a stage in education as possible. In particular, pupils should begin their schooling through the medium of the mother tongue, because they understand it best and because to begin their school life in the mother tongue will make the break between home and school as small as possible' (Bamgbose 1991:74).

This report reinforced the practice of mother tongue education where it existed already and supported its introduction where it did not.

2.2.4 Research in Africa and Advantages of Mother Tongue.

Among the studies carried out in Africa, the Ife Six-Year Primary Project (1970) conclusively shows that the use of the mother tongue for instruction has advantages for the development of cognitive faculties in the early years of education. It demonstrated the superiority of teaching in the mother tongue throughout the primary level over teaching in a foreign language (in this case English) at all grades of the primary level. The pupils in the Ife Project scored higher than their counterparts in the regular schools both academically and cognitively. In addition, they were no less skilled in English than those who were taught in English during the last three years of the primary school. The study also shows that the use of mother tongue instruction at the primary level has advantages that go beyond academic success. It also has cultural, emotional, cognitive and socio-psychological benefits (Okombo and Rubagumya 1996:5). Similarly, the Mali Mother Tongue Education Project (1985) demonstrates cognitive benefits
and shows that the use of the mother tongue at the primary level is an important factor in academic success. The study followed 154 pupils from experimental schools and 340 pupils from French-speaking schools starting at the same level over six years. Forty-eight percent of the mother tongue group finished their studies without repeating a single class as compared to only seven percent from the French control group (Okombo and Rubagumya 1996:loc.cit.). In South Africa, The Threshold Bilingual Project (1990) concluded that bilingual programs in which a foreign language is used before a certain age or cognitive level is attained are not likely to be successful (Okombo and Rubagumya 1996:ibid.). In Ghana, Collison (1972) found that children were able to express and explain more scientific concepts in more complicated forms in their local languages (Ga and Twi), concepts they almost completely failed to understand when introduced to them in English. Similarly in Tanzania, research on secondary school education demonstrates that Swahili is superior to the use of English for cognitive development. For example, Okombo and Rubagumya 1996) note that:

‘when students were asked a question in English, the answer was often incoherent and irrelevant, showing lack of understanding of the question and / or inability to reply in English. When the same question was asked in Swahili, students gave a relevant and articulate answer in Swahili’ (Okombo and Rubagumya 1996:ibid.)

In Ghana however, Asante (1994), in a study of 18 children selected from three schools in the Winneba area, concluded that students from schools where English was used as the language of instruction from primary class one performed better academically than their counterparts from the public schools where the mother tongue was used for the first three years and English for the last three years of primary education (But see 3.9.6). Similarly in Zambia, MacAdams (1973) compared the performance of children who had gone through experimental schools using English as the language of instruction with children who went through a conventional scheme which used the mother tongue for the first three years and English for the last three years and concluded that those taught in English had a superior performance than those with the bilingual language (MacAdams 1973, cited in Serpell 1989:100).
However, Serpell (1989) tells us that:

"The statistics displayed in the thesis show us that the English-medium Scheme produced two clearly demarcated groups, an average group who were well ahead of the Zambian language group, and another group who were well behind them on a test of English. I interpret this as meaning that there is a large minority of children in the English-medium who could not read at all, which is just what Sharma found when he looked directly at reading" (Serpell 1989:loc.cit.).

2.2.5 Research Outside Africa and Advantages of Mother Tongue

The problem of what language to use in primary school is not peculiar to Africa. Though the context may vary significantly, there are useful lessons to learn from research outside Africa. From 1978 to 1981, the University of Bradford in Great Britain observed the effects of a yearly bilingual programme for five-year-old native Punjabi speakers (an Indian language). The experimental group who were taught partly in Punjabi and partly in English scored much higher than the control group taught using English only (Okombo and Rubagumya 1996:6). Martin-Jones (1995) in a study of the role of bilingual teaching assistants in reception classes in the north-west of England reports that the bilingual assistants’ relationship with the children showed cultural, emotional, and socio-psychological benefits to the children.

"In speech exchanges which were primarily learner-oriented, a close and caring relationship with the children was established...the children clearly responded positively to the interactional style of the...bilingual assistants" (Martin-Jones 1995:105)

The Center for Minority Education and Research of the University of California in the United States in studies of bilingual education programmes (1981-1991) aimed at determining whether teaching Spanish-speaking students who have limited English proficiency, mostly in English or in combination with Spanish, enabled them to “catch up” with their native English-speaking peers in basic skills in English language, arts, and mathematics. They studied fifty-one schools from five states and looked at three types of bilingual programmes:

- English Immersion (almost all teaching in English)
- Early-Exit-Bilingual (less than forty minutes instruction in the mother tongue per day, for two to three years)
• and Late-Exit-Bilingual (instruction in the mother tongue constituted about 40 - 50% of the day’s work up to grade four).

The study concluded that:
• the students’ mother tongue is the most effective language of instruction
• rapid transition to classes taught only in the students second language does not allow for satisfactory development of the students’ linguistic and cognitive abilities
• the second language can be taught effectively if half of the students’ classes are taught in that language
• a bilingual/multilingual programme, integrated into the regular curriculum, gives the best results (Okombo and Rubagumya 1996:6).

Gibbons (1989) informs us that the cumulative evidence of research in Hong Kong is that:

'Chinese (or predominantly Chinese) is the more effective medium of instruction, for the simple reason that, by and large, Chinese children understand it better... In fact, in many cases the English of children entering secondary school is grossly inadequate for receiving instruction in that language: after about 800 hours given over to English in the primary school curriculum, most pupils enter secondary school with no more than the most rudimentary competence in English, and many without even this' (Gibbons 1989:129)

Gibbons (1989) also notes that the cumulative evidence from the studies in Hong Kong also indicates that the lower a child’s academic ability, the more problems are caused by the use of English (Gibbons 1989:loc.cit.).

Research in Africa and other parts of the world seems to confirm that, from a pedagogical point of view, children learn better when taught in their mother tongue or encouraged to use it in discussion. However, it is difficult to determine exactly the degree of importance of the use of the L1 language for academic success in Africa because other factors also play an important part in determining success. For example, the quality of teachers and teaching methods, quality and availability of educational material, pupil motivation, educational supervision and the status of the L1 in the national community as compared to other L1s in the same country.
The fact that one or two studies have shown the advantages of teaching in the mother tongue does not mean it is universally applicable.

2.2.6 Advantages of the Use of Foreign Languages in African Primary Schools

It is argued that recent advances in computer technology have made a great deal of learning and processing of knowledge available on the machines, and, as is well known, computer language is largely based on languages of wider communication (LWCs) such as English and French and not on any African language. Thus the use of English for instruction is an advantage since this knowledge can be used later to acquire scientific and technological knowledge. Bamgbose (1991:80) notes that:-

'a good mastery of a LWC and a prominent role for it in the educational system in Africa seem too obvious to require any special pleading'. As long as science and technology are transmitted in these languages, an almost unchangeable role is assured for them as media of instruction in secondary and tertiary levels of education'.

It is therefore argued that since the mastery of a second or foreign language takes time and the foreign language is going to be required for instruction and learning at the higher grades it is better to introduce it early in the primary school. This is supported by Stern (1978) who suggests that:

'success in the initial use of the L2 may be due to teaching the school curriculum through the medium of the second language, which stimulates the child's bilingual home experience, allowing the learner to learn the L2 in a similar way to which the L1 was acquired... in this way language is acquired directly and not rehearsed for later use as it allows the learner to infer more often from both the situation and context, improvise and take risks with the L2 similar to coping techniques needed in real life communicative situations' (Stern 1978, cited in Stevens 1984:6).

It is also claimed that the use of a second or foreign languages has the advantage of continuity and the avoidance of the enormous cost of starting afresh. For example, this claim will suggest that the use of English in Ghana has the advantage of continuity of education from colonial to post independence period. English was the established language of instruction before independence so English textbooks and other teaching resources such as trained English teachers are available, but these are not available for the mother tongue. The cost of training teachers and providing resources in the mother tongue is enormous and not worth the effort since English
would inevitably be used at a later stage. However, the real cost of education in a foreign or second language must be weighed in terms of poor performance, high drop-out rates, cost of recruitment of foreign experts and the use of unsuitable material.

### 2.2.7 Disadvantages of the Use of Foreign Languages in African Primary Schools

Rubagumya (1993:1-2) points out that one of the major disadvantage of the use of a second language in African primary schools is that the language of instruction acts in varying degrees as a barrier to effective learning and teaching and Arthur (1993:63) also concluded that the policy of English medium in primary schools is a handicap to teachers and pupils in their pursuit of meaningful learning.

### 2.2.8 Advantages of the Use of the Mother Tongue in African Primary Schools

The Senegalese Deputy Minister for Basic Education and National Languages, Ndoye (1996) in an interview noted that a key advantage in using local languages in educating children and adults is that it helps the literacy campaign because it encourages people to learn to be literate in a language they already speak.

> "Literacy campaigns which aim at rendering people literate in a foreign language are not true literacy campaigns. They involve learning a foreign language and then gaining access to its written code. A true literacy program consists of helping people who speak a language, but cannot write it, to master the written code." (ADEA Newsletter 1996:10).

Findings from psychological research tell us that very little or no learning may take place for learners who are instructed through a language which is incomprehensible to them. It is clear from some of these studies that both English and the mother tongue may be used in the acquisition of basic concepts, with the stronger language (the mother tongue) mediating learning in English. For example, Dodson (1962) argues that:

> "the second language learner initially relies on concepts thought in his native language when he is learning the meaning of foreign language statements he hears. Only after repeated practice and application of the second language statements does he begin to rely less and..."
less on concepts thought in his mother tongue until eventually he is able to 'think' in his second language' (Dodson 1962, cited in Opoku 1994:27).

Opoku (1994) also argues that:

'Much of what is taught and learned through the medium of English may... be overtly or covertly referred to the more developed mother tongue representational system for semantic analysis and interpretation and then 'translated' to English if a response is required in English. Thus much learning at a lower level of educational experience may involve SEMANTIC TRANSFER from English to the mother tongue and from the mother tongue to English. If school children are inept in English, then there may be little, if any, of such semantic transfer and efforts made to teach these children to acquire concepts through the medium of English may be fruitless. The finding that the influence of the mother tongue on English is greater than that of English on the mother tongue for even moderately competent bilinguals makes the situation worse for children trying to acquire concepts through the medium of English' (Opoku 1994:28).

2.3 Arguments For and Against Educational Uses of the Mother Tongue

2.3.1 Educational Considerations

The use of mother tongue instruction in primary schools undoubtedly has many arguments in its favour. Many educational and linguistic studies support the idea that primary education should start in a child's mother tongue. At the international level it received its first support from UNESCO Report 1953: The Use of Vernacular Languages in Education (UNESCO 1953:11). Although the authors acknowledged and discussed the difficulties associated with implementing such a policy they agreed that

'It is axiomatic that the best medium for teaching a child is his mother tongue. Psychologically, it is the system of meaningful signs that in his mind automatically works for expression and understanding. Sociologically, it is a means of identification among the members of the community to which the child belongs. Educationally, he learns more quickly through it than through an unfamiliar linguistic medium' (UNESCO 1953:11, cited in Fasold 1984:293).

It is therefore argued that since mother tongue acquisition begins very early in life its importance in the development of the child's intellect and other aspects of personality in early education must be profound. (Le Page 1964:21, Bamgbose 1976:11, Boadi 1976:83, and Fasold 1984:393). Bull (1955) in a classic review of the UNESCO (1953) document on the use of vernacular language in education,
argues that UNESCO's position, with regard to the psychological and pedagogical argument, is unrealistic. He declares that:

'what may be desirable and convenient psychologically and pedagogically from the point of view of the child as an individual may not be the best for the adult members of the community', not as individuals, but as a corporate body. Educational planning in the twentieth century', he argues, 'must take account of considerations which do not necessarily accommodate all aspects of the individual's well being' (Bull 1955:290-291).

Le Page (1964), in arguing against the use of the mother tongue points out, the lack of adequately controlled experiments in multilingual societies to prove the claim that the child learns more quickly through the mother tongue. He also maintains that it is still wasteful and confusing to teach children in a vernacular that is not used as the language for their further education. He notes that apart from innate intelligence the most important factor in determining how quickly a child learns is the attitude of all concerned (parents, teachers, and the children) towards the language of instruction and to the subject matter (Le Page 1964:23).

It can also be argued that it is unrealistic to assume that a child discovering the existence of a new language at school would experience psychological problems especially in multilingual societies where the child's daily experience includes awareness and knowledge of other languages. Most children come to school already knowing different languages and are able to code-switch between them. It is therefore debatable that such children can experience shock because they arrived in school to discover that the school language is different from theirs. The children may only be shocked at the teachers insistence that they use only the new language which they do not know.

In anticipation of some opposition to their suggestions, the authors of the UNESCO Report (1953) considered possible opposition views and suggested possible solutions. For psychological and educational considerations they predicted that the following issues would be raised:

- that some languages have no pedagogical grammars and no tradition of literacy
- in many regions diverse languages exist side by side
• some languages have not evolved an adequate vocabulary and would not be suitable for instruction

For the lack of pedagogical grammars and a tradition of literacy the Committee Report argued that all languages have grammars although pedagogic written grammars may be lacking these could be developed. For the scarcity of textbooks and other teaching resources the Committee argued that it should be possible to develop what is lacking. They also reluctantly suggested that the mother tongue could be used as far as limitations would allow and from there a gradual change could be made to the use of a second language. The Committee conceded that where there is a diversity of languages within a given locality it may be necessary to teach some children in a language which is not their native tongue. Besides this, the Committee made a passionate appeal to governments, that might be faced with such situations, to provide education in as many of their native languages as they could support. The use of a foreign language should be seen as the last resort and be used only when absolutely necessary. The Committee recommended that educationists should endeavour to persuade communities who objected to the use of the mother tongue for instruction that there were merits in its use (Fasold 1984:293-296). The communities should be persuaded that children learn more quickly through the mother tongue than an unfamiliar language. Also that mother tongue instruction serves as a useful first step in preparing them for the later learning of the target language. This argument seems not to take into account the quality of the teacher, educational material and the teaching methods used. It is erroneous to assign success to the use of the first language alone because other factors are equally important. Therefore, the relative importance of the first language in educational success is debatable. Besides that the UNESCO Committee did not specify how the mother tongue should be used to achieve this desired objective. The other questions unanswered are:

• What do children learn most quickly through the mother tongue? Is it reading, writing, speaking, or content?
Another argument in favour of the use of the mother tongue is that education in a foreign language tends to alienate the child from his parents and culture. An example cited as evidence of the loss of culture is the development of dual identity through conversion of African children into Christianity or Islam as a result of Western and Islamic education.

However, I think this view is claiming too much because it implies that multilingual societies have lost their culture and are operating in other people's cultures. Multilingual communities today are probably as alive in their culture as they were thousands of years ago. The level of education received by an individual in a foreign language cannot make the recipient unconscious of his cultural identity. This partly explains why the French colonial policy of assimilation failed to turn black Africans into Black French people. It explains why, in spite of centuries of contact with the Arab world and its education through Classical Arabic, the Moslem communities of West Africa are still not 'arabised' (Fortune 1963:72). In addition, to argue that foreign language education might result in the development of dual personality is to attribute a causal role to the language of instruction that is unsupported by any evidence. The educational contribution to personality development is known to emanate from many factors which include school climate, attitudes to school, parental influence and socio-political factors. The development of dual personality is not a result of the language of instruction. However, Ahai and Faracas (1993) seem to provide evidence of alienation resulting from the use of second language only:

"The education system in Papua New Guinea (PNG) through its enforcement of 'English Only Policy', ...has managed to produce for the neo-colonialist system the two classes upon which it thrives: a very large number of losers or 'school leavers' ('pushouts' — who are alienated and powerless in the context of industrial society) and a very small number of winners or 'elite' graduates. — who are alienated but powerful in the context of industrial society) (Ahai and Faracas 1993:82-6).

Pattanayak (1986) argues that the use of the mother tongue is a fundamental human right.

"A mother tongue is the expression of the primary identity of a human being. It is the language through which a person perceives the surrounding world and through which initial
concept formation takes place. The mother tongue is the medium through which the child establishes kinship with other children and with adults around. The mother tongue is the language, the loss of which results in the loss of rootedness in traditions and mythology of the speech community and leads to intellectual impoverishment and emotional sterility. Mother tongue education is a matter of right as well as a need for every child' (Pattanayak 1986: 7-9).

Although it is widely accepted that the mother tongue is the language of initial concept formation and one through which a person perceives the surrounding world, by contrast there is no language a person cannot use to perceive his or her surroundings and form initial concepts. There is also no time when a person stops perceiving the surrounding world and developing new concepts.

Donoghue and Kunkle (1969:4) support this view when they state that:

'There is some evidence that dealing with reality by means of two languages actually increases mental capacity. The process of dealing with reality via second medium of instruction is a tremendously enriching experience. When one realises that not all thought can be fitted neatly into one's language thought patterns and that other languages express certain ideas better than one's own, one has taken a giant step towards becoming really a liberally educated person. The attempt to see the world as another cultural group sees it does a great deal to promote personal and cultural sensitivity and may lay the foundation for understanding between peoples of the world'.

Vygotsky (1962) more clearly illustrates the point by arguing that:

'Being able to express the same thought in different languages will enable the child to see his language as one particular system among many, to view its phenomenon under more general categories, and this leads to awareness of his linguistic operations' (Vygotsky 1962:110 cited in Swain and Cummins, 1986:13).

Contrary to Vygotsky's (1962) view however, it seems that the ability of a child to see his language as one particular system among many, which can lead to metalinguistic awareness, may depend on the child's level of second language competence. A less developed second or foreign language is unlikely to develop a child's metalinguistic awareness (Baker, 1993:135-137). Moreover, the development of the first language does not lead to recession in the second language. On the contrary, there is evidence to suggest that the development of L1 may lead to the development of L2. Cummins (1991) argues that the development of proficiency in the L1 is important because it improves cognitive functioning and facilitates subsequent acquisition of an L2. His case rests on two theories:

- the theory of developmental interdependence
and common underlying proficiency theory

Cummin's (1991) Developmental Interdependence Hypothesis proposed that:

"the development of literacy-related skills in L2 was dependent, at least, partly on a function of prior development of literacy-related skills in the L1. A child's second language competence is partly dependent on the level of competence already achieved in the first language (Cummins, 1991:76)"

This hypothesis implied that L1 and L2 skills were manifestations of a common underlying proficiency. Thus, the more developed the first language the easier it is to develop the second language, but when the first language is at a low stage of development bilingualism is difficult to attain. (Cummins and Swain 1986:80-95; Romaine 1989:238; Cummins 1991 loc.cit.; Baker 1993:140). Spolsky (1989), uses psycho-linguistic studies to support this hypothesis when he remarked that:

"any physiological or biological limitations that block the learning of a first language will similarly block the learning of a second language" (Spolsky 1989:89).

Cummins (1991) further argues that the educational relevance of the interdependence hypothesis becomes clear when it is associated with Krashen's (1982) hypothesis for comprehensible input. He declares that:

"L1 literacy' and conceptual knowledge constitute the central attributes of the individual that help to make academic input in the L2 comprehensible. If a second language learner already understands concept "x" in his or her L1, this will make L2 input containing that idea less difficult to comprehend as compared to L2 input containing the same concept which is not understood in the L1" (Cummins, 1991:77).

I think we need to consider oral competence of the L1 as well, especially in Africa where the L1 is usually an oral language. Baker (1993) presents the argument more clearly when he points out that Cummins' common underlying proficiency model, indicates that:

"The language the child is using in the classroom needs to be sufficiently well developed to process the cognitive challenges of classroom. Speaking, listening, reading or writing in the first or second language helps the whole cognitive system to develop. However, if children are made to operate in an insufficiently developed second language, the system will not function at its best. If children are made to operate in the classroom in a poorly developed second language, the quality and quantity of what they learn from complex curriculum material and produce in oral and written form may be relatively weak and impoverished" (Baker 1993:135).
Although Skutnabb-Kangas (1981:174) argues that a second language, which is sufficiently in use in the context situation, could be used for instruction, she points out that this should be done at a later stage to allow the L1 to develop. Corson (1990:178) concurs that, all things being equal, it is the later introduction of a second language that improves results for school-age children. He also argues that although second language teaching can work well with an early start, it depends on ideal conditions which are hard to meet. When a second language is introduced without the use of specialist teachers and appropriate methods which suits the interests and intellect of the pupils the results will not be worth the effort and expenditure. Stern (1976) adds that early instruction in a second language does not by itself guarantee success. The ability to learn a second or foreign language may actually improve with age. Skutnabb-Kangas (1981) gives support to this proposition when she remarks that older learners are better, quicker and more efficient in many aspects of second or foreign language learning (Skutnabb-Kangas 1981: *ibid.*). Baker (1993:137) points out some limitations of both the threshold and the interdependence hypotheses, and argues that although both suggest some language proficiency they fail to define what aspect of proficiency is implied. They also fail to show what standards have to be attained in order to avoid the negative effect of bilingualism or to take advantage of its positive effect (Cummins 1991:78, Baker 1993:137). Swain and Lapkin (1981) suggest that the attainment of literacy in both languages may be a crucial factor in the extent to which educational advantages might affect bilingual students. Following several comparative studies of literacy skills in L1 and L2, Swain and Lapkin (1981) concluded that there is a transfer of knowledge and learning across languages and the development of L1 literacy entails real benefits for the students acquisition of subsequent languages (Cummins *ibid*).

Corson (1990) also cites Verhallen et al (1988) who suggest that very young, low and high proficiency bilingual children were able to express complex language functions in the second language although they did so less often than their monolingual classmates. These and other studies indicate that the maintenance of the mother tongue in the early years of schooling is necessary for children whose
mother tongue is used only at home. Corson (1990) concluded that early exposure to a second language before a child has sufficiently developed the mother tongue may impair academic progress and general linguistic development (Corson 1990:178). This view is not supported by proponents of the 'maximum exposure hypothesis' which maintains that the development of L2 academic skills is directly related to exposure. Minority language speakers, it argues, require maximum exposure to the L2 if they are to succeed academically. For example, the New York Times’ (1981) declares that:

‘Teaching non-English-speaking children in their native language during much of their school day constructs a roadblock on their journey into English. A language is best learnt through immersion in it, particularly by children... Neither society nor its children will be well served if bilingualism continues to be used to keep thousands of children from quickly learning the one language needed to succeed in America (The New York Times Editorial of October 10th, 1981 cited in Swain and Cummins 1986:80).

This argument was used against advocates of minority language use in school, who proposed teaching through L1 for minority students who were failing because of poor understanding of L2.

Sufficient exposure to the school language seems to be essential for the development of academic skills. But there is the important consideration of the extent to which students are capable of comprehending the academic input to which they are exposed. The inadequacy of the ‘maximum exposure hypothesis’ is demonstrated by ‘immersion students’ learning French. They had less exposure to English but did as well as monolingual students studying in English. The older students efficiency in learning enabled late immersion students to catch up with early immersion groups (Skutnabb-Kangas 1981:161; Swain and Cummins 1986:89).

Further support for the use of the minority language comes from research findings of the San Diego City School (1982):

‘Native English-speaking project students because they do not receive instruction in English reading as early as do students in the district's regular elementary level program; begin to develop reading skills somewhat later than regular program students. However program students make rapid and sustained progress in English reading once it is introduced and, ultimately meet or exceed English language norms for their grade levels’ (San Diego City Schools 1982:182 cited in Swain and Cummins 1986:86).
2.3.2 Political and Economic Considerations for the Mother Tongue in African Primary Schools

The adoption of an African language for literacy purposes is very often not based on how many people speak it but on the function of the language as the dominant means of communication in a certain area of the country (Ntiri, 1993:360). For example, in Ghana the fifteen languages used in education are not based on the proportion of speakers in the population but rather on their use as dominant languages in given areas. In Africa the choice of language for literacy is made complicated by:

- the prestige accorded to English, French, or Portuguese compared to the local languages
- language policies and planning programmes, are often dictated by political interests and group attachment
- strong economic arguments are often advanced in order to postpone policy decisions
- and the ideological issues raised by the existence of different political and ethnic entities (ADEA Newsletter 1996:2).

Selecting an African language is more likely to be successful if the language is spoken by a large number of people. Unfortunately most African languages are only spoken by few thousands of people (Ntiri 1993:ibid.). For example, Dolphyne (1995:27) write:

"Ghana’s 16 million people speak about 42 different languages. But two languages, Akan and Ewe, dominate the landscape, accounting for 37% of the population, while “Dangme, Ga, Nzema, Dagaare, Gonja, Gurenne, Kasem and Dagbani account for another 20%. This means that each of the remaining languages is spoken by only a few thousand people” (Dolphyne 1995:27, cited in Banjo 1997).

The UNESCO Committee (1953), anticipated objections to its social and political recommendations for the use of the mother tongue. What follows is a review of the UNESCO recommendations to the political and economic objections. The objections pointed out that:

- the use of the vernacular would impede national unity
- most mother tongues are unsuitable for assuming the role of language for instruction as there are no adequate teaching materials in them: Books are
scarce and teachers are both few and also untrained in the use of the mother tongue in education

- some communities would oppose the use of their languages as the language of education

On the question of mother tongue education being likely to impede national unity, the UNESCO Committee (1953) felt that the solution to the political disintegration did not lie solely with the use of a foreign language for instruction. The use of a foreign language for instruction was itself a potential threat to the unity it was supposed to preserve. Certain sections of the community might be resentful towards the national government and therefore refuse to accept a national identity based on the symbolism of the foreign language. There is no evidence that after forty years of independence in Ghana of the rejection of English or the rejection of French in former French colonies.

The UNESCO committee argued that the indigenous languages of a people should be an important resource for educating their children if the children are later to identify with their roots and respect their heritage. Although both arguments are weighty and could be elaborated, what remains unanswered is the role that the mother tongue should be assigned in the education of African children. Bull (1955) and Boadi (1976) claim that it is unrealistic to assume that the indigenous languages of the ‘Third World’ can, during our lifetime, hope to compete with the world languages of wider communication such as English, French, and German unless there is complete severance from the rest of the world (Bull 1955:292, Boadi 1976:84). What seems to be required is a kind of language planning which combines idealism with pragmatism. It appears to be desirable for the developing nations to adopt educational policies which can ensure unimpeded contact with the outside world while promoting national ideals. Sound principles of psychological pedagogy should never be sacrificed at any stage in the process (Bull 1955:loc.cit.). This however is difficult to achieve. Although it is sound psychological pedagogy to use the mother tongue in the education of children in Africa, other factors such as linguistic diversity, technical problems, cost and problems of implementation appear to be prohibitive so the question remains
unresolved. Pattanayak (1986) opposes the view that scarce resources should not be ‘wasted’ on mother tongue teaching and claims that ‘Mother tongue education’ is essential because:

- it offers equal opportunity to a majority of people to participate in national construction
- it gives greater access to education and personal development to a greater number of people
- it frees knowledge from the preserves of a limited elite and lays a foundation for appropriate technology by enabling a greater number of people to interact with science
- it demands decentralisation of information and ensures free public media
- it provides a greater opportunity for political involvement of a greater number of social groups and is therefore a good defence for democracy (Pattanayak 1986:12).

However, Grabe (1990) opposes the view that investing scarce resources on mother tongue teaching can improve literacy and living standards. He suggests that an improved literacy does not necessarily lead to improved living standards. Radically increasing mother tongue literacy as in Canada with native Canadians or French Canadians, and Iranians, Tanzanians, Ethiopians and Nicaraguans does very little to change the economic well-being of the populations. In addition, he argues that the assumption that literacy leads to cognitive differences in individuals, social improvement, economic betterment, critical consciousness and democracy have all proved false in spite of experiments to the contrary (Grabe 1990:147). Ntiri (1993) however, argues that limited literacy in Africa is the result of deliberate manipulation and intervention by those in power because of their vested interests. The ‘consciousness-raising’ aspect of universal literacy, he notes, threatens African governments’ inherited political and bureaucratic positions (Ntiri 1993:357).

Support for this view comes from Zolberg (1966) who writes:

"In most West African countries, it was relatively easy for a particular age cohort to move from relatively modest positions in the occupational structure to the highest political position. Within a single decade clerks and elementary school teachers became cabinet ministers. However, for the next generation, whose expectations, based as it were, on the
experiences of their predecessors, conditions radically and fundamentally changed. The stress the incumbents had earlier placed on educational qualifications in order to challenge more traditional leaders is now a source of embarrassment to them because on the bases of such criteria, the youth is now better qualified than they are' (Zolberg 1966:73 cited in Ntiri 1993:336).

However, although the use of mother tongue education has led to an increase in absolute figures for the number who benefit from school education, the lack of a corresponding expansion in resources, trained teachers and facilities has led to a deterioration in the quality of education. Sadly, teachers, textbooks and other equipment are all scarce because most developing countries have insufficient financial resources. Rubagumya (1993:3) supports this position when he states that:

'there has been massive expansion in educational provision over the last few decades in a number of African countries, with insufficient attention to the quality of this provision'

An alternative solution is to allow primary school teachers to alternate between the L2 and L1 during the early formative years. This is also supported by Rubagumya (1993) who writes:

'one of the strategies used to solve the problem of communication in the classroom is code switching between the official medium of instruction and the students' L1/indigenous language' (Rubagumya 1993:2).

2.3.3 Practical Obstacles Impeding the Use of the Mother Tongue in African Primary Schools

Ntiri (1993) argues that Africa's educational dilemma is whether to use or not to use African languages in schools. However, practical and pragmatic considerations have to a large extent determined the choice of a language of instruction. The infrequent use of African languages in schools is partly explained by the demographic figures. The continent has between 1,900 and 2,000 languages and in most countries there is no common language. Although most countries do hope to replace foreign languages, as both national and the language of education, the great difficulty is deciding which of the many languages to support. The selection of a language for literacy is very complex. For example, Nigeria with 100 million
people has about 400 languages but only three regional languages are officially recommended. Ghana has 42 languages and 16 million people but 15 languages are officially recommended for use in education (Ntiri 1993:336, Banjo 1997:312.). Banjo (1997) suggests that the selection criteria which uses population size, acceptability, international standing and literacy status have the major weakness of hierarchical ordering:

"some people might say that population is the most important consideration, since it makes the problem of propagation easier. Others would insist that what is important is not so much the absolute number of speakers of a language at any point in time but the rate at which the language is already spreading among non-native speakers; i.e. the degree of acceptability... Perhaps therefore they should all be given equal weighting and the competing languages compared with respect to each" (Banjo 1997:311)

In English-speaking West African countries, Banjo (loc.cit.) argues that, although they are multilingual they can be classified into two groups:

"(A) Countries in which, in addition to a number of indigenous languages, English exists side by side with Creole. These are Sierra Leone, Gambia and Liberia
(B) Countries in which, in addition to a number of indigenous languages, English exists side by side with Pidgin. These are Ghana and Nigeria (the Republic of Cameroon presents a unique scenario of its own)" (Banjo loc.cit).

Banjo (1997) uses this grouping to show difficulties of choice, attitudes, political interest and group attachment which militate against realistic language planning policies in Africa and the use of African languages in education. Apart from Tanzania where Kiswahili has been successfully used in the primary schools the observations Banjo makes on West Africa are perhaps also true of the rest of colonial Africa.

The difficulty of providing mother tongue teaching in African schools is also illustrated by the small number of its speakers. For example, Banjo (1997) writes that:

'The distribution of language use at the local level also has its own problems. The population of Sierra Leone in 1973 was 2.6 million, that of Gambia in the same year 494,279, and that of Liberia in 1972 was 1.5 million. Obviously, some of the indigenous languages are spoken by only a few thousand people, and this may raise questions as to cost of their development for use at the local level (Banjo 1997:312).
Yet, as he points out, if early literacy in the mother tongue is considered a right for every child, something has to be done for them.

The lack of orthographies for most languages is another important consideration. Ntiri (1993), suggests that the choice of a second language in the African context may be dictated by the lack of orthographies in the local languages. Although pioneer missionary work developed orthographies for some local languages there are still many languages without orthographies. He states:

'When there is willingness to use a local language the preferred language may lack an orthography and where such orthography exists their number impose a tremendous financial burden with the production of literacy materials. This is even made worse when a number of languages are involved' (Ntiri 1993:363).

Le Page (1964) argues that one reason for the use of second language is the need for a language with which they can extract knowledge of science and technology to transform both themselves and their economies. But the language of science is usually one of the major international languages with English being the most frequently used (Le Page 1964:24-28). In spite of the difficulties, the use of a second language has the advantage of immediate access to scientific and technical knowledge for African countries at less cost and at the same time it gives them time to develop one of their languages to eventually take over.

However, in an emotionally charged proposal to The Deheer-Amassah Committee on Review of Education Reform Programme in Ghana, Atakpa (1993), the National President of The Association of Teachers of Ghanaian languages (ATGL) argued that:

'There is no evidence whatsoever to prove that by using languages indigenous to Africa, advances in the scientific and technological fields, leading to overall development of our societies cannot be achieved' (Atakpa 1993:5).

On the contrary, there is no evidence of any serious intention to use Africa's indigenous languages to develop scientific and technological skills by African scientists. Few African scientists have the resources to make scientific and technological advances and many leave to pursue a better education elsewhere and do not return.
The implications are that African countries use:

(a) L1 initial in combination with L2
(b) sole use of indigenous language for instruction of the whole curriculum while L2 is taught as a subject at all levels
(c) sole use of an international language for instruction of the whole curriculum, while L1 is taught as subject at all levels
(d) the indigenous language throughout the curriculum for the primary level and with L2 being introduced at secondary level.

For option (a) above, African countries could take advantage of the existing language of science and teach this language in combination with the initial use of the mother tongue. The pattern of use could take the form of:

(i) initial use of mother tongue and a later change to a second language
(ii) teach some subjects in African languages and others in second languages of wider communication
(iii) or allow language alternation in all subjects (i.e. the combined use of the target language (L2) and the mother tongue during the formative years.

For category (b) above, African countries could defer using the existing languages of science and wait until the indigenous languages have developed into languages of science although this may take a long time. When the African languages have been developed as languages of science the choices open are:

- the development of indigenous science
- copy advances already made in science
- a combination of both

Option (c) above, has the implication of taking advantage of the current language of science to both copy advances already made and to develop local science while option (d) has similar advantages as option (a). The most realistic choice here is one that combines both L1 and L2 during the initial stages.
Socio-linguistic factors also determine the choice of a second language for teaching. For example, the choice may be determined by resentment from parents and students who believe that the mother tongue provides an inferior education, the economic cost of providing higher education and the cost of training professionals in the vernacular (Le Page 1964:25).

In Africa, there are no research reports about resistance to plans to extend mother tongue education to secondary schools. However, historical evidence show parents asking for second language instruction for their children. The Advisory Committee on Native Education in Tropical Africa, a subsidiary of the Phelps-Stokes Commission British Educational Policy in Africa (1927) did not only recommend the use of indigenous languages in education, but also stressed that English should be used in all schools on the grounds that the natives wanted to learn English (Boadi 1976:88). This is further supported by Serpell (1989:103) who writes:

'Most parents in Zambia want their children to master English at school.'

Research in other countries comparable to Ghana have shown that plans to extend mother tongue instruction to secondary schools have met with some resistance. Gibbons (1989) tell us that in Hong Kong:

'plans to extend Chinese medium education to the first three years of secondary school have met with resistance from parents who believe that such a move would adversely affect their children's career prospects (Gibbons 1989:124).

What is perhaps at issue here is the lack of economic opportunities for graduates trained in the vernacular. The prospect of social advancement through education in the second language has blinded many to the merits of mother tongue education at all levels, and especially at the primary schools where parents decide for their children. The choice of a second language is further dictated by the lack of resources such as books and qualified personnel for implementing a programme of higher education in a vernacular language. The economic cost is enormous as it requires a full programme of teacher training, translations and the updating textbooks in the vernacular. In addition competent bilinguals needed for the task
are not only rare in Africa but have their services urgently needed elsewhere (Le Page 1964).

At all levels of education, there is a shortage of competent teachers with professional training in the mother tongue and the situation is even worse for tertiary education. This acute lack of professional teachers in the mother tongue is likely to persist for a long time for two reasons:

(a) First, the attitude of planners of mother tongue education is that anyone who knows a bit of 'the relevant GL' can teach it. It is difficult to convince decision makers that it is not easy to teach a language simply on the basis of being a native speaker and that the native speaker still needs training in the language, especially when most native speakers are themselves not literate in the local languages.

(b) Secondly, mother tongue education in African countries cannot rely on expatriates. A high proportion of local graduates have no desire to teach, and very few want to do so in the vernacular. The few who do, feel very frustrated that they are not taken as models for the young to copy. The teaching profession is seriously underpaid in most countries, Ghana included, and so fails to attract the best students and until this situation is rectified, people will not choose to become teachers of indigenous languages.

This partly accounts for the reliance on the use of second language teaching in Africa which has many advantages including:

• economy of sharing the cost of textbook production
• avoiding parental misunderstanding about lower standards of education
• available assistance for the training of personnel for higher education
• minimises the acute shortage of qualified personnel
• provision of an internal and international lingua franca
• advantage of continuity thus avoiding the cost of restarting.
Another factor in favour of second language teaching is the perceived practical
difficulty of providing classes for the different linguistic groups in multilingual
schools. Even where it is possible to set up separate schools the supply of good
teachers tends to be more limited in the small communities. The quality of
education also tends to be better in some schools than others and in some
languages than others.

2.4 Educational Uses of Code-Switching

2.4.1 Introduction

It is necessary to review the literature on code-switching as it forms one of the
main interest areas of this study. This will not only provide relevant information for
the present study but also give guidance to the theoretical basis of the study.
Through the review useful lessons can be learnt on data collection techniques,
coding schemes and taxonomies, and data analysis and reporting.

2.4.2 Code-Switching in Ghanaian Primary Schools

There is no systematic study of the use of code-switching in Ghanaian primary
schools other than the present study, there is therefore no evidence of the use of
code-switching in primary schools. Dolphyne (1995) remarks that the classroom
language of the primary school teacher is a mixture of English and a relevant GL
(personal communication). However, Ure 1972:232 noted that in Ghana
code-switching:-

'is much used, though not officially, in the universities, where it can have, inter alia, a
function of bridging the transition that students have to make between reference and practical
and experimental skills'.

This evidence suggests that at the primary level, where children start the learning
of English, the environment would be conducive for the promotion of language
alternation. Evidence in chapters 5 and 6 in this study confirms Dolphyne's (1995)
observation. There is no school that can claim to use one language as the sole
language of instruction in Ghanaian public primary schools. Even the special
experimental and demonstration schools only emphasise the use of English. They do not use English as the sole language.

2.4.3 Formal Definitions of Code-Switching

Many definitions have been used for code-switching. A widely accepted definition is that of Gumperz (1982):

"Code-switching is the juxtaposition within the same speech exchange of passages of speech belonging to two different grammatical systems or sub-systems" (Gumperz 1982, cited in Milroy and Muysken 1995:7)

Code-switching is studied from a number of different perspectives such as sociolinguistics, social psycholinguistics, and anthropological linguistics. Sociolinguists consider the study of code-switching as one aspect of the larger pattern of language use and social correlates. The anthropological approach examines code-switching as one of the ways in which language use reflects social change and cultural values. The social psycholinguists who deal with 'speech accommodation theory' examine shifts to another style within the same language rather than code-switching between languages. Milroy and Muysken (1995), point out that code-switching, a central aspect of bilingual research, is the alternative use by bilinguals of two or more languages in the same conversation. Included under the general term of code-switching are different forms of bilingual behaviour. The switch sometimes occurs between different speaker turns, sometimes between utterances within a single turn, and sometimes even within a single utterance (Milroy and Muysken 1995:7)

Romaine (1989), takes Gumperz’s (1982) as her starting point. Myers-Scotton (1993) and Eastman (1992), use the term ‘code-switching’ to describe the speech of bilinguals and monolinguals whose utterances draw to differing extents, on items which come from more than one language and are often combined in different ways. Myers-Scotton (1993) defines code-switching as the term used to identify the alternation of linguistic varieties within the same conversation. The linguistic varieties used in code-switching may be different languages or dialects or styles of
the same language (Myers-Scotton 1993:1). She argues that technically it may be defined as:

'Code-Switching is the selection by bilinguals and multilinguals of forms from an embedded language or languages in utterances of a matrix language during the same conversation. The matrix language is the main language in the conversation while the embedded language is that with the lesser role' (Myers-Scotton 1993:4)

2.4.4 Types of Code-Switching
Romaine (1989) points out that recent studies of code-switching consider two different aspects, namely grammatical/syntactic and discourse/pragmatic. Formal grammatical types include intra-sentential switch, inter-sentential switch, tag-switching or emblematic or extra-sentential switching, discourse marker switch, and phrase switch. Discourse/Pragmatic types are described using the terms metaphorical switch and situational switch. The difference between the grammatical and pragmatic approach lies mainly in the level at which explanations are sought. The grammatical perspective is chiefly concerned with accounting for the linguistic constraints on code-switching. The pragmatic framework assumes that the motivation for switching is basically stylistic and that code-switching should be treated as a discourse event that cannot be adequately studied in terms of the internal structure of sentences. Many linguists however, point out that switching is a communicative option available to bilinguals or multilinguals in the same way as switching between styles or dialects is an option for monolinguals (Romaine 1989:111). Muysken (1995) notes that although many studies have analysed code-switching from a grammatical perspective and have found it to be a normal and widespread form of bilingual interaction which requires a great deal of bilingual competence. There is still some disagreement over the general properties of the process.

Blom and Gumperz (1972), are credited with the distinction often made between metaphorical and situational switching:

'The oft-cited distinction between 'situational switching' (switching triggered by a change in the situation) and 'metaphorical switching' (switching that itself expresses a 'comment' on the situation)' (Blom and Gumperz 1972, cited in Milroy and Muysken 1995:9.).
Auer (1984), notes:

'As the language of interaction has already been established on the basis of the situational parameters, digression from this language is seen by members as the violation of a Gricean maxim (the maxim of manner). It therefore initiates an implicature involving the categories 'we code' and 'they code' and makes them relevant for the interpretation of the metaphorical code-switching' (Auer 1984b:88 cited in Wei 1995:198)

Metaphorical code-switching is viewed as a change in code choice when both the situation and the language activity remain unchanged. The switch is usually viewed as intentional and it is often intended to harmonise speaker relations. This may involve a comment on the situation. The switch, it is argued, enriches the situation and suggests the existence of more than one social relationship in the same situation (Forson 1979:7). Romaine (1995), explains that metaphorical switching concerns the communicative effect the speaker intends to convey (Romaine 1995:161)

With grammatical categories:

- Tag-switching involves the insertion of a tag in one language into an utterance which is otherwise entirely in another language.
- Intrasentential code-switching involves switches from one language to the other which occur within a clause or a sentence.
- Intersentential switches represent those switches which occur between sentences or speaker turns and may vary from a single morpheme to the clause level (Myers-Scotton 1993:4; Romaine 1995:122-123).

2.4.5 Code-Switching Theories

(a) Grammatical Theory

This review on grammatical theories of code-switching will be brief because this study is mainly concerned with pragmatic and sociolinguistic aspects of code-switching. Various 'constraints' and 'models' regulating code-switching have been proposed and tested. Muysken (1995), argues that the results are unsatisfactory since some constraints fall under one model and others under another and the differences between the proposed models are still not clear in any
systematic way. He points out that many of the studies do not make clear the constraints of the various models. They are often merely descriptive statements (Milroy and Muysken 1995:177). One of the crucial questions in modern linguistics is the division of labour between the lexicon and the grammar of the language. When we produce and comprehend utterances, do we rely on the properties of individual words or on the general rules of the language? Is it possible to reduce differences between languages to lexical differences? These and other issues, it is hoped, can be resolved through the study of code-switching. (Muysken 1995:ibid.)

(b) Models Accounting for Code-Switching Constraints

In recent studies of constraints on code-switching the patterns observed in different contact situations are partly related to the characteristics of the languages involved (Muysken 1995). Two main models have been proposed to account for code-switching constraints; models ‘A’ and ‘B’. Koppe and Meisel (1995), explain that the ‘formal constraints principle’ involves the use of formal and functional principles in grammatical explanations for structural constraints on code-switching. In other words how can one formulate in linguistic terms what happens when speakers code-switch? Researchers of the model ‘A’ tradition believe that there is a general set of constraints on code-switching. Poplack (1980) puts forward a ‘structural equivalence constraint principle’. DiSciullo, Muysken and Singah (1986), propose a ‘principle of governance’ and Myers-Scotton (1993b), advances a ‘matrix language/embedded language asymmetry theory’. These researchers propose a global theory that makes more limited switch-sites available in specific instances than would be desirable. Switches contrary to the principles are explained using escape hatches which make additional switch-sites possible.

With model ‘B’ different switch strategies are employed. These include ‘flagging’, and ‘constituent insertion’ which are governed by constraints specific to those strategies. There is no relationship between linguistic properties of the language and the strategies involved. Different language mixing patterns and strategies are the central concepts common to both models.
According to Poplack (1980) the ‘free morpheme constraint’ predicts that a switch may not occur between a bound morpheme and a lexical form unless the lexical form has been phonologically integrated into the language of the morpheme. For example, in a Spanish/English bilingual speech the constraint will predict that ‘flipeando’ (‘flipping’) would be permitted, but ‘catcheando’ would not be, because catch has not been integrated into the phonology of Spanish and as such cannot take the Spanish suffix -‘eando’ (Poplack 1980 cited in Romaine, 1995:126).

The ‘equivalence constraint principle’ predicts that code-switching will tend to occur at points where elements of the two languages do not violate any syntactic rule of either language. The implication here is that a language-switch is only practical at the boundaries which are common to both languages. Thus unless the two languages are structurally similar, code-switching will be relatively rare (Romaine 1995:loc.cit). According to Bentahila and Davies (1983), and DiSciullo et al (1986) the relationship between a lexical element and its syntactic environment plays an important role in code-switching. The principal argument is that a lexical item will often require other specific elements in its environment and this requirement may be language specific which can be formulated in terms of ‘head-complement’ relations. This presupposes that syntactic constituents have their properties derived from those of their head. For example, a noun phrase inherits many of its features from the head noun. So the principle of governance seeks to explain switching constraints on the basis of ‘asymmetric syntactic relations’ (Muysken 1995:185-189).

Myers-Scotton (1993b) who compared ‘code-switching’ and ‘borrowing’ and argues that both should be considered as universally related processes. Her ‘matrix language frame’ (MLF) theory predicts that code-switching occurs everywhere within a frame which is set by the matrix language. When two or more languages are used in the same conversation the ‘matrix language’ refers to the language in which the majority of morphemes occur while the term ‘embedded language’ is the language with the lesser role in the conversation. The central issue of this MLF
theory is that content and system morphemes in the embedded language are accessed differently by the matrix language. The MLF theory is concerned with the basis for distinguishing which singly occurring embedded language lexemes are borrowings from those that are code-switches. Scotton (1993) argues that both borrowed and code-switched forms behave in the same way morpho-syntactically in the matrix language. The matrix language frame-model proposes structural constraints to account for both borrowings and code-switches (Eastman 1992:2).

(c) Formal and Pragmatic Theories of Code-Switching

The pragmatic constraints deal with theoretical explanations involving the use of social and pragmatic rules to account for code-switching. From this perspective, pragmatic competence in code-switching refers to a bilingual’s ability to select the appropriate language according to external factors such as the particular interlocutor, the situational context, and the topic of conversation. With respect to formal or grammatical competence, adequate code-switching requires that switches within one sentence observe specific grammatical constraints (Koppe and Meisel 1995:277). A clearer picture of the use of the term is provided by Romaine (1989: 159), when she said, “unlike formal grammatical analysis which produces rules, the pragmatic approach is interpretative”. Thus, the pragmatic approach deals with the question of what discourse functions code-switching serves.

Another interpretation of the pragmatics of code-switching are given by Auer (1995), who suggests that theoretical explanations of the meanings of code-switching should take into account the sequence of the alternation. Auer (1995) states that:

'The meaning of code alternation depends in essential ways on its 'sequential environment'. This is given, in the first place, by the conversational turn immediately preceding it, to which code-alternation may respond in various ways. While the preceding verbal activities provide the contextual frame for a current utterance, the following utterance by a next participant reflects his or her interpretation of the preceding utterance. Therefore, following utterances are important cues for the analyst and for the first speaker as to if and how a first utterance has been understood’ (Auer 1995:116)
2.4.6 Code-Switching in the Classroom

Earlier studies characterised the social meaning of code-switching in relation to different cultural values (e.g. Guthrie 1984). However, Martin-Jones (1995) notes that:

'whilst the languages used in a bilingual classrooms are bound to be associated with different cultural values, it is too simplistic to claim that whenever a teacher who has the same language background as the learners switches into a shared code, s/he is invariably expressing solidarity with the learners' (Martin-Jones 1995:98).

Martin-Jones (1995) argues that:

'Teachers and learners exploit code contrasts to demarcate different types of discourse, to negotiate and renegotiate joint frames of reference and to exchange meaning on the spur of the moment'

She quotes Gumperz (1982) as pointing out that code-switching is one of the number of possible contextualisation cues or communicative resources available for constructing and interpreting meaning in context and adds that:

'code switching can therefore be seen as similar to some punctuation features in written discourse: a means of conveying pragmatic information to interlocutors as to how a particular utterance is to be read in context' (Martin-Jones 1995 loc.cit.).

Code-switching researchers in bilingual classrooms have recognised the need to take account of switches related to language proficiencies, preferences of the hearers, and the communicative intentions of the speakers. This approach identifies 'discourse related switches' and 'participant related ones'. 'Discourse related switches' deal with speaker orientations while participant switching is hearer oriented and takes into account the listeners' preferences and competencies (Martin-Jones 1995:99-100).

2.4.7 Educational Use of Code-Switching

(a) Motivations for Code-Switching

Martin-Jones (1995) argues that the principal motivation for undertaking most classroom based code-switching research seems to be the need to establish how language education policies are being put into practice in day-to-day classroom life. Most research on code-switching has been done in settings where there is debate about language education policy. For example, in settings implementing a new
form of language education programme, or in settings planning a change in the language of instruction because the current policies are inappropriate (Martin-Jones 1995:90).

(b) Functions of Classroom Language Alternation

Martin-Jones (1995) tells us that early studies on code-switching were mainly concerned with the communicative functions of alternations. From this functionalist approach researchers next adopted a conversational analytic approach which identified the various types of communicative acts. The early studies were done on the frequency of the communicative functions of code-switching in teacher-led talk and also on the frequency of the use of specific languages for specific purposes such as ‘foreigner talk’. Other early studies assigned interpretations to switches based on mere juxtaposition of the languages contributing to the discourse. However in more recent years code-switching studies have been based on ethnographic studies. These take into account the social dimensions of bilingual classroom discourse and use pragmatic approaches which interpret code-switching discourse by taking account of the sequence of the alternation. This approach reveals how code-switching in bilingual discourse is shaped by the social conditions operating in different types of classroom. In addition, Martin-Jones (1995) states that it has been shaped by different strands of influences because of its inter-disciplinary nature including applied linguistics, socio-linguistics, bilingualism, and ethnography.

Lin (1990) argues that the answer to why teachers switch to Cantonese (L1) in an English language lesson in Hong Kong has often been couched in various functional terms including to maintain classroom discipline, to encourage a response from students, to talk to individuals, to help weak students and to save time. She also concluded that language alternation is often used as an effective marker of boundaries in discourse and changes in frame (Lin 1990:113). In addition, Lin (1990) also notes that:

*the very act of switching between the two linguistic codes, as well as the direction of each language switch (i.e. from English to Cantonese or vice versa) are in themselves meaningful. They render possible the effective communication of, and negotiation for, meanings (e.g.*
social and/or discourse related ones) that are otherwise often difficult to express explicitly... As such, it is an important addition to the teachers' repertoire of communicative resource in the classroom.' (Lin 1990:114).

Lin (1990) further adds that language alternation

'seems to reflect the teacher’s response to some conflicting demands...to ensure thorough understanding of the teaching points for students with limited English ability while trying to fulfil the requirement of teaching L2 ... in L2'(Lin 1990:116)

Rubagumya (1993:2) also notes that:

"...one of the strategies used to solve the problem of communication in the classroom is code switching between the official medium of instruction and the students' L1/indigenous language (English/Setswana, English/Kiswahili, French/Kirindi...code switching is employed in subtle and skilful ways by both teachers and students to manage difficult teaching and learning situations...it contributes to the accomplishment of pedagogic routines, the construction of knowledge across the curriculum and to classroom management".

Merritt, Cleghorn, Abagi, and Bunyi, (1992) in their study of communicative patterns and variation in Kenyan primary schools point out that teachers regularly use code-switching to seek attention, give summaries, give restatements, and to emphasise major points in the instructional material (Merritt et al. 1992:117).

Pennington (1995) in her study of the use of language by eight Hong Kong bilingual teachers reached the conclusion that language alternation should be considered as having both compensatory and strategic motives. As a compensatory motive for teachers, she suggests that it is an unconscious response to the moment by moment requirements of the difficulties of teaching. As a deliberate strategy, it represents a planned aspect of language use that replicates the community's norms for language use (Pennington 1995:102). Faltis and Hudelson (1994) noted that the L1 is used in North American schools because the native language facilitated the learning of L2. Culturally, it helps to preserve the ancestral language. In cognitive-academic terms learners may be assisted in their learning of the content if they make use of the native language alongside the L2. The L1 too may have positive affective and psychological influence on the pupils and make them react more positively towards the learning of the L2 if they experience acceptance of the native language and also if it is valued (Canagarajah 1995:175). Canagarajah (1995) analyses code-switching between English and Tamil in the classroom and concludes that the greater use of Tamil and code-switched English in ESL classes
in Jaffna can reconcile the conflicts which students face for their identity and group membership and motivate them to participate in the learning process more keenly. It also prepares them for the types of bilingualism used in their society (Canagarajah 1995:193-4).

Modiano (1979) in a study on the most effective language of instruction for beginning reading in Mexico compared the effectiveness of native Indian teachers, without professional training or qualifications who understood the language of their pupils and alternated the use of L1 and L2 in their reading lessons, with that of their Spanish counterparts who operated solely through the L2. They did not understand their students’ language. Although the latter were better professionally trained teachers with higher academic qualifications, the native Indian teachers were found to be more successful than their Spanish colleagues. (Modiano 1979:282-288). Modiano concluded from this study that reading comprehension in the L2 was more effectively achieved when approached through the vernacular than when all instruction was given in the L2 (Modiano, 1979:285).

Auerbach (1993:16) notes that the use of the learners’ L1 increases their openness to learning the L2 by reducing their cultural shock and Cummins (1991) explains that proficiency in L1 promotes better proficiency in L2 by activating a common underlying proficiency that enables cognitive-academic and literacy-related skills to be transferred across languages (Canagarajah 1995: ibid.).

Ndayipfukamiye (1993) identified a number of functions for the use of language alternation. He reports that:

'It was clear that the use of Kirundi here (Burundi) facilitated the pupils’ understanding of the new materials that the teachers were presenting.'

He also concludes that:

'Over the long term, these classroom routines contribute to the reproduction of the diglossic relationship between French and Kirundi languages in the school system. Pupils come to see French as being the language in which learning is to be displayed while Kirundi is the language for meaningful communication in the classroom' (Ndayipfukamiye 1993:88).

Thus ‘language alternation’ functions as the language for meaningful classroom communication in multilingual African countries where foreign languages are used for instruction in the primary school.
Ndayipfukamiye (1993) argues that:

'code switching is a communicative phenomenon that should be explicitly accounted for in decisions about teaching methods and language policies. It plays a crucial role in reconciling two contradictory demands in classroom interactions: using Kirundi (L1) in domains where French (L2) is expected, to ensure understanding; abiding with the official policy that requires teaching of French' (Ndayipfukamiye 1993:91).

(c) Legislation and Classroom Language Use

The question has arisen as to whether there are optimum proportions of L1 and L2 a teacher should use in the bilingual classroom. For example, Legarretta-Marcaida (1981) is quoted as advocating 70% L1 in kindergarten grade-2 and a gradual increase of English (L2) to 50% in later grades (Legarretta-Marcaida 1981 cited in Goldman and Trueba 1987:210). Milk (1981), is quoted as saying:

'If a particular classroom is aiming towards truly equal development of both languages, then each language must be used by both teachers and learners more or less equally for the full range of classroom functions. It is not sufficient, therefore, for the languages to be used an equal amount of time—they must also be used to an equal extent to accomplish the principal pedagogical functions of the class' (Milk 1981:13 cited in Goldman and Trueba 1987:loc.cit.).

However, Guthrie and Guthrie (1987) argue that it is difficult, frustrating, and indeed futile to formulate a rigid policy on the amount of L1 and L2 to be used for instruction in bilingual classrooms. The amount of L1 and L2 used by teachers and their pupils should be decided on the basis of the actual situation and specific purposes (Guthrie and Guthrie 1987:227-229).

Atkinson (1987) shows practical uses of language alternation in classrooms and also points out that it is a resource that has been neglected.

'The role of the mother tongue in monolingual classes is a topic often ignored in discussions of methodology and in teacher training' (Atkinson 1987:241).

He concludes that:

'I feel that to ignore the mother tongue in a monolingual classroom is almost certainly to teach with less than maximum efficiency' (Atkinson 1987:247).

Therefore, it can be argued that proscription of classroom 'language alternation' in bilingual and multilingual context is the direct result of ignorance of the value of 'language alternation' in classroom discourse. It can also be argued that in multilingual communities an educational policy that proscribes the mother tongue
is in effect proscribing the use of a natural resource. This action suggests that there is ignorance of the value of the mother tongue in classroom discourse.

In view of these arguments, this study sets out to disseminate knowledge about primary school language use and about language alternation in particular in Ghanaian primary schools. It is hoped that this knowledge might influence those who formulate policies for language in education reconsider the language policy and language alternation in Ghanaian primary schools.

Conclusion
The desire for cultural identity motivated post-colonial African governments, educators and language education planners to adopt the use of indigenous local languages in education and the UNESCO Report of 1953 served as the catalyst to hasten the process. However, performance failed to match expectations. The debate to find solutions produced two opposing groups with one favouring the continuing use of second language of instruction while the other called for the use of indigenous languages. A review of the literature on the language of instruction in schools shows the debate still continues. No evidence has yet been accepted as conclusive regarding the superiority of using either the local indigenous languages or second languages. Evidence has been published which supports both sides. Current neuro-linguistic studies Cummins (1991) suggest that a mother tongue used for instruction has advantages over the use of a second language. Support for this comes from the common sense observation that initial use of the mother tongue for instruction helps the child's understanding of the content of the subjects. It also seems to facilitate the child's initial formation of concepts. However, Baker (1993:181) cautions that this should not necessarily be assumed to imply that the mother tongue is superior and this should not be used as an argument against second languages. He argues that the second language can be used successfully if the teaching is done properly. The verdict of inconclusive evidence is supported by researchers including:
1. MacNamara (1966:133) who after reviewing five studies concludes that

'in view of the lack of satisfactory evidence, perhaps the wisest counsel to follow is to say that the linguistic effects of teaching in a second language are unknown'.

2. Dakin, Tiffen, and Widdowson (1968:27) after reviewing four experiments concluded:

'The evidence about the difficulties of a foreign language medium at the school stage thus seems inconclusive. The superiority of the mother tongue has not been everywhere demonstrated'.

3. Engles (1975:26) after reviewing and summarising twenty four experimental reports concludes that:

'The twenty-four studies or reports summarised varied in every conceivable way, and most provide no substantial evidence as to which approach is better'.

4. Tucker (1977:37-8) after reviewing three experimental reports had this comment to make:

'For a number of years, many educators have accepted as axiomatic the idea that the best medium of instruction for a child is his mother tongue ... Are there empirical data to unequivocally support this position? The answer would seem to be no. Does this mean the position is untenable? Once again, the answer would seem to be no'.

5. Fasold (1984:298-299), concludes that:

'From the evidence available the unanimous opinion seems to be that nobody knows exactly whether using mother tongue as the medium of instruction is better than using a second language or not.

I have also reviewed the literature on code-switching and language alternation in primary schools both in Africa and other parts of the world. Most studies seem to suggest that the use of the indigenous language during the initial stages of foreign language learning has advantages over a monolingual approach which uses only the target language. However, there are some studies which indicate that there are advantages for the monolingual approach. On the proscription of classroom language alternation I concluded that it is the result of the ignorance of classroom language use as current research shows it has advantages for teachers and pupils alike.
CHAPTER THREE
BACKGROUND AND SETTING OF THE STUDY

3.1 The Country

3.1.1 Demographic and Geographic Information
Ghana is a West African country lying between the Republic of Côte D’Ivoire (formerly The Ivory Coast) and the Republic of Togo. It is a relatively small country with an area of 239,460 square kilometres, a population of 16 million (Dolphyne 1997), and an annual growth rate of 3.1% (Nukunya 1992:203). It is a multilingual community with between 42 and 54 estimated languages. English is the official language for conducting government business and for education. The Akan language, with about 10 different dialects, is the dominant language group and is spoken by about 44% of the population. The dominant dialect Twi is spoken by about one and half million people (Laitin and Mensah 1991:139). Fifteen languages/dialects are used in education because they are the commonest in different parts of the country (Bemile 1995:11). Other major indigenous languages are Ga, Ewe, Dagbani, Wali/Dagare and Hausa (Bemile 1995:4).

The country is divided into ten administrative regions, namely, The Greater Accra region, Eastern region, Volta region, Western region, Ashanti region, Brong Ahafo region, Northern region, Upper West region and Upper East region.

3.1.2 Brief Political History
The bond of 1844 between the British and the Fante chiefs in Cape Coast brought the Gold Coast (Ghana) under formal British colonial rule. The country finally attained independence in 1957 under the leadership of Dr Kwame Nkrumah and the Convention Peoples Party (CPP). The CPP was overthrown in February, 1966 for corruption and dictatorship by Lt. Gen. Ankrah. The National Liberation Council set up after the coup d’état was later led by Lt. Gen. Akwesi A. Afrifa.
after some internal strife. Gen. A. A. Afiifa organised elections in 1969 and handed over the administration to civilians led by Professor K.A Busia and his Progress Party (PP). Professor Busia was also overthrown in a military take-over, led by Col. I.K Achampong in 1972 for corruption and neglect of the army. The National Redemption Council set up by Achampong was in 1979 led by Lt. Gen. Akuffo whose reign was short lived. In the same year, Flt. Lieutenant J.J. Rawlings toppled the Akuffo regime and executed eight past military figures in the Achampong and Akuffo administration for ruining the Ghanaian economy and for excessive corruption. He handed power over to civilians led by Dr Hilla Liman in the same year after only three months of what has been described in Ghanaian political history as a ‘house cleaning exercise’. In 1981 Rawlings overthrew the civilian administration for corruption and poor administration. Then in 1992 Rawlings’ military regime changed clothes and became a civilian administration. In 1996 Rawlings won a second civilian election and is currently the head of government. Thus from 1981 the country has experienced relative stability in its political history.

In the period of political stability major changes were made to the country’s educational system. A major educational reform was introduced in 1987. The seventeen-year pre university education system inherited at independence was replaced with a twelve-year pre university education system. This new system provides at least three years of secondary education to every child. Opportunities for university education for the large number of high school graduates were improved by the establishment of two more universities to bring the number to five. One of the new universities is devoted to training graduate teachers for service at the primary school level, thus bringing the number of universities devoted to teacher education to two; The University College of Winneba and The University of Cape Coast.
3.2 Ghana’s Educational System

3.2.1. Educational Administration

The various organs of educational administration are in one centralised system namely ‘The Ministry of Education’. The Minister of Education, who heads the administrative machinery, is responsible for education to the cabinet and is accountable for all policy matters relating to education. The minister is assisted by two deputies, two assistant deputies, a principal secretary and a few secretarial personnel who are mainly concerned with broad policy issues.

Responsibility for curriculum development, supervision of schools, posting of newly trained teachers, and the management of schools are in the hands of a national professional body: the Ghana Education Service (GES). At the top of the GES structure is the Ghana Education Service Council (GESC), with 11 members who have responsibility for managing and controlling all pre-university educational institutions. They also serve as the liaison between the GES and the Ministry of Education. The GESC has responsibility for promotion, appointments, recruitment and discipline of teachers. Regional and District Committees help it to carry out these functions at the local level.

The chief executive of the GES is a Director General (DG) who is assisted by two deputies (DDG). The DDG1 has responsibility for administrative matters for the ten regions of Ghana and for six diploma-awarding institutions. DDG2 has responsibility for headquarters’ organisation (see Appendix 2). Regional and districts directors are responsible for the daily educational decisions relating to transfer, inspection and in-service education at the local level. They serve as the link between the grassroots and the national headquarters (Antwi 1992:57-86).

3.2.2 Structure and Characteristics of the Education System

Figure 3 shows a simplified structure of the public education system in Ghana in 1996. The system provides for a structure for 6 - 3 - 3 - 4 years of education. These are as follows: Basic primary education [six years primary and three years
junior secondary school (JSS), three years senior secondary schools (SSS) and three or four years tertiary education. To this, we should add two years for nursery schools which exist mainly in urban and big villages and may be public or privately operated.

**Figure 1: Ghana's Structure of Education 1996**

A large number of public schools, which were originally established by religious bodies, still have their support and also retain their religious names. In general, the quality of primary schools in Ghana is associated with how they were established: those established relatively early in colonial times or established in the country's early post-independence era in the 1960s tend to have better facilities, a sounder infrastructure and teaching and learning equipment. Although schools may be religious or state-supported, this distinction does not appear to correlate with quality. Antwi (1992:197) writes that although schools are provided both in the rural and urban areas, there is some disparity in the provision of educational facilities.

Access by various ethnic groups is also uneven (Foster 1965:183, Antwi 1992:7). Antwi (1992) illustrates the great inequality by pointing out that there are more second cycle schools (secondary and teacher training colleges) in four towns in the south than there are in all the rural areas put together. He adds that this was the result of the colonial government's policy of not establishing educational institutions in the northern part of the country under the pretext that the people there might have disturbing influences which might make them difficult to govern. This disparity also affects the literacy rate, which in Southern Ghana averages
54.3% but is only 11% in the North where at independence in 1957 there was only one graduate (Antwi 1992:52).

The Ghanaian education system has a pyramidal structure which shows a relatively broad base at the primary level but is less extensive in the secondary and tertiary levels. The statistics at independence in 1957 are as follows:

**Table 1: Number of Schools in Ghana at independence**

<table>
<thead>
<tr>
<th>Primary</th>
<th>Middle</th>
<th>Secondary</th>
<th>Teacher Training</th>
<th>University-Colleges</th>
</tr>
</thead>
<tbody>
<tr>
<td>3571</td>
<td>1311</td>
<td>38</td>
<td>82 (as at 1967)</td>
<td>2</td>
</tr>
</tbody>
</table>

There were no figures for 1957. However in 1950 there were 19 teacher training colleges. By 1967 the number had increased to 82 because of Accelerated Educational Development Plan begun 1951. (Foster 1965:183, Antwi 1992:39, and Kwapong Report, 1967:87).

The statistics for the 1995/96 academic year show 11,800 primary schools with a total enrolment of 2,230,108 pupils. The number of junior secondary schools is not available although we have the total enrolment figure of 846,010 pupils.

**Table 2: Ghana’s Education Statistics- School Enrolment for 1995/96**

<table>
<thead>
<tr>
<th>Schools</th>
<th>Primary</th>
<th>JSS</th>
<th>SSS Public</th>
<th>SSS Private</th>
<th>Teacher Training</th>
<th>Universities</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of Sch.</td>
<td>11,800</td>
<td>Not available</td>
<td>467</td>
<td>44</td>
<td>38</td>
<td>5</td>
</tr>
<tr>
<td>Total Enrolment</td>
<td>2,230,108</td>
<td>846,010</td>
<td>201,813</td>
<td>7,377</td>
<td>19,369</td>
<td>Not available</td>
</tr>
</tbody>
</table>

Ministry of Education: Basic Education Statistics 1995/96

The figures for senior secondary schools show 467 public schools and 44 private institutions. For the public sector, the total enrolment of 201,813 has a sex ratio of 64.6% males to 35.4% females while the total enrolment for the private sector shows a total population of 7,377 students with a male-female ratio of 51:49. For the teacher training colleges the figures show a total student population of 19,369, with 65.8% males and 34.2% females.
3.3 Primary Education in Ghana

3.3.1 The Structure of Primary Education

In 1987 a new structure of education was introduced. The primary sector was reorganised and placed under basic education. The basic education sector is a nine-year compulsory free education and it is divided into two main sectors, a primary sector and a junior secondary sector. The primary sector is sub-divided into two: a lower and an upper sector (see figure 2). There is also a period of two years of nursery schools for children aged 4 and 5. Formal basic schooling starts at age six and ends at age fourteen.

3.3.2 Primary School Language of Instruction

According to the English Panel (1992) with reference to the Ministry of Education: EP439/11/221 (undated), the language policy in education is:

‘the major local language of the district/region is the language of instruction from P1-3, after which it becomes a subject and English is the medium of instruction from P4 onwards’ (English Panel, 1992:6)

However, Atakpa 1993:3) says that Ghana’s current language policy in education stipulates that:

- ‘the language of instruction in the first three years of primary education should be the local Ghanaian language of the child
- at the Junior Secondary School level, a Ghanaian language should be a core subject for the student.
- at the Senior Secondary School level, a Ghanaian language should again be a core subject for the student and an elective if he or she wishes to study it further’ (Atakpa 1993:3)

56
The primary school curriculum for 1995 has nine subjects and the time-table shows fifty periods of thirty minutes a week in both the lower and upper sectors. The allocation for each of the nine subjects at both levels is shown in Table 3. Because all subjects at the lower primary level other than English are supposed to be taught in the Ghanaian language, the teaching of Ghanaian language itself as a subject and its use for instruction takes up to 74% of the time allocated while English takes 26%. (i.e. 6.5 hours a week).

Table 3: Primary School Time-table - Weekly Allocation

<table>
<thead>
<tr>
<th>Subject</th>
<th>Lower</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Language study</td>
<td>4 hours</td>
<td>4 hours</td>
</tr>
<tr>
<td>Library study in English*</td>
<td>1 hours</td>
<td>1 hours</td>
</tr>
<tr>
<td>Handwriting in English*</td>
<td>1.5 hours</td>
<td>1.5 hours</td>
</tr>
<tr>
<td>Mathematics</td>
<td>4 hours</td>
<td>4 hours</td>
</tr>
<tr>
<td>Life Skills</td>
<td>3.5 hours</td>
<td>3.5 hours</td>
</tr>
<tr>
<td>Cultural studies</td>
<td>2.5 hours</td>
<td>2.5 hours</td>
</tr>
<tr>
<td>Elementary Science</td>
<td>2 hours</td>
<td>2 hours</td>
</tr>
<tr>
<td>Agriculture science</td>
<td>1.5 hours</td>
<td>1.5 hours</td>
</tr>
<tr>
<td>Ghanaian language</td>
<td>2 hours</td>
<td>2 hours</td>
</tr>
<tr>
<td>Social Studies</td>
<td>2 hours</td>
<td>2 hours</td>
</tr>
<tr>
<td>Physical Education</td>
<td>1 hours</td>
<td>1 hours</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>25 hours</td>
<td>25 hours</td>
</tr>
</tbody>
</table>

* considered as part of English Language Studies.

At the upper primary, the time-table allocation follows the same pattern except that there is now a shift away from Ghanaian language to teaching in English with English language being taught as a subject for six and half hours a week. Together with its use as the language of instruction in the other subjects English is used for 92% of teaching time while the Ghanaian language takes up 8% of the time (i.e.2 hours a week).

So at the upper primary level when pupils are just beginning to understand and acquire basic literacy and numeracy in the Ghanaian language its study receives less emphasis. The small amount of time devoted to its study often results in a drastic loss of basic literacy skills acquired in the first three years of its study. By the end
of primary class six literacy skills in the Ghanaian language are weakened and likely to be lost.

3.3.3 Characteristics of Primary School Textbooks

Generally speaking, there is an inadequate numbers of primary school English textbooks. However, the quality is reasonable because the texts use Ghanaian culture as a stimulus for the use of the second language and provide large amounts of discourse for pupils to practise and develop a range of language skills in the second language. The emphasis is on practical training in the development of language skills rather than a conscious linguistics analysis. The basic concern is the transmission of real messages related to the actual language needs and interest of the pupils. However, at the primary school level, very little comparison, if any, is made between the L2 and the L1, and overt discussions of aspects of civilisation associated with the second language have no place in the text. A problem associated with their usefulness is the level of language, which rather over-estimates attainable levels of competence for pupils. This affects the use of the books as realistic materials for learning English in Ghana.

The book-to-pupil ratio changes as one moves away from the educational district centre to the interior of the rural areas and as one moves from the southern sector of the country to the northern sector. The book availability at the district centre may range from one for each child to one for every five children. In the rural areas the ratio could be as low as one book to an entire class. The above refers more to the English textbook situation; the Ghanaian language textbooks are not available at all.

3.3.4 Primary School Examinations

The final primary school leaving certificate examination, referred to as the Basic Education Certificate Examination (BECE), is officially conducted in English at the end of the ninth year of basic education. Teachers at various class levels are however expected to conduct their individual class test in the Ghanaian languages.
A pass or a failure in it does not count towards promotion to the next grade just as a pass or a failure in English at this stage of moving from one class to the other does not count. Promotion from one class to the other is based on attendance rather than on academic performance. Teachers are officially proscribed from making pupils repeat a year on the basis of academic performance.

3.3.5 Guidelines for the Selection of Junior Secondary School Pupils into Senior Secondary School

The subjects studied at the Junior Secondary Schools are shown in Table 4.

Table 4: Subjects Studied at the Junior Secondary School

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mathematics</td>
<td>8</td>
<td>Social Studies</td>
</tr>
<tr>
<td>2</td>
<td>General Science</td>
<td>9</td>
<td>Cultural Studies</td>
</tr>
<tr>
<td>3</td>
<td>Agriculture Science</td>
<td>10</td>
<td>Technical Drawing</td>
</tr>
<tr>
<td>4</td>
<td>Ghanaian Languages</td>
<td>11</td>
<td>Technical Skills</td>
</tr>
<tr>
<td>5</td>
<td>English</td>
<td>12</td>
<td>Vocational Skills</td>
</tr>
<tr>
<td>6</td>
<td>Physical Education</td>
<td>13</td>
<td>French</td>
</tr>
<tr>
<td>7</td>
<td>Life Skills</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Ghana National Association of Teachers 1993:45-46)

The selection of students into senior secondary school (SSS) from the primary school is mainly based on performance in English because it is based on the BECE examination which is entirely conducted in English. No matter how good a candidate's grades are in other subjects, a failure in English means no admission because a pass in English is a pre-requisite for admission.

Entry into SSS by JSS graduates is based on the results of the Basic Education Certificate Examination (BECE). This is made up of continuous assessment and an external examination. To qualify for entry into the senior secondary school (SSS), a candidate should obtain grades which when aggregated are 36 or less in six of the JSS subjects including a minimum of grade 8 English.
3.4 Teacher Education in Ghana

3.4.1 Historical Development

In 1950 there were 19 pre-university teacher training colleges. The 1951 Accelerated Educational Development Plan (AEDP) led to the establishment of emergency training colleges to cope with the rising demand for teachers. Ten intensive training centres for a six-week course for untrained teachers were established in 1953, but in 1962 the intensive training centres and the emergency training colleges were phased out. In 1964 nine specialist training colleges were established to offer English, Geography, History, Mathematics and Ghanaian languages. More specialist colleges were added in 1973 but unfortunately they were short-lived as they were phased out in 1976 to make way for semi-specialist post secondary programmes which were aimed at preparing teachers for the JSS programme. These were also abandoned in 1979 for general post secondary teacher training programmes.

In the early 1970s it was estimated that by 1980 Ghana would have achieved training of all its teachers. However, the oil boom in Nigeria and the expansion of her educational system in the same period made a lot of Ghanaian teachers leave for what they saw as greener pastures. By 1985 the exodus left Ghana with 78,746 teachers for the primary schools and of this number 40.51% were untrained. For the secondary schools and teacher training colleges there were 9,299 teachers out of which there were only 36.9% graduate teachers in 1984 (Antwi 1992:87-140). The Nigerian Aliens Quit Order in the late 1980s led to the return of some teachers but the damage caused to the Ghanaian education system was substantial.

Following the mass exodus of teachers to Libya, South Africa, Swaziland and particularly to Nigeria between 1974 and 1982, the acute shortage of teachers led to the establishment of a two-year modular teacher training programme in 1983. The programme gave external two-year training, to untrained post middle teachers in the field whose training sessions were normally held during the school holidays. After two years of external training they were given another two years of training.
in residential teacher training colleges as regular students. At the end of the course they sat the same examination as the students who had pursued a regular four year course.

Today, there are 38 teacher training colleges in Ghana with 13 of these preparing teachers specially for the lower grades of the primary school system (i.e. for classes one to three). The others give general courses and their graduates can teach either in the six-year primary or in the JSS. There are seven diploma awarding teacher training institutions which offer various courses for teachers. Two tertiary institutions; the University of Cape Coast and the University College of Education in Winneba offer advanced courses for teachers. From September 1997 all teacher training colleges will become diploma awarding institutions.

3.4.2 Teacher Training, Time-table, Course Content, and Qualifications

(a) Time Table

Table 5 shows time-tabling for both English and Ghanaian language in the teacher training colleges (TTCs).

<table>
<thead>
<tr>
<th>YEAR</th>
<th>WEEKLY</th>
<th>Weekly</th>
<th>Man-hours Per annum</th>
<th>Man-hours per annum</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>English</td>
<td>Gh. Lang.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year One</td>
<td>5 hrs.</td>
<td>2 hrs.</td>
<td>5 x 40 weeks 200</td>
<td>2 x 40 weeks 80</td>
</tr>
<tr>
<td>Year Two</td>
<td>5 hrs.</td>
<td>2 hrs.</td>
<td>5 x 40 weeks 200</td>
<td>2 x 40 weeks 80</td>
</tr>
<tr>
<td>Year Three</td>
<td>10 hrs.</td>
<td>0 hrs.</td>
<td>10 x 40 weeks 400</td>
<td>0 x 40 weeks 00</td>
</tr>
<tr>
<td>Total</td>
<td>20 hrs.</td>
<td>4 hrs.</td>
<td>800</td>
<td>160</td>
</tr>
</tbody>
</table>

The training system is heavily biased towards English language teaching and its use for instruction. Less time is devoted to the teaching of Ghanaian languages and their use for instruction. Therefore, the graduates produced are on the average better able to teach English at primary school level than Ghanaian languages. Table 5 shows the typical time allocated for the teaching of English as a subject at the TTCs. Quite apart from the time allocation, the language of instruction in the TTCs’ curriculum is English and this strengthens the claim that English is over-emphasised.
(b) Teacher Training Institutions

In 1996, 38 teacher training institutions with a total student population of 19,369, offered courses leading to basic initial teacher qualification; the '3 year post secondary teachers' certificate A', for service in the primary and JSS schools. Entry requirements include the school certificate or the general certificate of education (ordinary level) plus a pass in the common entrance examination and an interview.

(c) Course Content

A total of 12 subjects are offered for the three year course. Eight are compulsory for all students with a choice of two from the remaining four. The compulsory subjects are: English, education, Ghanaian language, mathematics, science, agricultural science and physical education and the optional subjects from which a choice of two is made are social studies, life skills, cultural studies and English Literature. Five of the 12 subjects (Ghanaian language, mathematics, science, agriculture science and physical education) are studied for two years only and are examined externally at the end of the second year. In the final year there is a some specialisation with English and education being compulsory for all students, plus a choice of two subjects from English literature, social studies, cultural studies and life skills. Different schools have different combinations of the optional subjects. There are four weeks of teaching practice a year, though most colleges organise the activity in the second and final years of the three year course.

(d) Teachers' Qualifications

Nine official teacher qualifications are recognised and approved by the government for teaching at primary level and two others accepted for schools with an acute shortage of teachers. Thus within the primary school system teachers with varying degrees of training, experience, and qualifications operate side by side (Antwi 1992:116). The eleven teacher qualifications are as shown in Table 6.
<table>
<thead>
<tr>
<th></th>
<th>Teachers Qualifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>a)</td>
<td>Untrained Middle/secondary school Leavers (Pupil-Teachers)</td>
</tr>
<tr>
<td>b)</td>
<td>Untrained High Sch/ 'A' Level Pupil-Teacher</td>
</tr>
<tr>
<td>c)</td>
<td>Two-year Post Middle Certificate &quot;B&quot; Teachers</td>
</tr>
<tr>
<td>d)</td>
<td>Two-year Post &quot;B&quot; Certificate &quot;A&quot; Teachers</td>
</tr>
<tr>
<td>e)</td>
<td>Four-year Post-Middle Certificate &quot;A&quot; Teachers</td>
</tr>
<tr>
<td>f)</td>
<td>Two-year Post Secondary Certificate &quot;A&quot; Teachers</td>
</tr>
<tr>
<td>g)</td>
<td>Three-year Post secondary Certificate &quot;A&quot; Teachers</td>
</tr>
<tr>
<td>h)</td>
<td>Three-year Specialist Teachers</td>
</tr>
<tr>
<td>i)</td>
<td>Three-year Diploma Certificate Teachers</td>
</tr>
<tr>
<td>j)</td>
<td>Non-professional graduate Teachers</td>
</tr>
<tr>
<td>k)</td>
<td>Professional Graduate Teachers</td>
</tr>
</tbody>
</table>

Teachers in categories (a-h) teach at the nine-year basic education level and (h-k) may teach in secondary schools or teacher training colleges, except category (i) who are confined to teaching in the secondary schools but could volunteer to teach in a primary school. The untrained Middle School-leaver-Pupil-teacher is almost entirely used as an attendant in the kindergarten and are very rarely used in the classroom as teachers.

The Certificate ‘B’ categories were quickly given two years of training when the country attained internal independence between 1951 and 1957 to cater for a massive educational expansion which started in 1951. The certificate ‘A’ post ‘B’ did another two years after the certificate ‘B’ to qualify as certificate ‘A’ teachers. After independence the minimum teacher qualification for teaching in the primary school was raised to the certificate ‘A 4 Year’, while the two year post-secondary certificate ‘A’ was trained for the junior forms of secondary schools. In 1976 the three year post secondary started for the junior secondary school programme but could not be introduced throughout the entire country. The number of colleges running the post secondary programme gradually expanded and in 1994 all four year certificate ‘A’ colleges were phased out. The specialist, the diploma, and graduate teachers were all originally trained for teacher training colleges and
secondary schools but are today posted to head and teach in basic education schools. Today there are many more professionally trained teachers than there were in the 1970s and one might expect the results of their work to be better. However, as discussed earlier, results are worse than they used to be in the 1950s and 1970s. One thing the 1950s teacher had which the present-day teacher lacks in substantial quantities is commitment to work.

In all fairness to the present-day teacher who is faced today with greater frustration than his counterpart of the '50s, the teaching profession today seems to be blamed for all the economic woes of the country. It is publicly declared a drain on resources as it does not immediately - generate income. It is also regarded as a job that can be done by anyone who has set foot in a classroom. In 1993 when teachers went on strike to back their demand for the restoration of the Ghana Education Service Council, the Head of State in a nation-wide broadcast asked the Regional and District Administrators to replace all striking teachers with retired soldiers, members of the citizen's defence committee (a bunch of revolutionary hooligans, whose education did not go beyond the primary school certificate) and educated but unemployed people. Teachers are also blamed for the educational failures resulting from political incompetence. In a parliamentary report in September 1994, that was given radio and television coverage, the Minister of Education in reacting to the mass failure of SSS students in English Language in September 1994, blamed the poor results on teachers' ineptitude and lack of commitment to their duties. Today teachers lack materials for their work because most schools not only lack textbooks but also have very large classes. Teachers in some schools have to combine classes because the government has placed an embargo on the employment of untrained teachers to fill vacant places, not because of its interest in protecting the quality of education but for economic reasons.
In discussing the problems of English language teaching and learning in Ghana Seidu (1993) argued that:

'\textit{the crux of the problem lies in the poor foundation pupils receive in the primary schools. Primary school pupils are often taught by teachers whose competence is itself questionable. The children in the primary schools are exposed to poor, non-standard English by many teachers who have themselves failed to acquire the requisite skills necessary to use and teach English as a language of learning and by implication the root cause of the problem lies with the inadequate teaching given to the teachers in the teacher training colleges}' (Seidu 1993:107).

3.4.3 Graduate Teachers

The University of Cape Coast and the University College of Winneba produce graduate teachers for service in secondary schools and teacher training colleges. For graduates from the University of Ghana embarking on a teaching career the University of Cape Coast provides a year’s course leading to graduate certificate in education. However, to be eligible candidates must have taught for at least one year. The University College of Winneba, is assigned the specific responsibility of producing graduate teachers for primary schools.

3.4.4 Funding for Teacher Education

All teacher trainees receive a government allowance while in training equivalent to the salary of an unqualified teacher and also attracting a yearly increment as if they were teaching. In addition to this, the government pays for their board and lodging and meals for the duration of the course. This practice had been abolished in 1967 but was re-introduced in 1990 for the sole purpose of attracting good calibre students into the teaching profession which had become a dumping ground for less well qualified secondary school graduates.

3.4.5 Certification and Examination of Teachers

Until the phasing out of the four-year post primary school course in 1992 two bodies were responsible for the examination of teachers, The West African Examination Council and the University of Cape Coast. The Institute of Education, University of Cape Coast is now solely in charge of teacher examinations for the three year post-secondary programme. It supervises, controls the syllabus and
content of courses on behalf of the National Teacher Training Council, now the National Training Council, which is the body charged with the responsibility for the certification of teachers.

3.5 Language and Language Use in Ghana

Although disputed, Greenberg's (1963) typology of African languages identifies three main language families in Ghana. Welmer's (1977) classification also identified the same African family language groupings for Ghana as Greenberg. These are the Mande, the Gur-Voltaic and the Kwa (Tadjadji 1980:8-11, Bemile 1995:3). The Mande forms a very small language group in Ghana, and since linguistic classifications have undergone considerable amendments, this review will present a simplified version. Thus, the three-way classification is substituted by a two-way grouping. On a very broad basis the people of Ghana may be grouped into two main groups (see the sociolinguistic map of Ghana: Appendix 1): The Languages of northern Ghana and the languages of southern Ghana.

(a) Languages of Northern Ghana

The languages here belong both to the Kwa sub-family and the Gur-Voltaic sub-family group. The Gur-Voltaic family is sub-divided into two main groups;

- the Moore-Gurma family: Mole-Dagbani, Wali-Dagaree
- and the Grusi family: Kasem, Sisala, Mo

The Kwa family in the north include sub-families of the Guan: Gonja and Nchumburu.

(b) Languages of Southern Ghana

The languages here are members of the Kwa sub-family and may be classified into three main groups:

- the Akan family: Twi-Fante, Akwapim, Kwahu, Sehwi, Nzema
- the Ga-Adangme family
- the Ewe-Fon family (Antwi, 1992: 8-10)
3.5.1 The Language Distribution in Identifiable Communities

Table 7 shows the distribution of the four main dominant language groups in Ghana. It shows Akan as the language with most speakers (45% of the population). It is the indigenous language of wider communication in the country. However, most local languages function mainly as in-group or regional languages.

<table>
<thead>
<tr>
<th>Group</th>
<th>% land area</th>
<th>% speakers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Akan</td>
<td>49.1</td>
<td>45</td>
</tr>
<tr>
<td>Mole-Dagbani</td>
<td>40.9</td>
<td>30</td>
</tr>
<tr>
<td>Ewe-Fon</td>
<td>8.6</td>
<td>13</td>
</tr>
<tr>
<td>Ga-Adangme</td>
<td>1.4</td>
<td>9</td>
</tr>
<tr>
<td>immigrants</td>
<td>-</td>
<td>3</td>
</tr>
</tbody>
</table>

The language distribution in Ghana is very complex and defies simple categorisation and definitions of language use. At one level it can best be described as being multilingual, while at another the situation is more of bilingualism, and yet at a third monolingualism is the norm.

In view of the numerous languages and dialects ‘multilingualism’ best describes the country's general language scene. Ansre's (1970:6) sociolinguistic survey testifies to the multilingualism of most individual Ghanaians, and indeed many Ghanaians are multilingual. However, the present study considers Ansre’s findings to be too general, because they fail to identify specific localities and communities where bilingualism is the norm and areas where monolingualism can be expected.

As noted above, any useful and realistic sociolinguistic description of the individual's language use should take into account three distinct communities of language use:

- multilingual communities in urban areas and city suburbs (the Zongo suburbs in urban areas e.g. Madina Ansre’s (1970) study setting)
- bilingual communities within urban and rural settlements (Northern Ghanaians, Nigerians, Togolese, Ivorians, and Bukinabi communities in
rural southern Ghana and Southern Ghanaian communities in urban northern Ghana) 
• and monolingual rural and urban communities

A fourth situation worthy of consideration is that of individuals dotted all over the country in both rural and urban areas who have acquired bilingualism through both Arabic and English education.

In urban areas there is no doubt that multilingualism is the norm (Ansre 1970:6 and Ure 1979). However, there are large areas within the urban settlement where most speakers are likely to be monolinguals. For example, in Kumasi, the Asante capital, there are suburbs of the city completely settled by indigenous Asantes. In these suburbs, monolingualism pre-dominates, as it also does in most small villages, especially, those far away from the urban centres.

For the urban areas Ure's (1979) diary studies testify that it is common for Ghanaians, to speak more than one language. Everyday language choice among Ghanaians, just like the language situation itself is complex. Ure's studies of language choice and use among Ghanaian primary school teachers testifies to this complexity.

Owusu-Ansah, (1992:12) identifies two types of bilingual language use:

• English and one or more Ghanaian languages 
• and bilingualism involving only Ghanaian languages

The present research also identifies two other types of bilingual language use in Ghana that are often disregarded:

• bilingualism involving Arabic and other Ghanaian languages 
• bilingualism involving English, Ghanaian languages and one or more other international languages of wider communication (e.g. late-President Hilla Liman spoke English, French, and other GLs i.e. Sisala, Twi and Hausa).
As Owusu-Ansah (1992) notes, English and Ghanaian language bilingualism is commonly found among educated Ghanaians. Occasionally, an individual may acquire fluency in spoken English without a formal education. This may be due to the individual's association with expatriates or involvement in certain capacities through which he or she frequently comes into contact with English. It is not surprising that English does not extend beyond the spoken form.

A common form of bilingualism in urban areas is the use of two or more Ghanaian languages. This is also observed in rural areas where the language taught in school is different from the indigenous local dialect (Apronti and Dentah 1969, cited in Owusu-Ansah 1992:13). Thus, bilingualism can be acquired through either:

- interaction between the individual and native speakers of the second language
- and or education in classroom settings.

Owusu-Ansah (1992) also notes that bilingualism is confined to conversational skills when it is acquired outside the classroom.

### 3.5.2 The Role of English in Ghana

English is the official language and the language of government at the national level. As the official language, it is a language of high prestige and the dominant language of education, the international language, the language of publication, the language of the professions (commerce, law, administration, employment, the media and social advancement). Although it started as a foreign language, today, its use is established for national purposes and it has a growing Ghanaian literature associated with it (The English Panel 1992:8).

The use of English for national purposes is associated with political and historical factors. Politically, the country has citizens belonging to different linguistic groups whose languages are not mutually intelligible. In addition, not one of its local languages is widely enough understood by the citizens to promote its use as the common language. For practical reasons therefore, English was chosen as the
national language because, its use was already established in government and in education. Growth and expansion of education led to wide-spread use of English as a second language by the nationals to communicate with each other.

Although there is a discussion of ‘Ghanaian English’ the authorities are divided on the extent to which English has been ‘indigenised’.

However, Bamgbose (1997) argues that:

‘the labels “Non-native Englishes” and its variant “New Englishes” have become so familiar to those researching in English as spoken or written in non-native contexts that it will come as a surprise that anyone will dare to question the validity of the concept which they represent’...teachers of English in non-native contexts may think that what is involved in these disagreement is merely a terminological quibble, or an analytic or academic disputation without any practical consequences. I hasten to warn that over the years, we have preached the gospel of appropriateness of material in the local cultural situation. Hence, books intended for teaching English in West Africa cannot be those imported from England. We have even gone a step further by ensuring that such material is country specific in order to suit them to the sociocultural context’ (Bamgbose 1997:15).

In education, English is the language for instruction and is also a subject after P4. It is extensively used in education and the English courses are intended to develop a pupils’ language from the level of ‘complete Beginner’ to learning the early secondary curriculum in English (English Panel 1992:7).

3.5.3 The Use of Ghanaian Languages

According to Ure (1979) there are virtually no areas of language use in which Ghanaian languages are not sometimes used. All English language skills duplicate skills in the mother tongue (Ure 1979:278). English and Ghanaian languages have complementary roles in daily use because the languages do not compete for reserved domains. English invades every informal domain as much as the indigenous languages invade all formal domains. English is used in the market place, in the streets and in homes. It is also used at more formal levels such as ‘child outdoing’ or Ghanaian child naming, marriages, funerals, enthronement (installing a chief), conducting sermons and in other domains.
Although English dominates as the most important language at the national political level, the local languages are not wholly relegated into the background. Political speeches are often punctuated with indigenous languages. Thus code-switching is common.

Owusu-Ansah (1992:21) identifies four major situations of choice of language between English and the Ghanaian Languages:

- Code mixing is frequent in situations of informal conversation between equals
  English is the choice between educated Ghanaians without a common language
- Formal discussion and disciplinary related matters in offices will be initiated and discussed in English
- Informal discussions will be initiated in local languages

Under the PNDC government of Jerry Rawlings the issue of indigenous languages has again entered the political scene. Rawlings, in an attempt to decentralise local administration, increased the number of administrative districts from 65 to 110. Nearly all districts are linguistically homogeneous. In the elections for the District Assemblies candidates who speak no English were permitted to run. Consequently, political debate in the Assemblies especially in rural districts takes place in the indigenous languages (Laitin and Mensah 1991:143). This is the most important use of indigenous languages in modern Ghana. If this trend continues, it will perhaps serve as a catalyst for the regaining of respect for the indigenous languages.
3.6 Language Policy in Education

3.6.1 National Languages

Five indigenous Ghanaian languages and one West African language of wider communication (Hausa), have been declared as national languages. The five indigenous languages are Akan, Dagbani, Ewe, Ga, and Nzema. English, the official language, and the six national languages are used on national radio and television programmes.

3.6.2 Languages in Education

In multilingual societies, the multiplicity of languages not only poses serious problems to political advancement but also to educational planning. Boadi (1976) argues that if we take as axiomatic the desirability of a language planning policy that will not sacrifice national aspirations and identity, there still remain problems of choice, such as which languages to select for development in education. Of the numerous languages, should the selected language or languages be used as language for instruction or taught as a subject? This has always been a problem in African countries (Boadi 1976:85). A country like Zambia opted for the use of a second language across the curriculum and had many problems because of the absence of trained English teachers. The teachers continued to teach using the proscribed mother tongue (Serpell 1989:95).

Although, today the teacher situation in Ghana has improved, the overall practice does not seem to differ. There are many English trained teachers but common sense observation of any Ghanaian primary school class would seem to suggest that classroom language use involves the dual use of English and a local Ghanaian language. Until quite recently (the 1980s), there was a problem in that the Ghanaian government took for granted that the choice of Twi, Fante, Ewe and Ga adequately represented all Ghanaian languages. Not a single northern Ghanaian language was officially recognised as a language of education as late as the 1970s (Boadi 1976:85).
3.6.3 Historical Background to Language in Education Policy

Ghana, like other African countries, has had its share of intermittent changes in educational language policy. The first language in education policy for Ghana that gave recognition to the use of indigenous languages in schools as languages of instruction was the recommendation made in the Phelps-Stokes Commission Report (1927): British Educational Policy in Africa. One of the outcomes of this work was the setting up of an Advisory Committee on Native Education in Tropical Africa. Its first report (1927) recommended the use of indigenous languages in education. It also stressed that English should be used in all schools on the grounds that the natives were keen to learn English (Boadi 1976:88)

Historically, literary work in indigenous Ghanaian languages can be traced back to the 19th century and the Basel Missionaries. For more than a century they studied the local languages. Literacy development in Akan, the dominant GL, owes its standing to pioneer work of Chritaller (1875) "Tshi": Grammar of Asante and Fante (Westermann 1937, cited in Akrofi 1965:viii). In spite of the use of English as the official language, colonial education authorities continued to support the study of indigenous languages (see Boadi, 1971, 1976, Bagulo 1990; and Owusu-Ansah 1992). The indigenous languages continued to be used in education in varying amounts and emphasis, until independence in 1957 when there were changes.

The attainment of internal independence in 1951 brought an important step in Ghana’s educational development. This was the Accelerated Educational Development Plan (AEDP). Among its stated objectives were:

- The provision for a sound foundation for citizenship with permanent literacy in both English and the vernacular;
- At the beginning of the primary school course instruction will be given through the medium of the local vernacular with English taught as a new language. As soon as possible there will be a transition from the vernacular to English medium and the upper classes will receive instructions through the medium of English except that throughout the whole course the vernacular will receive a special study. (Boadi 1976:88)

In response to the AEDP, The Bernard Committee was appointed in 1956 to investigate the feasibility of using English for instruction throughout the primary
school course. However, according to Boadi (1976), the Committee did little more than endorse the proposal embodied in the AEDP concerning the language of instruction at the primary level. That is:

- At the beginning of the primary school course instruction will be given through the medium of the local vernacular with English taught as a new language. As soon as possible there will be a transition from the vernacular to English medium
- and the upper classes will receive instructions through the medium of English except that throughout the whole course the vernacular will receive a special study (Boadi 1976:88)

However, one committee member who dissociated himself from the majority report wrote a minority report which advocated the use of English for instruction in the primary school across the curriculum. This recommendation was accepted by the newly elected Legislative Assembly and was put into effect in 1957, the year of independence. Thus, ironically the year that marked the apex of nationalism was also the year the role of the national language in education was reduced.

In fairness to the young politicians of the time it should be noted that in most African countries the role played by indigenous languages in national life is unique and different from the corresponding role of other aspects of culture. However, no aspect of culture is a greater source of political divisiveness than language. From the point of view of the politicians, stressing the importance of some indigenous languages in education at the expense of others was dangerous for national unity (Boadi 1976). Especially so, when on the eve of independence there were divisive feelings amongst sections of the population. The Akans demanded federalism, and at the same time the northern people did not want independence at the same time as southern Ghana. Sackey (1997) points out that

'apart from political reasons of national unity, the government appeared to have been overwhelmed by its overriding concern with falling standards in English which affected the children’s prospects for higher education' (Sackey 1997:131).

Thus English became the language for instruction officially from 1957 and this continued as such until 1967. However, a few indigenous languages were favoured as subjects although they were not officially permitted beyond primary class three (Bensor-Samuel 1980, cited in Owusu Ansah 1992:17). In maintaining the few indigenous languages (though not the mother tongue), Sackey (1997)
argues that it was more an act of consideration rather than absolute belief (Sackey 1997: ibid.).

By independence in 1957, the reasons for the use of English as language for instruction in Ghanaian primary schools can be summed up as follows:

- political reasons of national unity
- the lack of a single mother tongue
- the pioneering role of English in the establishment of government, law, education, and the press
- the fact that by 1957 only four of the 54 languages were officially recommended for use in education, although others were tolerated.

However, there were few attempts to challenge the supremacy of the use of English for instruction. A private member's motion was tabled in the Ghana National Assembly (1961) which reads as follows:

'in the opinion of this House it is desirable that the Akan Language should be taught in all schools in Ghana' (Laitin and Mensah 1991:143).

The motion was defeated but during the debate many points were raised which have appeared again and again whenever language matters are discussed. A majority was in favour of retaining English as the official language, not only because of its international status, but also because of its neutral unifying role in Ghana. Mrs Sussana Al Hassan, the then Deputy Minister of Education is credited with summing up the official position on the matter as:

'It is the intention of the government to encourage the development of all our major languages so that each of them may have the opportunity of attaining a standard which would improve its chances of being chosen as the national language when the time comes for such a decision' (Laitin and Mensah 1991: 143).

Governments changed repeatedly over the next generation but the language policy of Mrs Al Hassan has remained intact.

The Bureau of Ghanaian Languages has analysed and developed a number of indigenous Ghanaian languages for their use in teaching. However these were not used beyond primary class one. This apart, books produced in Ghanaian languages
by the same body have not been purchased nor even assigned to classes by the education authorities (Ghana's Daily Graphic 1990).

In 1967 The National Liberation Council, the new military government, commissioned 'The Kwarpong Committee' to conduct a comprehensive review of the entire educational system. In its report it recommended that:

(i) a Ghanaian language be used as medium of instruction for the first three years of primary education; the change to English medium of instruction should commence in the fourth year whilst the Ghanaian language continues to be studied as a subject; in the metropolitan and other urban areas where children are generally more exposed to spoken English than in rural areas, the change to English as a medium may commence earlier than the fourth year of the course;

(ii) that in the English-language (experimental) schools where English is the medium of instruction from the first year, the pupils should be taught a Ghanaian language as a subject throughout the course;

(iii) that the Ministry of Education should undertake a comprehensive evaluation of the experimental schools project, including the performance and progress in secondary schools of pupils from these schools;

(iv) that before the six-year primary course is introduced for the whole country, the Ministry of Education should conduct an experiment under the average conditions likely to encountered, to determine whether it is possible to reach the standards necessary for entrance to the secondary school if the children are taught in a Ghanaian language for three years before being taught in English for a further three years (Kwapong Report, 1967:55)

The main reason they gave for this recommendation was that:

'... we endorse this practice because children learn more easily in their mother tongue and are more easily able to express their ideas and relations in that language... ' (Kwapong Report, 1967:54).

Although similar recommendations had been made before, the novelty of this one was the recognition given to the different needs for urban and rural schools. However, the government rejected this recommendation and instead proposed that the local language should be used for instruction only during the first year of primary education. This lasted for only three years. In 1970, the new civilian administration of Professor K. A. Busia reintroduced the use of the mother tongue for instruction for the first three years of the primary school course with a modification. The modification had to do with the insertion of a clause that stated that "where necessary the mother tongue should be continued for another three
years”. In 1972 the Acheampong regime rejected the Busia clause and since then subsequent governments and education review committees have not seen the need to modify the policy or replace it altogether (Boadi 1976:83-112). In 1974 the Ministry of Education published a new structure and content of education based on the Dzobo Education Committee Report. This placed emphasis on the study of indigenous local languages and stated that:

‘the medium of instruction for the first three years of primary education shall be the main Ghanaian language spoken in the area’ (Bemile 1995:9)

The new policy also added that:

‘student teachers in training shall learn one Ghanaian language other than their mother tongue’ (Bemile loc.cit.)

This measure was taken to enable teachers to cope with the new policy on the teaching and learning of GLs.

3.6.4 The Language Policy in Basic Education Schools

In 1987 the new educational reform guidelines stated that:

‘a pupil in school shall learn his own language and another Ghanaian language in addition. The local Ghanaian language shall be used as the medium of instruction for the first three years of the primary school and English shall be learnt as a subject from the first year at school and shall gradually become the medium of instruction from the fourth year of primary school. The study of the Ghanaian language shall continue to be compulsory up to the senior secondary school’ (Ministry of Education, undated p.6, cited in Bemile 1995:10).

However, Atakpa (1993) also says the policy stipulates that:

• “the language of instruction in the first three years of primary education should be the local Ghanaian language of the child.
• at the JSS level, a Ghanaian language should be a core subject for the student.
• at the SS level, a Ghanaian language should again be a core subject for the student and an elective subject if he or she wishes to study it further.”

Therefore, the question of gradual change is disputed. In the experience of this researcher who taught in primary schools for sixteen years and another thirteen in the teacher training, there is no statement about ‘gradual change’ in the policy statement. Most teachers assume a gradual change in the interpretation of the policy, because a statement of introduction in the English syllabus on a recommended language teaching methodology is taken as the language policy and it states:
"Teachers using this syllabus are urged to teach English with as little recourse as possible to any language other than English, and to reduce to the minimum translation into the indigenous language..." (Ghana Education Service, 1992:5).

This introduction to the English syllabus is often associated with the policy because the policy document does not exist as a single document but as fragments of other documents.

3.6.5 Present Language in Education Policy

The present ‘language in education policy’ allows for the use of the mother tongue for the first three years of primary education. From the fourth year it is studied as a subject. In the secondary schools it is optionally studied as a subject, though at the teacher training college it is a compulsory subject for two years. At the primary school the policy exists more on paper than in real life because in most rural areas the vernacular is used indiscriminately and in some urban and private schools the local language is hardly ever used even at the kindergarten and nursery levels because in these schools there is total English immersion.

Owusu Ansah (1992:17) points out that although the local languages are officially expected to be taught and studied as optional subjects beyond the primary school only three of the 54 are examined at the General Certificate of Education Ordinary Level. These are Akan, Ewe and Ga. The number of students offering Ghanaian languages has decreased over the years. At the tertiary level Owusu Ansah (ibid.) notes that Akan and Ewe are used for lectures only at the university of Cape Coast. In the teacher training colleges, where the policy recommends that ‘student teachers in training shall learn one Ghanaian language other than their mother tongue’, a total of 15 local languages altogether are taught and learned throughout the 38 training colleges. However, students usually study their own mother tongue or another Ghanaian language which they acquired as bilinguals or multilinguals. The policy of the student-teacher learning another Ghanaian language other than his own has never been implemented. Currently, at the national adult education level there is a national non-formal adult literacy project that is producing literacy primers in 15 local languages.
3.7 Attitudes to Language Use in Education

3.7.1 Attitudes to Ghanaian Language Use in Education

The Ghanaian Minister of Education, Sawyer (1997) in an address to the inaugural meeting of the Ghana English Studies Association said:

'Here in Ghana we value our own languages as practical vehicles and also as symbols of our cultures and of our identities... ' (Sawyer, 1997:3).

However, Ghanaian society generally resents mother tongue education mainly because of its lack of opportunities for social and economic advancement. Another reason is the lack of public discussion about the educational benefits of mother tongue education.

Even the educated elite, who the public look up to for guidance, are themselves divided on the issue:

'The first school of thought believes that time should not be wasted on learning the mother tongue in school, for what is acquired at home is all that is necessary... Most people are convinced that a knowledge of English gives one an immediate social and economic standing in society. Knowledge of the mother tongue is not very necessary for one to attain high social status... The second school of thought consists of those who believe that good knowledge of the mother tongue (and therefore of one's culture gives one dignity and a sense of self-esteem in one's society... (Ghana's report: Native Language Learning and Teaching, UNESCO Conference 1969, Hamburg) (Canham 1972:21).

Those who argue most in favour of mother tongue education are those who least want their children to attend schools offering the mother tongue for instruction. Most top civil servants and university lecturers send their children to private international schools or university demonstration primary schools where the language of instruction is English even at the nursery stage.

Teachers also resent the use of mother tongue for two reasons:

- there is lack of adequate training in it
- the lack of teaching material
Atakpa (1993:3) observes that ineffective implementation of the national language of instruction and teaching of the languages, accounts for the negative attitude to local language use in education.

3.7.2 Attitude to English Language Use in Education

The official attitude towards the teaching of English in Ghana is perhaps illustrated in the following statement made by the Minister of Education:

'Whatever the circumstances under which English first arrived at our shores, the language has provided us with an invaluable tool for education and development. Our national syllabuses are very clear about the central role of English in our educational enterprise. English language is a core subject in all primary and secondary institutions, for all students. The reason is obvious. Since English is the language of instruction in all institutions beyond the earliest primary years, a good knowledge of that language is essential for academic advancement, and for success in the more lucrative professions and occupations after graduation' (Sawyer, 1997:2).

As the Minister points out the principal role given to English is captured in the syllabi and the introduction to the primary school’s English syllabus states:

The importance of English language in Ghana is widely recognised. It is the official language, the language of administration, of law, of business and of the learned professions. English is the medium of formal education at all levels except the lowest... This syllabus aims, therefore, at providing such opportunities for learning and using English as to enable pupils completing their basic education to take their proper places in a society in which a knowledge of the English language is essential. It should also provide training in the use of English as a tool for higher education' (Curriculum Research and Development Division Ghana Education Service 1992:4).

Parents, teachers, politicians and the general public favour the use of English in education. Atakpa (1993:2) writes that success in English language is erroneously used as a measure of success in education in Ghana, and Laitin and Mensah (1991:145) state that English in Ghana is held to be the language that promotes technical advancement. They add that the international and national prestige of the English language as well as its neutral unifying role in the country make it more favoured than any Ghanaian language. Laitin and Mensah (1991:148) write that even with economic incentives to promote one Ghanaian Language as the sole language of instruction in all schools as against English, 98% of the respondents preferred English to 2% who favoured Ghanaian language. The
composition of the sample was dominated not only by ordinary Akan speakers, but the high social group, such as family members of the Akan royal household. Ironically, Akan is the dominant language group in Ghana.

Sawyer (1997) sums up the motivating factors for the high premium given to English when he said:

_The reason is obvious. Since English is the language of instruction in all institutions beyond the earliest primary years, a good knowledge of that language is essential for academic advancement, and for success in the more lucrative professions and occupations after graduation’ (Sawyer 1997:2)._

Knowledge of English as well as educational success in it brings better job prospects and educational advancement than a similar knowledge and success in any local language. A good pass in English is a necessary for admission into:

- senior secondary schools
- teacher training colleges
- post secondary nursing training colleges
- polytechnics and universities.

The 1957, 1969, 1979 and 1992 national constitutions all stress that the adequate knowledge of English is a prerequisite qualification for a member of parliament. However, this is not the case with elections to the District Assemblies because knowledge of English is not a requirement. The Ghanaian Press daily advertises job opportunities that depend on an adequate knowledge of English in order to be considered. The level of public interest shown for the study of English language and concern for pupils' success in its study is perhaps borne out by the seeming lack of interest and concern for the local languages. This is demonstrated by the Ministry of Education's inability to organise examinations in local languages for senior secondary school graduates in 1993. At the same time the students’ poor results in the English language examination, at the same level in the same year, was
greeted with panic and hysteria. Parliament demanded an explanation from the Minister for Education.

In explaining the government's inability to organise the conduct of an examination in the local languages, the minister argued that the possibility of students moving from a junior secondary school in one region to another region necessitated the decision to make the study of the local languages optional, contrary to the stated objectives of the 1987 Educational Reform Program. The minister blamed the poor performance in English on the teachers' ineptitude and their deliberate sabotage of the education reform policy (Sawyer 1993:12-3).

The general public, on the other hand, blamed the poor performance in English on the national medium of instruction policy of having a local language for the first three years of primary education. Teachers, for their part, blamed the poor results on inadequate preparation due to late arrival of prescribed textbooks and the poor knowledge of English with which the students started the course. The Ghana National Association of Teachers drew attention to the fact that the results were generally good and that poor results were only for English. The public, the Ministry of Education, the National Assembly and the government were however blind and deaf to that fact. All they cared about was the level of English. Thus, the growing concern over the deteriorating standards of English, expressed by parents, teachers, parliament and the general public testifies to the positive attitudes people have for the development and continuous study of English in Ghana. Although no research has been carried out on this, economic concerns and prospects for social advancement seem to be the deciding factors which account for people's positive attitudes to English, as has been confirmed in the Minister for Education's quotation which has been cited at the beginning of this section.
3.8 Language Learning in Ghana

3.8.1 Literacy in Local Ghanaian Languages
Westermann (1937) pointed out that few books exist in African languages that have been written by Europeans and still fewer exist that have been written by Africans in their own African languages (Westermann 1937, cited in Akrofi 1965:vii). Owusu-Ansah (1992:19) writes that few people can read and write at all and even fewer can do so in their mother tongue. Goody's (1968) idea that throughout history literacy has been the preserve of only a minority is very true of Ghana, especially with regard to the mother tongue. In the past, attempts were made to address the problems of literacy in the mother tongue. The Ajumako Specialist Teacher Training Institute was established to train qualified teachers and specialists in Ghanaian languages for secondary schools and teacher training colleges. Adult literacy programmes in various Ghanaian languages were also introduced and newspapers founded in Akan, Ga, Nzema and Ewe. Today Ajumako has closed down and its function has been transferred to the University College of Education in Winneba with a very reduced intake for mother tongue specialist teachers.

Ure (1969) reports that little reading and writing is done using the Ghanaian languages, and Otoo (1969) observes that very few of those who have the facility to produce good work ever do so, and few literate people ever look for something to read in their mother tongue.

3.8.2 Literacy in English
Although current literacy figures are not available Antwi (1992:52) reports that the 1970 national figure is 43%. He also points to the disparity rate between figures for the southern sector and those of the northern parts of the country. The south, he writes, has an average of 54.3 % while the north has the low figure of 11%. Figures for the major language groups in 1970 are as in Table 8:
Table 8: Literacy Rate Among Speakers of Four Main Language Groups in Ghana

<table>
<thead>
<tr>
<th>Language Group</th>
<th>Literacy Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ga-Adangme</td>
<td>65%</td>
</tr>
<tr>
<td>Akan</td>
<td>51%</td>
</tr>
<tr>
<td>Ewe</td>
<td>47%</td>
</tr>
<tr>
<td>Mole-Dagbani</td>
<td>11%</td>
</tr>
</tbody>
</table>

Literacy, which is defined in this research as the ability both to read and write is virtually restricted to English. Literacy in the indigenous languages is almost non-existent because most people cannot read and write in the vernacular. The newspapers, both public and private are in English. English has more radio time than all the local languages put together (Jones-Quartey 1976 cited in Owusu-Ansah 1992:26). Most literary work by such authors as Ama Atta Aidoo, Sey, and Ayi Kwei Amarh are all in English.

Parliamentary recordings, judicial recordings, documents in the civil and public services and even personal letters are written in English. Otoo (1969) put his finger on the matter when he commented that most writing in the local languages is not read beyond the confines of the classroom (Owusu-Ansah ibid.).

3.8.3 Current Language Learning in Ghana

The present research is cautious about making generalisations on the state of language learning in Ghana. Things are so fragmented that general and sweeping statements about events in the classroom can scarcely avoid being overgeneralisations. This research divides the primary schools in Ghana into two main types, namely, rural and urban schools. Primary schools in Ghana are usually classified as being in rural districts or in urban districts. This classification is in line with the wider community. As might be expected the rural schools are in the majority, because the bulk of the Ghanaian population live in the rural areas.

The Urban Areas

The pattern of language use in the urban areas is different from that of the rural areas. In Accra (the capital) and Kumasi (the second largest city) Ga and Twi are the respective indigenous languages spoken in each town and its immediate vicinity. Ga is by no means the dominant language in Accra nor Twi that of
Kumasi. All ethnic groups in the country are represented in these towns and some suburbs are completely dominated by a linguistic group other than that native to the locality. In Kumasi, suburbs such as Fante New Town (Fante dominated), Mossi-Zongo (Mossi dominated), Asewasi (Hausa dominated), Ababoo (Hausa dominated), Old Tafo, Suame, Mayanka, and many others are dominated by non-Twi speakers. In Accra, suburbs such as Tudu (Hausa dominated), Russia (Akan), Lagos Town now Accra New Town, Sukura, Madina, Zongo-Junction, Kaneshie and many other areas are dominated by non-Ga speakers.

As might be expected, the linguistic background of children in primary schools varies but the present language for instruction is Ga for Accra and Twi for Kumasi. For example, in Accra where Ga is the language native to the locality, most schools nevertheless have their enrolment dominated by Akan speakers, but these children are forced to learn Ga. In Kumasi, Dagomba, Hausa, Fante and other non-Akan ethnic linguistic groups are forced to learn Twi. All schools in Ababoo are almost entirely dominated by other linguistic groups. This is especially so for members of the Zongo communities, whose common language is Hausa and not Twi. In spite of this, they have to learn Twi. In fairness to the policy makers, most pupils and their parents have lived long enough in the locality to speak and understand the languages of the area. This fact however, should not be used as a licence for committing what Phillipson (1992) describes as ‘linguistic imperialism’ - the act of forcing people, by various means, to abandon their native tongue.

The pupils’ performance in the mother tongue in the urban schools is no different from that of their kinsmen in the rural areas. However, their performance in English Language is relatively better. This is to a large extent the result of a number of advantages that they have over their rural counterparts. Some of these are:

- Urban schools have better access to audio-visual facilities: radio, television, cinema, video, and the tape recorder
- They also have easier access to textbooks, newspapers and library facilities
They have greater contact with speakers of good English. For example, they meet other students especially those in second cycle and tertiary institutions - the secondary schools, teacher training colleges, and university, and they also meet people who work in government offices and speak good English [there is a concentration of second cycle-schools (secondary and teacher training colleges) in the urban areas. Antwi (1992) notes that there are many more second-cycle institutions in four towns alone than there are in all the rural areas put together (Antwi 1992:52)]

The urban areas have greater attraction for good teachers

They experience a second language of wider communication daily as they often meet people from different linguistic backgrounds.

The Rural Areas

According to Ms Sara Oppon, a recently retired Director of Education in charge of primary education,

'A rural primary school is a typical primary school in Ghana and its teacher a typical Ghanaian primary school teacher' (Personal communication).

In this 'typical' Ghanaian school the status of the use of mother tongue is relatively straight-forward. In each town or village there is one dominant language. This is the language of the home, the market place, public assembly, churches or mosque, and the local courts. This is also the language used by the school children in the playground, and when one listens carefully, one even hears it whispered in the background as the teacher talks. It is the language the lower primary pupils often use when they want permission to leave the classroom.

Therefore, the current policy of mother tongue teaching for the first three years should not meet any obstacle in these 'typical' Ghanaian primary schools. Unfortunately, there is a gap between the reality of the classroom situation and the official policy. The pattern of language use is not a fixed one nor regular within a given locality. In quite a large number of schools teachers do not follow the 'language in education policy' guidelines. The mother tongue continues to be used
long after pupils have left the first three classes of the primary school. Within the first three years of primary school it is not uncommon to find teachers using English when they are not supposed to.

3.8.4 The Use of English and GL for Reading and Writing

Generally, knowledge of both English and GL is poor among basic education graduates and secondary school leavers. Their ability to read, write and speak English is poor and that of GL is no better. Bemile (1995) reports that the Director of the Curriculum Research and Development Division (CRDD) of the Ghana Education Service in 1988 revealed the shocking information about the state of the Ghanaian languages. The Director writes that:

'English has dealt a serious blow to the use of the local languages. Educated Ghanaians can hardly speak the local languages without intermingling them with English' (Bemile 1995:7).

Dolphyne (1997) also writes that:

'We, members of GESA (Ghana English Studies Association) are particularly concerned or should be concerned about the general complaint, from teachers and non-teachers alike, about the general decline in both the productive and receptive communicative skills in English at all levels of our educational system, including the universities. People often point out that the level of competence in English of Middle School leavers in the 1950's is much higher than that of many secondary school leavers in present day Ghana, a fact which seems to be so obvious that nobody even bothers to question the basis for such comments. What is even more disturbing is the fact that a similar decline in communicative skills among young educated people can also be observed in their use of Ghanaian languages' (Dolphyne 1997:5)

Reading and writing in both English and Ghanaian languages is indeed poor among young school pupils. It is not easy to assign reasons. One might have expected that the use of the mother tongue in rural areas would have resulted in good reading and writing skills in GL among school pupils. However, the results for GL are less encouraging in the rural areas than they are in the urban. If the lack of economic rewards for a good knowledge of GL leads to its haphazard teaching and subsequent poor results, one would expect results in English language at least to be better, but the story differs little from that of the GLs.
One might expect the use of mother tongue throughout the curriculum in the rural schools to meet very few problems. However, objections to the use of mother tongue across the curriculum in rural schools include:

- headmasters of senior secondary schools will increase the level of discrimination against pupils from rural schools in their admission practices
- parents will interpret the policy to mean inferior education for their children
- the policy will amount to segregation and will increase the existing level of disparity in educational facilities to the rural areas
- the absence of sufficiently trained teachers in mother tongue education will militate against the success of such a policy
- it will increase the economic burden of funding for the state
- the problem of developing learning and teaching material in all the local languages
- the near impossibility of providing suitable texts in all the languages, since some have no orthographies
- the current postings of teachers pays no regard to knowledge of local languages
- it will amount to restricting opportunities for rural pupils to advance socially and economically since to a large extent the social and economic advancement is related to a knowledge of English
- there is also the need at some time to introduce a second language
- and the fact that not all who want to be teachers want to be teachers of the local languages

3.8.5 History and the Learning of English Language in Ghana

Historically, the arrival of the British in Ghana dates back to the second half of the sixteenth century (the 1550s). However, it was not until 1872 that there were no other European rivals for the control of the political destiny of the country. The first Ghanaians to learn English were the five sent to Britain by the English Expedition in 1554, three of whom returned in 1557 (Sackey 1997:126-7). The first school was founded by the English at Cape Coast Castle in 1694, and the first
systematic efforts by the colonial administration to regulate education took place in 1882 (Antwi 1992:32-32). The Phelps-Stokes Commission Report (1927) argued that 'English should be used in all Ghanaian schools on grounds that the natives were desirous of learning it' (Boadi 1976:88). Wardhaugh (1987) supports this view when he writes that in the British colonies parents actually wanted to have their children educated in English. He also notes that although the mission schools generally favoured vernacular education they still taught English (Wardhaugh 1987, cited in Owusu-Ansah 1992:5). The pioneer mission schools taught in English almost exclusively through the Bible and English classic literature. This according to Owusu Ansah (1992:6) influenced the spoken English of the first generation of educated Ghanaians. In the present researcher's personal experience, British, Canadian and American educational assistance to the development of both primary and teacher education has influenced the development of various forms of English used in Ghana.

English is now used more than any other Ghanaian language in education, in terms of subject coverage and time allotted to its study. Apronti (1974) and Sey (1973) note that it is so closely associated with education that it is generally considered to be the language of educated people. Ansre (1970) reports that apart from Akan no other Ghanaian language has more speakers than English. From independence until 1967, English was language for instruction from the first day at school up to and including the university level. From 1967 until today, it is studied as a subject for the first three years of primary education, and from the fourth year up to university level it is used for instruction in all subjects except the Ghanaian languages. This at least is the official position. However, the stage at which English is introduced differs from school to school and between localities (Boadi, 1976:85).

3.8.6 Forms of English Used in Ghana

Ure (1979) has documented various domains in which English is a preferred language choice to a Ghanaian language or is used because it is the only choice available. Ghana's multilingual environment with its lack of one dominant language
as a lingua franca partly accounts for the use of English in various informal domains. Marriage between educated Ghanaians without a common language is gradually increasing the number of Ghanaian mother tongue speakers of English. In such situations, English is the home language but this is however relatively infrequent. Mazrui (1975) has observed the same in other African countries and described it as the creation of Afro-Saxons (Mazrui 1975, cited in Owusu Ansah 1992:29). Owusu-Ansah (1992) writes that the model of English spoken in Ghana seems to be a West African version of received pronunciation (RP). He argues that the better educated an individual, the closer he or she gets to this model, but lower down the educational ladder Ghanaian language sound patterns become manifestly noticeable. English in Ghana varies from educated Ghanaian English to Pidgin English. Pidgin English is quite widely spoken on the university campuses in informal situations and in the polytechnics. Other institutions where pidgin is common include the army, the police, and the customs and preventive services. Within the civilian population, casual labourers who associate with expatriates, traders, and self-styled businessmen and women also widely use pidgin. Essel's (1987) analysis of students' pidgin English describes it as dynamic and systematic (Essel 1987, cited in Owusu-Ansah 1992:32). American slang is used mostly by former USA expatriate Ghanaians who often do business with the USA. Sey (1973), Laitin and Mensah (1991:146) rightly observe that pidgin English in Ghana is held in the lowest esteem.
3.9 Bilingualism and Language Alternation in Ghana

3.9.1 Language Alternation Studies in Ghana

Ure (1972), Forson (1976, 1979), and Narney (1982) are the main language alternation studies in the context of Ghana. Ure (1972) simply uses data from Ghana to discuss code-switching and mixed language in the register system of developing languages. Code-switching she points out regularly occurs among the elite in many developing countries. She describes it as a form of language patterning which involves the mixing of local languages with dominant international or post colonial languages, she notes that it is associated with an unfortunate disparaging language attitude. She concluded that it was a form of language that had a central functioning role in developing countries. She also noted that it was unofficially used in the University of Ghana during the transition stage when students were acquiring reference, practical, and experimental skills. She argued for an increased attention to local languages and the use of a language mix in areas where it had a real mediating role in the language development process (Ure 1972:232).

Forson’s (1979) study looked at the linguistic characteristics of code-switching involving Akan (a southern Ghanaian language) and English. In the study he discusses sociolinguistic factors which account for normal Akan and English code-switching, the grammatical constraints on Akan and English code-switching, acquisition, and social functions and attitudes towards Akan and English code-switching. Twi, a dominant Akan dialect, is one of the languages involved in our classroom study of language alternation. The 1960 population census showed that Akan had a population of 2,512,860 and out of this Twi had 895,360 speakers (see Table 9 below).
### Table 9: Akan Dialects and Number of Speakers (1960)

<table>
<thead>
<tr>
<th>Dialect</th>
<th>Total Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asante (Twi)</td>
<td>895,360</td>
</tr>
<tr>
<td>Fantes</td>
<td>757,470</td>
</tr>
<tr>
<td>Bono</td>
<td>347,390</td>
</tr>
<tr>
<td>Akyem</td>
<td>203,820</td>
</tr>
<tr>
<td>Akuapem</td>
<td>144,790</td>
</tr>
<tr>
<td>Kwawu</td>
<td>131,970</td>
</tr>
<tr>
<td>Ahafo</td>
<td>17,910</td>
</tr>
<tr>
<td>Akwamu</td>
<td>14,070</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2,512,780</strong></td>
</tr>
</tbody>
</table>


### 3.9.2 Akan and English Bilingualism in Ghana

Forson (1979) suggests that formal education is the usual way of becoming bilingual in Akan and English since English is taught as a subject and also used for instruction. It is also possible, he noted, for some Akans to become bilinguals in Akan and English through their workplace where they often have contact with speakers of English. Such people may work as drivers, labourers or as servants in educational institutions. They may also work in places where English is the dominant language of communication such as the police force, the military, and the hospital (Forson 1976:14, 1979:187).

### 3.9.3 Sociolinguistic Factors Accounting for Akan and English Alternation

Forson (1979) claims Akan and English bilinguals normally switch when in the company of other Akan-English bilinguals. The degree of switching, he argues, depends on the person’s educational background as well as that of his or her participants. It may also depend on the subject matter under discussion. He further argues that instances of Akan-English code-switching show Akan to be the matrix language and English the embedded language. The proof of this, he argues, is that the Akan and English bilingual uses code-switching only when in the environment of other Akan-English bilinguals and never in the company of non-Akans. The speaker therefore considers himself to be speaking Akan (Forson 1979:113-131).
However, I believe it is erroneous to assume that Akan and English bilinguals only switch from Akan into English and that they never switch in the company of non-Akans. I have personally been in the company of Akans and non-Akans where we talked using switches from English to Akan or Hausa and vice versa. This was because all the participants were multilingual in the three languages. Evidence from data I collected from lesson transcripts from Akan native speaking teachers in Akan schools also showed that Akans code switch from English to Twi and from Twi to English. Even in lessons officially supposed to be taught in Twi, I observed teachers using English and then switching back into Twi. In some Twi lessons, I also observed teachers switching both ways. There were large Twi utterances with switches into English and others in English with switches into Twi (See Appendix 5 (14) pp141 Vol. 2).

3.9.4 Grammatical Constraints on Akan-English Alternation
Forson (1979) notes that both inter-sentential and intra-sentential switches occur in Akan and English code-switching. For inter-sentential switches, he says, the speaker more or less retains the same grammatical (phonological, syntactic, lexical and semantic) features as would be expected in the speaker’s regular monolingual English speech. However, with intra-sentential switches he records that there is the obvious phonological difference often associated with L1 interference which is more pronounced during the early stages of L2 acquisition. The main phonological difference he notes, is the superimposing of Akan tonal patterns on English utterances. Semantically, he notes, as did Sey (1974), that literate Akans may use English items with meanings that reflect Ghanaian culture (e.g. ‘headkerchief’ after handkerchief) (Forson 1979:133).

3.9.5 Social Functions and Attitudes towards Akan-English Alternation
Forson (1979:128) delimits the relevant sociolinguistic requirements for normal code-switching as:
- the presence of at least two languages one of which should be socially more prestigious (normally the non-native)
• the participants should be bilinguals in the two languages
• the subject matter should not be typically the domain of one language
• the discourse should be informal, unprepared and spoken
• the purpose of the discourse and the social relationship between the interlocutors promote Akan and English code-switching.

He points out that the use of code-switching in an inappropriate context will meet with disapproval. Generally, he notes that attitudes towards code-switching are negative and range from mere tolerance at best to downright condemnation and even denial that the practice actually exists (Forson 1979:200).

3.9.6 Studies on Language Policy and Falling Educational Standards
Asante (1994) is the only study which is concerned with the effect of the official language in education policy on the pupils' performance in English at the primary level in Ghana. In a study of 18 children selected from three schools in the Winneba area, he concluded that students from schools where English is used for instruction from primary class one or below perform better academically than their counterparts from the public schools where English is used for instruction from primary class four. He also noted that results of questionnaires for teachers also confirmed the findings. However, it was only lower primary class teachers (classes 1 - 3), who used Ghanaian language, who asked for the continuing use of the Ghanaian language for instruction, while the rest opted for the use of English.

Asante's findings probably produced the results he desired because of the methodological flaws of comparing private schools with state schools. It is an open secret in Ghana that better academic performance correlates with attendance at private schools rather than with state schools, where performance is generally low. As he himself noted, the very good students from special schools were not only children of lecturers from the University of Winneba but were also children who spoke English at home with their parents. The results cannot therefore be said to be a reflection of the effect of the language used because other variables were not effectively controlled.
The lower primary school teachers who advocated continuing use of the vernacular, did so I think, because they had a better understanding of the reality of teaching at that level than the others. No group of teachers can better understand the problem than those who face it daily. Finally, I suggest that standards of English should not be the only criterion of educational achievement or the problems described here will continue to exist.

The evidence in chapters 5 and 6 shows that among the Ghanaian state primary schools, no school can claim to use one language only for instruction. Even the special experimental and demonstration schools only emphasise the use of English, they do not use only English.

**Summary and Conclusion**

In this chapter, I have briefly described Ghana’s geographic and demographic figures and its political history. I also described the educational system and its structure at the primary level. I reviewed the language for instruction at the primary school and at the teacher training colleges and pointed out that there was a greater emphasis on the use of English and that there was the need to redress the imbalance in the allocation of resources for teaching English and Ghanaian language. I also reviewed the use of language in Ghana and pointed out that although Anse’s (1970) sociolinguistic survey testifies to the multilingualism of most individual Ghanaians, I consider the findings to be too general, because they fail to identify specific localities and communities where bilingualism is the norm and areas where monolingualism can be expected. I pointed out that although English is the language of power and education, English and Ghanaian languages are used in complementary roles.
CHAPTER FOUR
RESEARCH DESIGN AND METHODOLOGY

4 Introduction

The aims of the study are described in chapter one so we proceed to describe the research design and the methodology. The research questions addressed are as follows:

1. What is the actual language of instruction for language and content subjects in Ghanaian primary schools as opposed to the official policy? To answer this question we used an audio tape recorder as data collection instrument on classroom language uses as described in 4.2.3. Also see transcriptions in Appendix 5. Vol. 2 pp 14-425.

2. What is the extent of the use of English or Twi in Ghanaian primary classrooms in language and content subjects? We used the frequency of words in each language to determine the pattern of the use of each language in these areas. See Appendix 15 for the frequency of language use in these areas and chapter 5 on the patterns of language use in the different subjects. Section 5.1.1 gives an overview of the pattern of language use by grades and subjects. In 5.2.1 we have the pattern for mathematics. The pattern for science is in 5.2.3. English’s pattern is in 5.2.5 and the pattern for GL is in 5.2.7. Also see 5.3.1 for pattern between schools.

3. What factors account for the use of English and Twi in both language and content subjects in Ghanaian primary school classrooms? In answering this question first we used the frequency of the use of each language to determine the matrix language and the embedded language or the language switched into (see 4.3.1, 4.3.4 and 4.3.5). Then we assigned functions to the code-switched portions by using both the functions (see 4.3.2) and cues in the speech events to assign reasons for the switches (see 5.2.2, 5.2.4, 5.2.6, and 5.2.8). We also informally interviewed teachers for reasons they switched from one language into the other.

4. What are the frequency and direction of code-switching in each subject? The unit of analysis for counting the frequency of code-switching is the utterance as defined in section 4.3.5. The matrix language determined the direction of switch.
Where the matrix language is English the direction of switch is English to Twi (L2-L1) and vice versa. See sections 5.4.1 to 5.4.7 for the frequency and direction of code-switching.

5. What functions do teachers use code-switching to perform? To answer this question first we designed a coding scheme for functions of language alternation as described in 4.3.2. (See Appendix 7 for the coding scheme and chapter 5 sections 5.6 for the code-switching functions).

6. What language do teachers' believe they use in teaching language and content subjects in Ghanaian primary schools? We investigated this question through the use of a survey questionnaire as described in 4.2.4. See Appendix 9 (a-f) for samples and statistics of completed questionnaires. Also see section 6.2 for discussion of the results.

7. Do teachers believe that their pupils' language competence today is less than that of their predecessors? We investigate this question through a national survey questionnaire. The discussed results are in section 5.6.

8. What is the reading competence of Ghanaian primary school pupils? We investigated this through the use of an unofficial language proficiency test as described in 4.2.5. The results are in 6.5.

9. What attitudes do teachers have towards the language of instruction? We investigated the attitudes using section B of the survey questionnaire. The results are in section 6.7.

4.1 The Sample

4.1.1 Selection of the Schools

Primary schools in Ghana are usually classified as being in rural districts or in urban districts, so two rural and two urban schools were selected for this study. For both types 'good' and 'poor' were identified by taking the latest junior secondary schools final examination results for 1994. The top ten and bottom ten schools were then selected, from which one rural and one urban district (unnamed for reasons of confidentiality) were selected. When selecting from the list of the ten
poorest schools in the rural district, the two most accessible ones were chosen and then a final selection of one was made by blind ballot. However, when selecting from the top schools, the school at the top of the list of rural district results was excluded for two reasons, the most compelling of which was that it had been used for the pilot study (see Appendix 16) and the teachers had therefore been exposed to the study’s objectives. This knowledge, it was felt, could have influenced their classroom practice if they had taken part in the main study. The second reason was that most children who attended the school were from the city because the school was physically within the vicinity of the city but politically administered by a rural district. Thus, including it in the main study would bias the data in favour of greater urban influence. So a ballot was conducted to select one school from the remaining nine. The two urban schools were selected by ballot from the lists of the ten bottom urban and ten top urban schools in the urban district. This then gave one example each of a good rural, poor rural, good urban and poor urban primary school in which to make the study. In general the quality of primary schools in Ghana correlates with whether they are special schools, that is, demonstration, experimental or continuation schools and when they were established. Demonstration schools were established in the 1950s and early 1960s as practice schools for the numerous teacher training colleges. Their association with the colleges led to special attention being given to them in terms of staffing and materials. At the time of the conversion of the colleges into secondary schools in the late 1970s, the schools had already gained a head start in relation to better academic performance. Experimental schools date back to the colonial period when some schools were designated as English language schools on an experimental basis. After independence these schools continued to maintain their emphasis on the use of English and continuation schools were established as special schools with a vocational bias such as agriculture and carpentry. Special attention was given to providing qualified staffing in these schools. Education authorities were also encouraged to give special attention to them. The special schools and those that were established relatively early, in the colonial period and in the post independence era of the 1960s, tend to have better teachers
and better facilities: Antwi (1992:197) writes that while schools are provided both in the rural and urban areas, there is disparity in the provision of educational facilities with a bias in favour of the urban schools. They have a sounder infrastructure and better teaching and learning resources, though other factors may also encourage quality. Although schools may be religious or state supported this distinction does not appear to correlate with quality. Private schools, where standards are generally high are not considered in this study.

4.1.2 Characteristics of the Schools

The four schools finally selected were assigned arbitrary code names for the purposes of confidentiality and anonymity, as were the twelve teachers. Details about them are set out below with the enrolment figure in each school at the time of the study shown in brackets by the school’s code name. These figures represent enrolment for the primary schools only, not the junior secondary schools, since primary schooling was the focus of the study.

(a) The Good Urban School

Abozfo School (1700 pupils), situated in the heart of the city of Kumasi, is a prestigious urban primary school which was established in the early post independence era as part of an experiment to use English as the sole language for instruction. After the experiment, like most schools of its status, it did not revert to normal bilingualism because it was patronised by highly placed civil servants who wanted English for their children, and who used it as their own special 'private school' in order to avoid the high fees of actual private schools.

(b) The poor urban school

Zongo Borfo School (250 pupils) is also located in the city of Kumasi but, unlike Abozfo, it is on the edge of the city. It was established relatively recently as a state school and is patronised by working class people who usually live in the crowded suburbs of the city and whose children hardly come into contact with English until they are in the classroom.
(c) The good rural school
Wa Para-Military School (303) pupils, is located in a large village and shares the same compound with a senior secondary school with which it shares the same history. It was built, established and later donated to the public education system by its former private proprietor. This private status gave it a good start in academic performance which has been reinforced by its proximity to the recently established senior secondary school where students speak English.

(d) The poor rural school
Makaranta School (253 pupils) is a recently established religious rural school situated about ten miles from the city of Kumasi near four small villages from where the pupils come.

4.1.3 School Subjects and Classes

(a) Classes used in the study
Three school grades were studied, namely classes 3, 4 and 5 at which both teachers and pupils have serious communication problems. Class 3 represents the final preparatory stage for a switch to English as the language of instruction. Year 4 is the switch year in which English is introduced as the only teaching language while Year 5 is the year after the switch. They use English for teaching and learning all subjects other than Ghanaian languages. These three levels, therefore, cover the transition stage from one language of instruction to the other in the country’s nine years of basic education.

(b) Subjects
The subjects selected for the study were Ghanaian languages, English language, mathematics and elementary science. They were chosen because they have the most time allocated to them in the primary curriculum. Twelve English language lessons and eleven each for Ghanaian language, mathematics and elementary science were transcribed and analysed for the study. Eleven lessons from each of the three subjects were used because of poor sound quality of the lessons recorded,
the withdrawal of one teacher towards the end of the study and very sadly because one of the teachers died. (For content areas covered see Appendix 6).

4.1.4. Information about Teachers in the Study

Table 10 shows details of the twelve teachers who participated in the study. Throughout the study, code-names are used for reasons of confidentiality. Although the teachers have three different qualifications approved by the government and are proficient in both English and Twi, their proficiency levels in English varied. Three English language proficiency groups were identified, namely ‘A’ the best group, ‘B’ the good group, and ‘C’ the average group. (see 4.3.5. for a description of the assessment scale). The most proficient is teacher ‘TL’ and the least proficient is teacher ‘TC’.

Table 10: Teachers Information

<table>
<thead>
<tr>
<th>Teacher’s Code name</th>
<th>Class</th>
<th>Ethnic</th>
<th>Age band</th>
<th>Teaching Experience</th>
<th>Teacher’s Qualification</th>
<th>Language Proficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>TA</td>
<td>3</td>
<td>Ewe</td>
<td>26-30</td>
<td>6-10 Years</td>
<td>A (4YR)</td>
<td>A</td>
</tr>
<tr>
<td>TB</td>
<td>4</td>
<td>Twi</td>
<td>46-50</td>
<td>21-25 Years</td>
<td>A (4YR)</td>
<td>A</td>
</tr>
<tr>
<td>TC</td>
<td>5</td>
<td>Twi</td>
<td>31-35</td>
<td>6-10 Years</td>
<td>A (4YR)</td>
<td>C</td>
</tr>
<tr>
<td>TD</td>
<td>3</td>
<td>Twi</td>
<td>41-45</td>
<td>21-25 Years</td>
<td>A (4YR)</td>
<td>B</td>
</tr>
<tr>
<td>TE</td>
<td>4</td>
<td>Twi</td>
<td>36-40</td>
<td>11-15 Years</td>
<td>A (P/S)</td>
<td>C</td>
</tr>
<tr>
<td>TF</td>
<td>5</td>
<td>Twi</td>
<td>51+</td>
<td>21-25 Years</td>
<td>A (4YR)</td>
<td>B</td>
</tr>
<tr>
<td>TG</td>
<td>3</td>
<td>Twi</td>
<td>51+</td>
<td>21-25 Years</td>
<td>A (4YR)</td>
<td>B</td>
</tr>
<tr>
<td>TH</td>
<td>4</td>
<td>Twi</td>
<td>51+</td>
<td>21-25 Years</td>
<td>A (4YR)</td>
<td>A</td>
</tr>
<tr>
<td>TI</td>
<td>5</td>
<td>Twi</td>
<td>26-30</td>
<td>0-5 Years</td>
<td>A (P/S)</td>
<td>C</td>
</tr>
<tr>
<td>TJ</td>
<td>3</td>
<td>Twi</td>
<td>51+</td>
<td>31+ Years</td>
<td>A (P/B)</td>
<td>C</td>
</tr>
<tr>
<td>TK</td>
<td>4</td>
<td>Twi</td>
<td>26-30</td>
<td>0-5 Years</td>
<td>A (4YR)</td>
<td>B</td>
</tr>
<tr>
<td>TL</td>
<td>5</td>
<td>Twi</td>
<td>46-50</td>
<td>26-30 Years</td>
<td>A (4YR)</td>
<td>C</td>
</tr>
</tbody>
</table>

Group ‘A’, the most proficient are TA, TB, TG and TL who communicate confidently and smoothly, although they hesitate sometimes. The ‘B’ group, TD, TF, TH and TK are classified as good users of English. They are fluent but their language still shows a few errors. The ‘C’ group, TC, TE, TI and TJ are average users of English because, although they communicate effectively for about 40% of the time, they still have problems with English grammar. In summary, though some of these teachers express anxiety about their competence and proficiency in
English, their level of fluency is quite good and it is generally representative of primary school teachers.

TA was the only non-native speaker of Twi but was as proficient in Twi as the native speakers. Generally all the teachers were fluent when speaking in Twi, but their competence in Twi literacy was in three broad groups. The most literate were TG, TH and TJ. The second group TA, TB, TC TD, TK, and TF were generally representative of primary school teachers but TI and TL were not literate in Twi. One head teacher drew my attention to the fact that a teacher had to go for coaching from another before teaching in Twi even though it was his native language.

4.1.5 Common Teaching Methods in Different Subjects

The observation of teaching styles shows that all lessons are based on chalk and talk methods and are teacher-centred with an emphasis on oral drills and a restriction of the use of mother tongue in English lessons. The syllabus is based on listing the content-topics and structuring these into units for each term which are then sub-divided into weekly units. Lessons in all subjects generally showed the same basic structure of:

- Preparatory or introductory stage (getting the class settled)
- teaching stage (presentation of new material)
- practice stage (application and practice by pupils)
- monitoring and feedback (teacher checks understanding)
- reinforcement and further practice.

When teachers construct their discourse, they appear to vary the ways they express themselves to pupils. Verbal communication is often supported with gestures, variation in tone and pitch, language alternation and the use of blackboard sketches and demonstrations. This variation was influenced by the pupils’ proficiency in the language of instruction, the availability of textbooks, the syllabus and language teaching equipment. The location of the school (urban or rural), the subject, the content and topic of the lesson, the teachers’ preparation, qualification and
experience, age, orientation and attitude to language were all important factors. This confirms a claim made by Guthrie and Hall (1983) that:

'In the mutual construction of discourse, actors make lexical, grammatical, phonological and prosodic selections for each instance of a speech act. Actors also have a wide choice of variety of ways in which to say what they mean and to carry out their purposes. Semantic, social and linguistic factors constrain these selections at the discourse level (Guthrie and Hall 1983, cited in Guthrie and Guthrie 1987:209).

### 4.1.6 Variables under Study

This research targets the following variables in Ghanaian primary schools for detailed study through classroom observation and audio tape recordings:

a) the teachers’ use of English and Twi in urban and rural primary school grades 3, 4, and 5
b) Primary school pupils’ proficiency in English and Twi in school grade 5
c) Primary school teachers’ use of English and Twi in English language, Ghanaian language (Twi), science, and mathematics in urban and rural school grades 3, 4 and 5.

Other variables which were studied through the analysis of self administered questionnaires include:

a) Primary school teachers’ opinions on the use of English and Ghanaian language in class at all primary school grades
b) Primary school teachers’ opinions on the use of English and Ghanaian language in all subjects in the primary school curriculum,
c) Primary school teachers’ opinion on the use of English and Ghanaian language in urban and rural schools
d) Primary school teachers’ attitude to English and Ghanaian languages

### 4.2 Data Collection Instruments and Transcriptions

#### 4.2.1 Research Instruments

This section discusses the choice of sampling methods which influenced the design of data collection for the study. Coding schemes and questionnaires are common
quantitative methods for classroom data collection. In selecting an observation types, Malamah-Thomas (1987), cautions that:

'there is no one observation scheme that can be applied to any classroom anywhere in the world since each scheme assumes the context in which it was devised and is based on the sort of classroom practices associated with the specific context. Thus a scheme can only be applicable in a context similar to its own' (Malamah-Thomas 1987:30).

The FIAC or Flander’s category scheme, the BIAS or Brown’s analysis system and the Mitchell and Parkinson’s methods are examples of coding schemes developed for the analysis of classroom behaviour and interaction. The FIAC or (Flander’s Interaction Analysis Categories) consists of several categories aimed at describing teacher-pupil talk. Brown’s interaction analysis system is aimed at analysing classroom verbal interaction. Its purpose is to discover the nature of learning and teaching in the classroom. Mitchell and Parkinson’s Instrument is designed to investigate strategies of foreign language teaching in Scottish schools. (For more information on classroom observation schemes see MacAleese and Hamilton 1978; Bernnet and McNamara 1979; Malamah-Thomas 1987; Keeves, 1988; and Simpson and Tuson 1995).

4.2.2. Data Collection Methods

After considering a number of data collection instruments, an audio tape recording was finally selected as the most suitable data collecting instrument for classroom language use. Other procedures used for data collection were language proficiency tests (see Appendix 10) and a proficiency assessment scale (see Appendix 4). The test was for data on pupils’ language proficiency in both English and Twi and the proficiency assessment scale was for data on teachers’ proficiency in English language. The study also used a questionnaire for data on attitudes towards language. Originally, the study planned to use interview schedules, and classroom observation schemes. The interview schedule was abandoned because the approach required spending many hours in face to face interaction with respondents and it also involved travelling to various parts of the country to meet them which was impractical because of inaccessible roads in some parts of the country. The observation checklist was also abandoned as it required the observer to sit in class,
watch and record pre-specified behaviour whenever it occurred. In addition, this approach uses only a limited number of pre-selected events, resulting in a collection of a limited amount of data and the loss of the sequence of the interaction (Stallings and Mohlman 1988:471).

4.2.3. Data Collection: The Use of Audio Tape Recording

Audio tape recording was used as the main way of data collection on language used in class by teachers. It enabled the researcher to go back in detail to what was said, and the tone of voice used. A transcription of the recording also enabled the researcher to have a written record of the lesson which allowed a detailed study of teachers’ actual use of language in class (Boydell 1975:185).

Bearing in mind Allwright and Bailey’s (1991) caution that direct observation is not always the most appropriate way to gather classroom data, the researcher took steps to reduce any effect of the recording on teachers’ performance.

‘In reality, a teacher should not be expected to perform just as usual with an observer sitting at the back of the classroom, or a video camera in class or even with just a moderate audio-cassette machine sitting on a desk’ (Allwright and Bailey 1991:3).

To reduce the effect of the tape recorder in the classroom, especially in the rural areas, the study recorded more than one lesson in each subject area, thus, enabling it to ignore recordings with poor sound quality as well as those which seem to have been affected by the presence of the researcher and recorder. On average it recorded two observed lessons in each subject for each teacher, but some subjects were observed and recorded more than four times because of the poor quality of recording or because the research assistant edited them (see Appendix 18 p 570 Vol. 2)

The decision to use audio tape recording was made because it was less intrusive on the participants than a video recording would be. Data collected using the audio recording on language used in class was supplemented with an informal post observation interview involving the completion of a questionnaire. (see Appendix 9E for sample of completed questionnaire p 489 Vol.2). Participating teachers
completed their questionnaires at the end of the observation in each school. Thus the questionnaires for schools participating in the study were distributed separately from those of the general survey.

4.2.4 Data Collection: The Questionnaire - Purpose, Design, and Limitation

There were two reasons for using a questionnaire for data collection. Firstly, it allowed the collection of data on teachers' attitudes towards languages they teach and their opinions on what language they used in class, as well as information on the teachers. Secondly, it allowed for a wide coverage of the respondents. The design had three parts:

- issues relating to teachers' opinion on what language(s) they used in class.
- issues about attitudes towards English and Ghanaian languages.
- information about the teachers (see section C of Appendix 9 p469 Vol. 2).

The purposes of the questionnaire were to

- corroborate the findings of the observation study (a smaller sample) - on language use in the class (triangulation of data)
- investigate attitudes of teachers to medium issues and language education policies.

The researcher's personal knowledge of the classroom situation was taken into account to design sections 'A' and 'C' of the questionnaire for eliciting the teachers' opinion about classroom language use and for collecting personal information on the teachers. Teachers' attitudes to the languages used for instruction was studied by using a five point scale on attitude. This was designed through the adaptation of Alderson (1985) and Baker's (1992) taxonomies for data collection on attitudes to language. The main limitation of the questionnaire responses was that respondents did not respond to some items and they could not be contacted for an explanation.
4.2.5 Data Collection: Language Proficiency Assessment

A cloze test was used to collect data relating to pupils' language proficiency in English and Twi. The test required pupils to insert appropriate words in 20 blank spaces in a passage from which 20 words had been deleted (see Appendix 10B p509 Vol.2). Although, the test was constructed using the pupils primary school science textbook, it was modelled on the Edinburgh University Language Proficiency cloze test. The original English version was translated into a Twi version. The Twi version was checked by two groups of Twi teachers. Then the revised version was also given a pilot test in two primary schools as a reading text to ensure that it was within the reading ability of the target group. After this pilot study it was given to all year 5 pupils in the schools observed (see Appendix 10E p515 Vol. 2).

To evaluate the teachers proficiency in English the study employed a five-point scale adapted from schemes used for assessing Ghanaian primary school teachers' proficiency. Teacher proficiency was observed discreetly and informally so that none of the teachers in the study knew their proficiency in English was being assessed while they taught their lessons (see Appendix 4 for teacher proficiency evaluation scale p5. Vol. 2). Although the test raised ethical issues it was nevertheless employed to avoid any influencing effect on their performance. However, after the observation they were informed of the assessment and their opinion sought on its use in the study.

4.2.6 Transcriptions

In selecting lessons for transcription and analysis the study selected only those audio recordings that gave the best sound quality. Teachers had one lesson selected in each of the four subject areas investigated. Altogether, the study recorded 106 lessons but only 45 were finally used in the analysis. The data were transcribed and later used for the analysis. (For transcribed data see Appendix 5 (1) to 5 (45) pp7-425 Vol. 2). Information on the 45 lessons transcribed and used for analysis is summarised in the Table 11:
Table 11: Summary of Transcribed Lessons Used as Data

<table>
<thead>
<tr>
<th>Year</th>
<th>Maths</th>
<th>Science</th>
<th>GL</th>
<th>English</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>P3</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>16</td>
</tr>
<tr>
<td>P4</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>14</td>
</tr>
<tr>
<td>P5</td>
<td>6</td>
<td>6</td>
<td>5</td>
<td>6</td>
<td>45</td>
</tr>
</tbody>
</table>

The transcription used in this study is straightforward transcription. Phonetic transcriptions are only used when it is necessary to make a distinction between the teacher’s pronunciation and the Ghanaian version of normal RP pronunciations and when pronunciation is an issue between teacher and pupils. However, where this could be achieved through ordinary spelling, this was preferred to phonetic transcription to save time (See Appendix 8 for Transcription conventions pp440 Vol. 2).

4.3 Unit of Analysis for Patterns of Language Use

4.3.1 Determining the Matrix Language

In determining the base or matrix language in a code-switched interaction Muysken (1995) argues that there are three approaches to the problem: a discourse oriented approach, a statistical approach, and a psycholinguistic approach. Muysken (1995) says:

‘In those areas where it is reasonable to assume that there is a base language (also termed matrix language) in a code switched sentence, as in insertion models (e.g. Myers Scotton 1993b), how do we determine which one it is? The answer to this question is in part empirical, in part theoretical in nature. A discourse oriented way of determining the base language is the language of the conversation. A statistical approach is the language in which most words or morphemes are uttered and a psycholinguistic answer is the language in which the speaker is most proficient’ (Milroy and Muysken 1995:182).

The discourse approach uses the language of the conversation to determine the base language but this is controversial. The use of identifiable units of communication such as speech act or events is unsatisfactory because speech boundaries can be disputed and there is also the problem of weighting, are
sentences to be weighed in the same way as phrases. There is also the problem of who decides what language is used, the researcher or the participants?

In a discourse model that attaches great importance to parsing the base or matrix language is determined by using the head word, first word or set of words in the sentence (Jodhi 1985 quoted in Muysken, 1995). In a structurally orientated model the main verb or the semantic kernel of the sentence is very often taken to determine the base language. In Myers-Scotton's (1993b) matrix language frame, the grammatical morphemes have to be from the base language (Milroy and Muysken: ibid.). In the governance model, Muysken (1995) claims that DiSciullo et al. (1986) propose that:

'there need not be a single base or matrix language for the clause. Although there is still a notion of base or matrix present in the model, each governing element creates a matrix structure. If the chain of governance were unbroken, the highest element in the tree would determine the language for the whole tree' (Milroy and Muysken: ibid.).

So the discourse approach was rejected because of its varying forms.

The psycholinguistic approach was also found to be unsatisfactory because it was based on the report of the participants' but this can be unreliable. Participants and researchers alike can have wrong perceptions. Teachers are likely to say they used one language because of the effect of the language policy. For determining the matrix language and patterns of language use in tape recorded lessons with a view to answering the question, 'What language did teachers use in class?', the study used the statistical approach following Myers-Scotton (1992). According to Myers-Scotton code-switching involves at least two languages in the same conversation. Of these languages the matrix language can be identified on the basis of the relative frequency of the morphemes (Myers Scotton 1992:19). Although I recognised that other frequency counts such as conversational acts or speech acts frequency counts could have been used, a word frequency count is preferred because it is indisputable. Although I also recognised that the use of morphemes reduced the problem of one language using fewer words in encoding a proposition than the other I nevertheless rejected morpheme frequency count because it is often disputed. The dispute over morpheme frequency is attributable to the fact that the same utterance could be formulated in different structures and patterns of
language with one structure or pattern using more morphemes than the other, though both may carry the same propositional meaning. When morpheme frequency count is used as the base there can be problems, for example, a single meaning in English can have more morphemes than in Twi or the vice versa. To overcome this disadvantage I selected the word which in this study is the 'orthographic word' (i.e. 'a single unit of language that can be represented in writing or speech' (Cobuild English Dictionary 1995:1929)). The limitation of this approach is that sometimes it was not clear if a word was English or Twi. To resolve the problem the following criteria were used:

- did an equivalent exist in the base language, if so it was the other language, if not, the same language
- if it existed, but was seldom used, e.g. bank (sika-kurabia) it is the other language (i.e. bank is English even though it is embedded in Twi).
- However, where the two are used together by the same teacher they are considered as different languages.

Another problem was the status of fillers, words which could clearly belong to either language. For example, 'Mm', 'Mum', 'Mhum', 'ha', and 'He'. We solved this by regarding them as the embedded language or the language they followed as tags or served as head word. However, if they stand alone in speech event we counted them as switches if the following event is in the different language. We considered them the same language if both the events before and after the fillers were in the same language (See Extract 25 Event 359 p 141 (Appendix 5 (19).

The advantage of using the statistical approach is that it has been used by researchers in other countries in Africa similar to Ghana. It has been used with data collected in Kenya and Zimbabwe by Myers-Scotton (1993).

A 'speech acts frequency count' was also rejected because in initial trials it was found that although teachers' and pupils' 'speech acts frequency counts' tallied in most lessons, there were considerable differences in the number of words (See Appendix 16, Pilot study transcript p 541 Vol. 2). While pupil speech acts in most cases contained only one word, the teacher's speech acts often consisted of several
sentences and in some instances paragraphs. Therefore, the unit of analysis for determining the matrix language in the recorded lessons is the word because it can be replicated and cross checked without much difficulty.

4.3.2 Unit of Analysis: Coding Scheme for Functions of Language Alternation

To obtain information about the purpose and function of ‘language alternation’ in the teachers’ language use I designed a coding scheme adapted from Guthrie and Guthrie’s (1987) observation schedule (See Appendix 7 for the coding scheme). Other works that influenced the design were Camelleri (1993) and Mitchell et al. (1981) Guthrie and Guthrie’s (1987) taxonomy was chosen because it had been used in a similar situation to Ghana and with similar students (i.e. beginners or early learners of English). Based on the researchers’ knowledge of the Ghanaian situation the taxonomy of Guthrie and Guthrie (1987) was modified by substituting terms familiar in Ghana. For example, ‘exposition’ was replaced with ‘explanation’. This was to ensure that the labels used would not impede comprehension by Ghanaian primary school teachers. Another reason influencing the selection was the fact that it had been tested in a similar situation.

Lastly, Mitchell et al. (1981) was rejected for two reasons:

- it had not been used in a similar situation
- it had been used for the study of foreign language and not a second language.

4.3.3 Unit of Analysis: Reliability and Validity

Every teacher in the study had at least one of his lessons transcribed and the transcribed notes given back to him for perusal and comment. Both teacher and pupils were given the opportunity to listen to some of the recorded lessons after class. This enabled the teachers to follow the transcription and to comment on errors. The teachers also pointed out errors of spelling especially in Twi. For the validity, the other teachers not involved in the study were given one transcribed
lesson and the coding scheme to apply to the code-switching portions of the text. However, instead of working as individuals the teachers preferred to work as a team. The outcome of their team work was usually not very different from my own.

4.3.4 The Word Count: Determining the Extent of the Use of English and Twi
The computer Microsoft word count programme was used to count the frequency of the use of English and Twi in the transcripts of our informants’ lessons. However to ensure that the word count belonged to only one group and not a mixture of words belonging to the two major participants (teachers and learners), we counted each lesson separately. In each lesson’s count, first we deleted all words associated with transcription conventions (i.e. the numbering of the speech events). We also deleted all words belonging to the other language not counted. For example, when we were counting the number of words for English for the teacher, we deleted all Twi words. We also deleted all comments not associated with the teacher (e.g. learners and intruders utterances). We repeated the same process for the teacher's Twi, the learners' English and Twi. Since the focus was on the teachers’ classroom language use, the frequency of words for English and Twi shows only that for the teachers (see Appendix 15 p 540. Vol. 2).

4.3.5 Unit of Analysis: Counting Code-Switching Utterances
There are two levels of code-switching utterances: the quantitative and qualitative. The quantitative deal with counting the quantity of code-switching utterances and the qualitative level deals with the number of code switching functions within the code-switched utterances. In determining the quantity of code switched utterances we first determined the matrix language as described in 4.3.4. We ignored all speaker turns exclusively in the matrix language. We used speech events or speaker turns in the embedded or less used language and those that contained both languages. However some speech events had sentences, phrases or utterances with switches back into the matrix language. The unit of analysis selected for analysing the code switches is the utterance. This is operationally defined as a string of speech entirely in one language (English or Twi). Separating it from the next
utterance is an utterance in the other language. We obtained the total switches by adding together the number of 'utterances' in the embedded or less used language. For example, in speech event 135 quoted below there are three code-switched utterances in the first sentence and two in the second.

135 Tr. : Five. Nti negative two to five no mepes obi ba board no so na wɔ be ye ma me hwe. Ma ye first one no I have done the first one. Negative one to five, I want someone to come and work. Use the arrow to indicate negative two. Mhum ee! Tibua. Use a different arrow; negative two. Mhum (Appendix 5 (32) pp306 Vol. 2).

In some transcripts it was difficult to use the criterion of the overall matrix language exclusively for the entire lesson. The teachers in those lessons began with one language as the matrix language but as the lesson developed switched to the other language as the matrix language. Grosjean (1995) notes that bilinguals usually choose a base language to use with their interlocutor (i.e. the main language of the interaction) but can, within the same interaction, decide to switch base language if the situation requires it (Grosjean 1995:262).

Although an overall word or morpheme frequency count in a fluctuating base language might suggest one or the other language as the matrix, that hardly presents a true picture of the teacher's language choice. In such lessons, it was often difficult to accept the statistically dominant language as the only matrix language. So the study resorted to the use of two matrices, one for each section of the lesson, where one language is the undisputed matrix. There is a change in matrix language when the teacher switches into the other language and stays in it for more than five speech events. This was the practice chosen where there was the problem of separate sectional dominance of one language and the starting point was not in the overall matrix language. Accepting the statistically dominant language as the matrix suggests that the teachers started their lessons by code-switching. Though it sounds possible to suggest that the teachers started with the less used language and then switched to the dominant language, this could be an over simplification. From the teachers' view of the main language they used in the lessons, the study finds the use of double matrices as more appropriate in analysing those lessons. Myers-Scotton (1995), in a modified position points out that the:
‘assignment of the ML is a dynamic matter. Even though sociolinguistic and psycholinguistic criteria are not amenable to measurement, in general, a major change in their content means a change in assignment of ML status. For example, within the same interaction, the ML can change when there is an adjustment in situational factors (e.g. a new topic, an added participant)’ (Myers-Scotton 1995:237).

According to the teachers, the main language of their interactions in those disputed lessons is English. This conflicting position of the evidence and the teachers’ view is resolved by Myers-Scotton (1995), when she admits that:

‘speaker judgements also point toward the matrix language. Kamwangamalu and Lee, (1991) provide empirical evidence that persons engaged in code switching can identify which language is the matrix’ (Myers-Scotton 1995:ibid.).

The statistical word count however, shows English to be the less used or the embedded language. In explaining their view, the teachers pointed out that as the official language of the class they used it at the start and only employed the unauthorised language for clarifications and monitoring. A close study of their lesson transcripts confirms this usage. Teachers introduced the main concepts of their lessons in the official language. However, faced with the problem of their learners’ insufficient comprehension of the official language, they code-switched to Twi to explain, or recapitulate what was said earlier in the official language. This was then repeated in the official language to make the association stronger (see Extract 1).

Extract 1: L2 into L1 switch structure: L2→L1→L2

<table>
<thead>
<tr>
<th>Observed lesson</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 Tr. : Okay. Today we are going to see the importance of water or the uses of water.</td>
<td>15 Tr. : Okay. Today we are going to see the importance of water or the uses of water. Things we can use water to do. Or we are going to study the very usefulness of water. Importance of water and uses of water. All of you. Uses of water</td>
</tr>
<tr>
<td>16 Chn. : Uses of water.</td>
<td>16 Chn. : Uses of water.</td>
</tr>
<tr>
<td>17 Tr. : Again</td>
<td>17 Tr. : Again</td>
</tr>
<tr>
<td>18 Chn. : Uses of water.</td>
<td>18 Chn. : Uses of water.</td>
</tr>
<tr>
<td>19 Tr. : Okay, en soro ba nso yebe tumi de ay? What are some of the uses of water? Mhom. Yes, what are some of the uses of water? Yes.</td>
<td>19 Tr. : Okay, What sort of things can we do with water? What are some of the uses of water? Mhom. Yes, what are some of the uses of water? Yes.</td>
</tr>
<tr>
<td>20 Chd. : We use, we use for drink</td>
<td>20 Chd. : We use, we use for drink</td>
</tr>
</tbody>
</table>

Appendix 5 (34) Year 5 Science p 316 Vol. 2.

In this interaction the teacher first introduces the main topic ‘The Importance of water or the uses of water’ in English (the official language). Then she switches to
Twi (the unofficial language) to explain and elaborate on what had been said in English, and afterwards goes back to the official language to repeat the original ideas. So the structure shows English - Twi - English (L2 - L1 - L2).

In speech event 19 the teacher follows the L2-L1-L2 structure with a monitoring L1 question to ensure that the concept introduced in L2 and explained in L1 and re-stated in L2 is understood. This monitoring question is then reformulated in L2 to satisfy the official language policy requirement. The L2 statement is repeated to signal to the pupils that it is an L2 response that is expected. Thus the final exchange, (i.e. introduction, monitoring and pupil response) has an L2 -L1 -L2 -L1 -L2 structure. The dilemma the teacher faced, that led to the switch to the unofficial language, is confirmed in speech event 20 in Extract 1 above. This clearly points to the learners’ inadequate knowledge of the official language that could ensure full comprehension.

In pragmatic terms the official language (English) carried the main message, while the unofficial language (Twi) was used to elaborate or give comments and asides. In a way this confirms the differential status of embedded language from that of the surrounding matrix language as proposed by Sebba and Wootton (1984):

"Participants in a conversation orientate to [London] Jamaican stretches embedded in a basically London English turn as having differential status from the adjacent LE material, providing the principal message content. On the other hand, LE embedded within a basically LJ turn correspond to material of secondary importance, such as speakers comment on thematically more important material, or dimensions from the main theme of the turn, for instance, those involving speaker initiated-insertion sequence" (Sebba and Wootton 1984:3 cited in Auer 1995:122).

This observation about the teachers’ pattern of classroom language use is similar to Lin’s (1990) study of code-switching patterns in English language lessons of Anglo-Chinese secondary schools in Hong Kong where she observed a highly ordered pattern of code-switching between English and Cantonese. This took the structure of first introducing the grammar point in English. The main idea was then re-stated and explained in Cantonese. This Cantonese restatement was followed by the original statement made in English (Martin-Jones 1995:97). Martin-Jones (1995) refers to Lin (1990) who comments that:
"It is unlikely that these patterns have evolved only by accident. Rather they seem to reflect the teacher's response to some conflicting demands on her. On the one hand, they reflect her attempt to fulfil the requirement of teaching L2 grammar in L2; that explains why she always presents the examples and the teaching points in L2 first and last. On the other hand, they reflect her attempt to ensure thorough understanding of the teaching points by reiterating and elaborating them in L1 between the L2 initial and final presentation (Martin-Jones 1995)

4.4 Data Analysis: Questionnaire and Taxonomy of Code-Switching Functions

4.4.1 Data Analysis: Questionnaire

The analysis of questionnaire data took into account the following:

a) the sectional division of the questionnaire into three parts:
   - language used inside and outside the classroom
   - attitudes to English and Ghanaian languages
   - and information on teachers

b) language policy for the primary level:
   - Ghanaian language (L1) for primary classes 1, 2 and 3
   - and English (L2) for classes 4, 5 and 6.

c) language policy for subjects:
   - English for English at all grades
   - Ghanaian language for Ghanaian language at all grades
   - Ghanaian language for science and mathematics at classes 1, 2 and 3.
   - and English for science and mathematics at grades 4, 5 and 6.

To avoid results of the questionnaire being biased or obscured the following steps were taken:

a) all responses of P1 -3 content subjects in the Ghanaian language (L1) were separated from those of P4-6 who were taught content subjects in English (L2)

b) all responses relating to language use were coded and analysed according to:
   i) Content subjects (seven in all)
   ii) Language (two language groups plus a mixture)
iii) Language policy (L1 and L2 policies)
iv) School year grades (i.e. classes 1 to 6).

v) Rural urban comparison
vi) and status of schools (i.e. 'poor' or 'good')
c) Switches and switch functions were also analysed and compared by class, school, subject and teacher.

In addition to the above, the data required to test each of the research hypotheses was cross-tabulated between variables within each of the identified groups listed in (i-vi) above and between two or more such groups. When reporting the results of the study, each language hypothesis is discussed separately and a summary of the findings given. After this, the different issues raised under the individual hypothesis are considered and summaries of the findings provided for each. Finally, the overall results are discussed and a summary given.

4.4.2 Data Analysis: Taxonomy of Code-Switching Functions
In discussing the interpretation of discourse, Nunan (1993) points out that it is important for the language interpreter to recognise the functional role of the different utterances within the discourse. Language functions or 'speech acts', as they are often referred to, 'are simply things people do through language. For example, apologising, requesting, complaining, etc.' (Nunan 1993:65). In assigning discourse functions to identified switch 'utterances', the study considered the multiple functions of language following the example of Guthrie and Guthrie (1987). First, the researcher who was also the collector of the data, coded utterances in context by studying the tapes, transcripts, and field notes (see Appendix 17 p571 Vol.2). The conversational speech act coding system allows the double coding of more than one function to the same utterance (Guthrie and Guthrie 1987:210). In counting the code-switching functions we counted the double functions of the same utterance. This explains the lack of a tally between the number of switches (macro switches) and the number of switch functions (micro switches) identified in the study. Conversational acts represent a taxonomy
of speech act types which code utterances according to the grammatical structure of the utterance, its illocutionary properties, and its general semantic or propositional content (Guthrie and Guthrie 1987:215). As a result of the context of use and the focus of use, I made some modifications to the taxonomy of Guthrie and Guthrie (1987). The revised list of codes had thirty-five separate speech functions, each assigned a three-letter code. (For details of the scheme see Appendix 7). These were then re-grouped into ten broad functional categories to take account of the frequency of each function type and their broader association as conversational acts. What follows is a definition of the ten most commonly used function types. Extracts from teachers transcripts are also used to illustrate the types identified.

- **Substitutions**

These involve the embedded use of English/Twi words as substitutes for the matrix language. The embedded words do not involve formulaic or routine classroom expressions. They might be untranslatable foreign or indigenous words that do not have a one to one equivalent in the other language.

**Extract 2: Substitution Switch**

<table>
<thead>
<tr>
<th>Observed lesson</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>240 Tr.: Now who can tell us the English name for “akok&gt;&gt;” All of you say it.</td>
<td>240 Tr.: Now who can tell us the English name for “chicken” All of you say it.</td>
</tr>
</tbody>
</table>

Appendix 5 (27) Year 4 English p 260 Vol.2

They could be core borrowed lexemes with equivalents in the other language and may function as identifiers such as names. One such example is “akok>>” in speech event 240 in Extract 2 which is a core lexeme and has an English equivalent.

- **Explanations**

**Extract 3: Explanation Switch**

<table>
<thead>
<tr>
<th>Observed lesson</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>103 Tr.: Unit two. Page six. Unit two. Let's take two minutes to read silently. Kan no wɔ wɔtiri mu.</td>
<td>103 Tr.: Unit two. Page six. Unit two. Let's take two minutes to read silently. Read it inside your head (read silently)</td>
</tr>
</tbody>
</table>

Appendix 5 (27) Year 4 English p 255 Vol.2.
‘Kan no wɔ wotiri mu’ in Extract 3 above is an example of explanation. This group consists of expositions of what had been said earlier and may include reformulation or restatements.

• Questions
A question is a request for information which is mostly realised through the use of a direct interrogative. Its usual function is to involve the learners in classroom interaction by asking them knowledge of what has been presented either immediately before the question or in the past. In Extract 4, ‘na aka sen?’ illustrates a switch functioning as a question.

Extract 4: Question switch

<table>
<thead>
<tr>
<th>Observed lesson</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>173 Tr. Amos, quarter to, na aka sen?</td>
<td>173 Tr.: Amos, quarter to, how much (time) is left?</td>
</tr>
</tbody>
</table>


• Acknowledgement
The discourse has the function of accepting as correct teacher’s or pupil’s utterance. Examples include, correct, right, yes, and in Twi, wa twa, sɛnowa nono. eyɛ. This group includes responses, evaluations, blame, rejection, praise, and acknowledgement. Speech event 20 in extract 5 is an example.

Extract 5: Acknowledgement Switch

<table>
<thead>
<tr>
<th>Observed lesson</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 Tr. : Circle, eyɛ. Circle. Mo mmɛ mu nsɔm ɛma no</td>
<td>20 Tr. : Circle, It's right. Circle. Clap for him</td>
</tr>
</tbody>
</table>

Appendix 5 (36) Year 3 Mathematics p 335 Vol. 2.

• Management
These are organisational features of interaction which include management devices such as asides, protests, and attention seeking devices. Others are false starts, speaker selection and disciplinary devices. Extract 6 is an example of a management device.
Extract 6: Management Switch

<table>
<thead>
<tr>
<th>Observed lesson</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>214 Tr.: So let's observe it.</td>
<td>214 Tr.: So let's observe it.</td>
</tr>
<tr>
<td>215 Chn.: Oh sir!</td>
<td>215 Chn.: Oh sir!</td>
</tr>
<tr>
<td>216 Tr.: Wote dan mu na wo didi</td>
<td>216 Tr.: Do you eat while in class?</td>
</tr>
</tbody>
</table>

Appendix 5 (8) Year 5 Science p 76 Vol. 2.

The utterance is not directly connected to classroom discourse because it is an aside which comments on a pupil’s behaviour.

- Requests for Action

The discourse or utterance is a request for action such as teacher or pupil asking for work to be marked. It includes requests for information in statement form and may function as a prompt or a request for some action.

Extract 7: Request for action switch

<table>
<thead>
<tr>
<th>Observed lesson</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>143 Chd.: Sir. hwe me answer no ma me.</td>
<td>143 Chd.: Sir. Check my answer for me.</td>
</tr>
</tbody>
</table>

Appendix 5 (12) Year 3 Mathematics p 124 Vol. 2.

In speech event 143 in Extract 7 ‘hwe me answer no ma me’ is an example.

- Formulaic Expressions

These are routine classroom expressions that normally have equivalent expressions in the other alternative language.

Extract 8: Formulaic expression switch

<table>
<thead>
<tr>
<th>Observed lesson</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>269 Tr.: Nkatskyire ye dan nea? che. Nkatskyire ye dan nea? Yes.</td>
<td>269 Tr.: What do we mean by bed wetting? Yes, what do we mean by bed wetting? Yes.</td>
</tr>
</tbody>
</table>

Appendix 5 (23) Year 3 GL p 213 Vol. 2.

It involves some form of everyday language in the school and may be motivated by performance ease. Examples include “Yes sir. No sir, sir, teacher, madam, stop talking, again”. The word ‘Yes’, in Extract 8 is an example.

Another example is the word ‘break’ in the pupil’s speech event 347 in Extract 9.
Extract 9: Formulaic expression serving as a query and request for action

<table>
<thead>
<tr>
<th>Observed lesson</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>347 Chd.: Yan k&gt; break?</td>
<td>347 Chd.: Are we not going for break?</td>
</tr>
</tbody>
</table>

Appendix 5 (35) Year 3 GL p 334 Vol. 2.

In the first example, the formulaic expression functioned as a request for action. It signalled that the pupil should give a response to the question. In the second, the pupil’s utterance served as a query to the teachers’ action of continuing to detain them in class when it was time for break (i.e. it functioned as a protest from the pupil).

- **Directives**

Directives have the function of requesting a non-linguistic response and are realised by simple imperatives. ‘Wo deefato h>’ in extract 10 is an example.

Extract 10: Directive switch

<table>
<thead>
<tr>
<th>Observed lesson</th>
<th>Translation</th>
</tr>
</thead>
</table>

Appendix 5 (8) Year 5 Science p 74 Vol. 2.

Other examples include, ‘sit down, clap for them’ (see Appendix 5 (29) p 275 and in Twi examples are ‘fa k> soro (send it up) and ‘Tena h> yiye’ (sit properly (see Appendixes 5 (32) speech event 139 p 306 and 5 (42) speech event 211 p 398. Vol.2).

- **Translations**

The utterance includes translation and direct request for translation equivalent of an earlier expression. Akroma in extract 11 below illustrates a translation switch.

Extract 11: Translation switch

<table>
<thead>
<tr>
<th>Observed lesson</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>252 Tr.: Akroma is hawk. Me pe akok&gt; Borofjo. Akok&gt; baa</td>
<td>252 Tr.: Hawk is hawk. I want the English for chicken. A female chick</td>
</tr>
</tbody>
</table>

Appendix 5 (27) Year 4 English p 260 Vol. 2.
Appendix 5 (42) Year 4 Science p 393 Vol. 2.

Extract 12 is an example of content switch from science in Year 4. Content switch deals with the presentation of the subject matter and includes new information, summaries, counting, correction, interactional particles and reinforcement. From the translation, the teacher’s switch did not only explain the earlier information it also added new information to make the content clearer (i.e. *eye den. enna debiara eye twann* -it is hard and always sticky).

**4.5 Conclusion and Limitations.**

The data in this study are derived from the observation of twelve teachers who taught three primary school grades (i.e. grades 3, 4, and 5) in four selected schools. The teachers and schools represent a balanced selection of urban and rural primary schools in Ghana. The purpose of the study was initially to find what language was used for instruction and to compare the actual classroom practice with official policy. Subsequently the role of language alternation in classes was added, because it was felt this would help the practical value of the study.

The study is naturalistic rather than experimental. It used a combination of audio recording, extensive ethnographic notes, and self-administered interview schedules to collect data. However, it is important to note the limitations of the study in relation to the data:

- limited amount of data collected and the influence of a limited time
the possibility that the researcher's presence influenced the teachers' language in class

Although limited data was collected, nevertheless it was possible to generalise from the findings because the schools were representative of the Ghanaian schools and the study includes information from a national survey.

The data was supplemented with ethnographic field notes which aided the interpretations of the code-switching functions and the nature of the interactions.

The teachers preferred the researcher to sit in front of the class, on one side of the teacher's table. The pupils greeted the teachers and the researcher together at the beginning of the lessons (i.e. Good morning teachers) which shows their awareness of the researcher's presence. The teachers also took account of his presence by referring to him as 'sir' or 'master' and some of them were his former students. This group later explained that they felt his presence was like a follow up visit to evaluate the extent to which they applied skills and theories learnt while in college.

The study was limited because it could not use data from all of the 106 observations made but was able to use only forty-five because of poor sound quality and technical problems associated with the recording machine. Another limitation of the study is the use of plain transcription for analysis when phonetic transcription could have added more information. This was partly because of shortage of time but also because of the transcriber's poor knowledge of the phonology and phonetic transcripts of one of the languages. The study was also limited because it was confined to studies of classroom practices in Ghana using twelve teachers, four schools and three primary school classes, namely; classes 3, 4 and 5. It also studied four subjects of the primary school curriculum (English language, mathematics, science and Twi (GL). Finally it was limited by the collection of data largely through systematic classroom observation using a tape recorder when the use of an audio video recorder could have provided more information on classroom practices.
CHAPTER FIVE

PATTERNS OF LANGUAGE USE AND
LANGUAGE ALTERNATION:
RESULTS AND DISCUSSIONS

5.1 Introduction

This chapter presents the results of the study of classroom language use in Ghanaian primary schools at macro and micro levels. At the macro level it presents the results of the study of ‘patterns of language use’ and at the micro level it deals with ‘language alternation’. ‘Patterns of language use’ in this study is defined as the frequency of the use of English and Twi by teachers, and ‘language alternation’ involves ‘code-mixing’, ‘borrowing’ and ‘code-switching’. These terms have been used to describe different types of language alternation in sociolinguistic literature. For example, ‘code-switching’, a kind of mixed speech, involves the use of one or more languages embedded in a predominant language. Where the mixed speech is the norm it is said to be the ‘unmarked choice’. However, it is said to be ‘marked’, where code-switching is deliberately made to invoke social, political, economic or power roles. Code-switching may be classified as ‘tag-switching’, ‘intra-sentential switching’ or ‘inter-sentential switching’. ‘Tag-switching’ is classified as the insertion of a tag or marker from one language into a stretch of speech in another language.

‘Inter-sentential switching’ is said to involve switching within the clause or phrase level and ‘intra-sentential switching’ is often viewed as switching languages between the clause boundary or between speaker turns (Ferguson, 1993). Some writers have made a distinction between ‘code-mixing’, ‘borrowing’ and ‘code-switching’. Poplack (1980) defines ‘code-mixing’ as ‘intra-sentential switching’. However, Myers-Scotton (1992) argues that there is no distinction between ‘borrowing’ and ‘code-mixing’. Similarly, in the distinction between ‘code-switching’ and ‘borrowing’, ‘borrowing’ is often classified as the use of a single embedded lexical
item from one language into a stretch of speech in another language. However, this study makes no distinction between them. It has adopted Myers-Scotton (1992) position and sees them as related phenomena and has therefore treated them all under the general heading of ‘language alternation’. The study does not attempt to engage in structural analyses of the processes involved in code alternation. The main interest lies in the social and pedagogic functions of ‘language alternation’ in Ghanaian primary classrooms.

5.1.1 Patterns of Language Use by Grades: An Overview

Table 12: Percent Ratio of the Use of English to Twi by Grades and Subjects

<table>
<thead>
<tr>
<th></th>
<th>YEAR THREE</th>
<th>YEAR FOUR</th>
<th>YEAR FIVE</th>
<th>OVERALL</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGLISH</td>
<td>98: 2</td>
<td>94: 6</td>
<td>92: 8</td>
<td>95: 5</td>
</tr>
<tr>
<td>MATHS</td>
<td>74:26</td>
<td>96: 4</td>
<td>95: 5</td>
<td>86:14</td>
</tr>
<tr>
<td>OVERALL</td>
<td>52:48</td>
<td>52:48</td>
<td>72:28</td>
<td>58:42</td>
</tr>
</tbody>
</table>

Note: 1) Bold Print in the table shows amount of unofficial language
2) The first figure in each ratio shows the amount of English and the second is that of Twi (i.e. in English subject for Year 3 the ratio of 98:2 means 98% English and 2% Twi)
3) See Appendix 15 for the frequency figures on which these percentages are based

Table 12 presents the results of the frequency of the use of English and Twi by grades and subjects. The results show that there was no single language of instruction in any subject. There may be a dominant language but all subjects involve language alternation. The results show the use of English alternating with Twi in content subjects at lower primary school (classes 1-3 henceforth abbreviated as LPS), where the language of instruction was GL, and again at upper primary school (classes 4-6 henceforth abbreviated as UPS), where the language of instruction was English. Two patterns of language use clearly emerged. Firstly, in language lessons of English and Ghanaian language there were fewer switches compared to content lessons such as science and mathematics.

The significant findings were that in Years 3 and 4 the language of instruction was English for English language and mathematics but Twi for science and GL. In Year 5 the pattern changed, with English being the language of instruction for all subjects other than GL. During science and mathematics lessons there was substantial use of
the non-prescribed language, not necessarily the mother tongue. Although one would have expected a difference in the pattern of language use between Years 3 and 4 because of the different policies of language of instruction, there was no difference in the overall pattern (see Table 12). The data for Years 3 and 4 show overall almost equal use of English and Twi (i.e. 52% English to 48% Twi). In Year 5, the pattern had fallen in line with what one would expect since English was predominant, (i.e. 72%). However, individual subject results do not match the overall results. These results suggest that teachers did not follow the language of instruction in Year 3, though they followed the policy guidelines for change of language in Year 4. The policy guidelines were not followed for mathematics in Year 3, and in science for Years 4 and 5. In GL subject classes almost no English was used (2%). In mathematics, there is an overall predominant use of English, though with variation between classes - ranging from 74% in Year 3, contrary to official policy, to 96% in Year 4. In science, unlike mathematics, Twi is frequently used. The data show an overall 48% use of Twi in science. Again there is substantial variation between classes. In Year 3, science was taught mostly in Ghanaian Language (61%). In Years 4 and 5, Twi is frequently used in science contrary to policy stipulation (57% in Year 4 and 33% in Year 5).

In Ghana, the official policy is that the language of instruction for the first three years is a Ghanaian language and there is a switch to English from Year 4. However, Table 12 shows relatively little use of English in Twi subject lessons or Twi in English language lessons.

The reasons for this pattern of language use are discussed in relation to the school grades in later sections. It seems that switches into the non-prescribed language are motivated by a complex of conflicting pressures involving the honouring of the official regulations and coping with learner problems and needs. On the one hand, there is a learner problem of comprehending the official L2 which requires unofficial switches to L1. On the other hand, there is the desire to develop sufficient L2 vocabulary to meet requirements, which encourages switches from official Twi (L1) to unofficial English (L2).
5.2 Pattern of Language Use by Subject and School Grades

5.2.1 Pattern of Language Use in Mathematics

Table 13: Pattern of Language Use in Mathematics

<table>
<thead>
<tr>
<th>Class</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>All Classes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>100: 0</td>
<td>100: 0</td>
<td>100: 0</td>
<td>100: 0</td>
</tr>
<tr>
<td>Aborɔfo</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Makaranta</td>
<td>38:62</td>
<td>87:13</td>
<td>79:21</td>
<td>68:32</td>
</tr>
<tr>
<td>Zongo</td>
<td>71:29</td>
<td>99: 1</td>
<td>100: 0</td>
<td>90:10</td>
</tr>
<tr>
<td>Wa-Para</td>
<td></td>
<td></td>
<td></td>
<td>95: 5</td>
</tr>
<tr>
<td>Mean</td>
<td>74:26</td>
<td>96: 4</td>
<td>95: 5</td>
<td>88:12</td>
</tr>
</tbody>
</table>

Note: 1) **Bold Print** in the table shows amount of unofficial language
2) The first figure in each ratio shows the amount of English and the second is that of Twi (i.e. in Makaranta for Year 5 the ratio of 98:2 means 98% English and 2% Twi)
3) xxxx indicates no lesson was recorded

Table 13 shows the frequency of use of English and Twi in mathematics. It shows that apart from Year 3 and Zongo primary school there was not considerable alternation between English and Twi. In Year 3, the data show the dominant use of English although Twi is the official language. Both Aborɔfo and Makaranta primary schools exclusively used English and in Wa-Para primary school English was predominantly used. In the Zongo primary however, Twi was predominantly used. In Years 4 and 5 the predominant language of instruction is English but with switches into Twi.

5.2.2 Reasons for Patterns of Language Use in Mathematics

The greater use of English in mathematics at all grades may be attributed to the topic of the lessons and pupils’ familiarity with it. In addition, the availability of English textbooks in mathematics, the use of English numeral names for Ghanaian money, and the wrong interpretation of a statement in the English syllabus to mean the language policy are all contributing factors.

Most of the topics taught dealt with money, a subject which involves children’s everyday experiences. Also, most financial transactions in Ghana are anglicised. People rarely count their money in a Ghanaian language. Another reason for the frequent use of English is the use of the same symbols for numerals in English and Twi. Numerals in the local language are written using the same symbols as for English, except that they are read using local names. For example, the numerals 1, 2, 127
3, 4, 5 are read in Twi as baako, mmeinu, mmiensa, enan, enum. Although the language of instruction in Year 3 is Twi the mathematics textbook the teachers use is in English. The similarity of numerals combined with the use of English textbooks often led to the complete use of English by some teachers. The teachers also intuitively believed that language learning and acquisition is helped by the greater exposure to the target language. The frequent use of English in mathematics and science can also be attributed to the English language syllabus for primary schools in Ghana which is misinterpreted to mean the language policy for all subjects:

"Teachers using this syllabus are urged to teach English with as little recourse as possible to any language other than English, and to reduce to a minimum translation into the indigenous language..." (CRDD 1992:5 English Syllabus for Primary Schools).

This statement is misinterpreted as being the national language policy at the primary school because teachers are not exposed to the policy while in training and the document containing the policy statement is scarce. Fragments of it are accessible in various documents but never the whole document itself. Most teachers in training will only see the introductory aspects of the primary English syllabus which relate more to language teaching theory than to language policy. Many of the school inspectors interviewed felt it was unwise to allow the use of L1 in English lessons. Other reasons for the frequent use of English, but which relate to individual schools are:

- the location and status of the school
- the school and the individual teacher’s own language policy
- the head teacher and staff’s attitude to English and Twi
- the pupils’ proficiency in English
- the official language policy for the subject and the grades

These are discussed fully in 5.3.2.

Generally switches into Twi in Years 4 and 5 may be due to the pupils’ low proficiency in English, and the teachers’ commitment to the use of Twi to bridge the difficulties they and the pupils encounter. Although in Year 3 the similarity of the numerals encouraged switches into English when the matrix language is Twi, in Years 4 and 5 it encouraged switches into Twi when the matrix language is English.
It is also possible to suggest that teachers generally used the vernacular as an easy option because they lacked the resources to reformulate their ideas in English. Their personal experience as pupils and their teacher training has constrained their methods. They often resorted to switching when they had not sufficiently explored other means for helping pupils to comprehend. For example, there was often very little discussion between the teachers and their pupils.

5.2.3 Pattern of Language Use in Science

Table 14: Pattern of Language Use in Science

<table>
<thead>
<tr>
<th>Class</th>
<th>Year 3</th>
<th>Aborifo</th>
<th>Makaranta</th>
<th>Zongo</th>
<th>Wa-Para</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Makaranta</td>
<td>xxxx</td>
<td>93:7</td>
<td>7:93</td>
<td>60:40</td>
<td>43:57</td>
<td></td>
</tr>
<tr>
<td>Zongo</td>
<td>99:1</td>
<td>61:39</td>
<td>46:54</td>
<td>100:0</td>
<td>67:33</td>
<td></td>
</tr>
<tr>
<td>Wa-Para</td>
<td>94:6</td>
<td>64:36</td>
<td>18:82</td>
<td>60:40</td>
<td>50:50</td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: 1) Bold Print in the table shows amount of unofficial language
2) The first figure in each ratio shows the amount of English and the second is that of Twi (i.e. in Aborifo for Year 3 the ratio of 89:11 means 89% English and 11% Twi)
3) xxxx indicates no lesson was recorded

Table 14 shows the results for language use in Science. Although the data show there was an overall equal use of English and Twi, the year by year results show considerable variation in language use. Similarly, the results between schools show marked differences in the frequency of the use of English and Twi. All schools other than Zongo, used English more frequently. Zongo primary used Twi predominantly (82%). However, in Makaranta and Wa Para primary schools switching between English and Twi was very frequent.

5.2.4 Reasons for Patterns of Language Use in Science

Table 14 shows that in science two patterns of language use emerged. There was the more frequent use of Twi in Years 3 and 4 and a dominant use of English in Year 5. The results for Year 3 show 39% English and 61% Twi. All schools other than Aborifo used mainly Twi for science in Year 3. This can be explained in terms of the teachers’ adherence to the official language policy. In Makaranta primary and Wa Para Military primary schools switches to English in science are influenced by
the use of Twi as the language for instruction with an English textbook as source of reference and the teachers’ pragmatic concern for developing adequate English vocabulary to meet the pupils’ needs for the language change in Year 4. All Year 3 teachers mentioned their concern to develop the vocabulary in English to enable the pupils to cope smoothly with the change in the language of instruction in Year 4. In answer to the question of which language was officially recommended for Year 3, one older teacher, with over 30 years experience, articulated the attitude of the others when he said,

“Don’t mind them (policy formulators). They sit in Accra and say what they want. They think what works in Accra can work here (the village). They don’t know what is going on here.”

This illustrates the widespread lack of respect for the official policy by the teachers.

The typical pattern that occurs in Year 3 when teachers are developing L2 vocabulary for science, is shown in Extract 13.

| Extract 13: Concern for Developing English Vocabulary and Structure of Switch |
|----------------------------------|----------------------------------|
| **Observed lesson**              | **Translation**                  |
| 365 Tr.: *ehe, anomaa te he?*    | 365 Tr.: Yes, Where does a bird live? |
| 366 Chn.: *W≈da buo mu.*        | 366 Chn.: It lives in a nest.     |
| 367 Tr.: *W≈da buo mu. Yefer no nest, nest.* | 367 Tr.: It lives in a nest. We call it nest, nest. What did I say it is called? |
|                                 |                                   |
| 368 Chn.: Nest.                  | 368 Chn.: Nest.                   |
| 369 Tr.: Nest.                   | 369 Tr.: Nest.                    |
| 370 Chn.: Nest.                  | 370 Chn.: Nest.                   |
| 371 Tr.: Nest.                   | 371 Tr.: Nest.                    |
| 372 Chn.: Nest.                  | 372 Chn.: Nest.                   |
| 373 Tr.: *Anomaa w≈xe buo mu. Hwan ne na wahunu anomaa buo da?* | 373 Tr.: A bird lives in a nest. Who has seen a bird’s nest? |

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The teacher first asks for the item in Twi (L1). He repeats what the child says in L1 and then restates it in English (L2). Next, he checks if the pupils understand it correctly, and follows this with a drill in English to ensure memorisation of the new vocabulary. Finally, he gives a review which is also followed by further checking. In Year 3, the official language of instruction is Twi, so teachers present the content first in the L1 to satisfy the policy requirement. The teachers often give the English lexical equivalent to satisfy their concern for developing enough vocabulary and
expressions in English (L2) in preparation for L2 use in Year 4. This L2 equivalent is often repeated a number of times to enable pupils to memorise it. After this, there is very often a summary or monitoring of the original L1 item. This gives an L1 → L2 → L1 structure which seems to suggest that switches into unofficial language are a way of mediating the conflicting pressures of honouring the official policy regulations at the same time as catering for learner needs for change of language in Year 4.

Another reason for the alternation between Twi and English in Year 3 is the textbook. Teachers switch to English because the textbook is in English and some vocabulary items are highlighted in the text to suggest an emphasis (see Extract 14).

Extract 14: Sample of the Design of the Science Textbook

<table>
<thead>
<tr>
<th>FOOD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Food Poisoning</strong></td>
</tr>
<tr>
<td>&quot;Food can go bad. Bad food is called contaminated food. We can become ill if we eat bad food. This illness is called food poisoning. How do we know we have food poisoning? We feel pains in the stomach. We may go to toilet many times This is called diarrhoea&quot;</td>
</tr>
<tr>
<td>&quot;Poisonous Food</td>
</tr>
<tr>
<td>Some substances can make us sick. Some substances can kill us. These are called poisons&quot;</td>
</tr>
</tbody>
</table>

(Ministry of Education Ghana 1986:37-42. Unit 5, Year 3 science textbook) (see Appendix 3)

Thus, the text itself leads to the teaching of English vocabulary when introducing new scientific concepts. Teachers are expected to read the English text and to prepare their teaching material in Twi before the lessons, but most do not do so and engage in spur-of-the-moment translation during the lesson. This produces the dominant use of English in one school and considerable alternation between L1 and L2 in two others. For example, of two primary teachers observed teaching with the textbook, one taught it solely in English (see Extract 15) and the other taught it in GL but used English for the “bold” words (see Extract 16).

Extract 15: Dominant Use of English

25 Tr. : The food we've kept for a long time. Good. Now we are going to see how food becomes poisonous or some of the food that are poison. Lets turn our books to page 42, page 42, page 42, page 42. Right. We have poisonous food.

Appendix 5 (2) p 14 Vol. 2.
Extract 16: Switches Using Highlighted Words in Textbooks

<table>
<thead>
<tr>
<th>Observed Lesson</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>81 Tr. : Wɔte kukoɔ mu ɛte nsuo mu. Wɔse denkyam te fa he?</td>
<td>81 Tr. : It lives on land and in water. Where did he say a crocodile lives?</td>
</tr>
<tr>
<td>82 Chn. : Kukoɔ so te nsuo mu</td>
<td>82 Chn. : Lives on land and in water</td>
</tr>
<tr>
<td>83 Tr. : Saa mmoa no a ʋɛm te kukoɔ so nsane ɛte nsuo mu no ne bɔrafo yɛfe no amphibians. Mese yɛfe wɔm sɔn?</td>
<td>83 Tr. : Those animals that live on land in water are in English called amphibians. What did I say they are called?</td>
</tr>
<tr>
<td>85 Chn. : Amphibians</td>
<td>85 Chn. : Amphibians</td>
</tr>
<tr>
<td>86 Tr. : Amphibians. amee se denkyam eye amphibian a, aabo bɛn bi aana ʋɛm no nsoso eyo amphibian?</td>
<td>86 Tr. : Amphibians. So, if a crocodile is an amphibian, what other animal too is an amphibian?</td>
</tr>
<tr>
<td>87 Chd. : Crab</td>
<td>87 Chd. : Crab</td>
</tr>
</tbody>
</table>

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Because local languages lack some scientific terms, several teachers explained that they had to switch into a foreign language in order to carry on teaching. Extract 17 shows that for some scientific concepts reformulation into the L1 was simply not possible. For example, in Extract 17 the teacher did not know how to restate the words ‘turpentine’ and ‘carpenter’ in Twi because there are no corresponding Twi equivalents. ‘Carpenter’, ‘liquid’ and ‘polish’ are all borrowed words.

Extract 17: Technical and Scientific Vocabulary Without L1 Equivalents

<table>
<thead>
<tr>
<th>Observed lesson</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>51 Tr. : Turpentine</td>
<td>51 Tr. : Turpentine</td>
</tr>
<tr>
<td>52 Chn. : Turpentine</td>
<td>52 Chn. : Turpentine</td>
</tr>
<tr>
<td>53 Tr. : ee ee liquid wo kɔ carpenterfoɔ ʋɛm ye adwuma yɛsi sfr aiy ades noa ʋɛm de polish nkonwa no ho no. Mhun, yade fra turpentine, turpentine. All of you.</td>
<td>53 Tr. : ee it is a liquid if you go carpenters place where they work, they mix it with what, that thing with which they polish furniture. Mhun, they mix it with turpentine, turpentine. All of you.</td>
</tr>
</tbody>
</table>

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In this example, the overall matrix is English but the matrix in this speech event is Twi. This example also suggests that teachers could not explain the concept turpentine in English by saying it was liquid for removing paint stains.

One more reason for switches into English was the frequent use of ‘formulaic expressions’ (See Extract 18). Teachers often used these expressions for classroom instructions, prompts and acknowledgements. Words and expressions such as ‘All of you’, ‘Yes’, ‘good’, ‘correct’, ‘right’, ‘keep quiet’ and many more have become
institutionalised classroom vocabulary. The motivation to the English switch in the
Extract 18 is the teacher’s attempt to encourage the pupil to speak.

**Extract 18: Formulaic English Switches**

<table>
<thead>
<tr>
<th>Observed lesson</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>381 Tr.: Wz&gt; to. Se wo hwz a znomaa nyinaa no obia w&gt; sbuo a wz&gt; te mu. Nanso wo hwz a, aboa te ss akyenkyena she na wz&gt; te? Yes.</td>
<td>381 Tr.: It lays. If you observe you will realise that all birds have a sort of nest in which they live. Now where do you think an animal like the migratory weaver bird, where does it live? Yes.</td>
</tr>
<tr>
<td>382 Chd.: Wz&gt; da dua mu.</td>
<td>382 Chd.: It lives on a tree.</td>
</tr>
<tr>
<td>383 Tr.: Akyenkyena she, wz&gt; te he?</td>
<td>383 Tr.: The migratory weaver bird, yes where does it live?</td>
</tr>
<tr>
<td>384 Chd.: Wz&gt; te</td>
<td>384 Chd.: It lives</td>
</tr>
<tr>
<td>385 Tr.: Yes wz&gt; te he?</td>
<td>385 Tr.: Yes where does it lives?</td>
</tr>
<tr>
<td>386 Chd.: Ndwa nk&gt; mu.</td>
<td>386 Chd.: On the apex of tree tops.</td>
</tr>
</tbody>
</table>

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To sum up, the main reasons for the dominant use of English in one school and the considerable switching from Twi to English in other schools in Year 3 in science are the textbook design and language, lack of some scientific vocabulary in L1, the teachers’ policy of developing L2 vocabulary in preparation for change of language of instruction. Also the language of classroom management, teachers’ lack of language resources to match the level of the pupils, and the pressure of time to finish the syllabus.

In Years 4 and 5 the official language for teaching science is English. However, the significant features of the data in Table 14 are:

- the infrequent use of English in the Zongo primary school
- variation between schools and Years 4 and 5.

Zongo primary school teachers frequently taught science in Twi. The results show the predominant use of Twi in Year 4 and considerable variation between English and Twi in Year 5. The teachers attributed the frequent use of Twi to the pupils’ poor proficiency in English and also claimed that they could have used more English with higher ability groups. In Aborfo school however, the teachers used more English because of the school’s ‘all English language policy’. In Wa Para Military primary school there was as much as 40% use of Twi in science in Year 4 but, none
in Year 5 because of individual teacher’s style of teaching. In Year 4 the main cause is the teacher’s use of concurrent translation while in Year 5 the teacher viewed the use of Twi as a waste of the pupils’ time for learning the language needed for higher stages. Teachers in Makaranta primary school are aware of their predominant use of L1 in L2 subjects, but regret the pattern of language use which they attribute to the pupils’ poor proficiency in English. They also switch to Twi in order to save time. Like their counterparts in Zongo, they also claimed they could have used more English with higher ability groups. In Year 4 Makaranta predominantly used English for science (93%) but in Year 5, there was considerable switching into Twi (39%). The level of difficulty and complexity of English increased as pupils moved up the school grades. However, the lack of a corresponding increase in pupils’ proficiency in English led to greater use of Twi to reduce learning difficulties.

For some topics, switching from English to Twi is encouraged by the use of local examples to illustrate the lessons. Twi is sometimes used when there is no equivalent English word for the concept. For example, in Extract 19, the words ‘kukuɔ,

**Extract 19: Local Examples Without English Equivalents**

| 154 Tr. | Because of water that’s why it has become so thick eh! So If you use it to mould anything it can do it. Now, what are some of the thing we use clay soil to mould? Den noɔ\dž\a na yede saa wey eyɔ? enɔ\dž\a ban saa? Okay, S. |
| 155 S | Yede eye kukuɔ. |
| 157 An | Pɔɛ\dž\a |
| 158 Chn. | [Laughing]. |
| 159 Tr. | Yes Mo. |
| 160 Mo | Yede nwene a pot. |
| 161 Tr. | Pot. Clap for him. |
| 166 Chn. | Sedwa. |
| 167 Tr. | Sedwa. Clap for him. |

| 154 Tr. | Because of water that’s why it has become so thick eh! So If you use it to mould anything it can do it. Now, what are some of the thing we use clay soil to mould? What are some of the things we use this for? Things like what? Okay, S. |
| 155 S | We use it to make kukuɔ. |
| 156 Tr. | We use it in moulding kukuɔ. We also use it for bukyeya. You must speak in English. Speak in English. You know some of the things. Yes An. |
| 157 An | Pɔɛ\dž\a |
| 158 Chn. | [Laughing]. |
| 159 Tr. | Yes Mo. |
| 160 Mo | We use it for moulding a pot. |
| 161 Tr. | Pot. Clap for him. |
| 166 Chn. | Sedwa. |
| 167 Tr. | Sedwa. Clap for him. |

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bukyeya, pɔɛ\dž\a and Sedwa’ are all local names for concepts that do not have word for word equivalents in English. ‘Kukuɔ’ is a type of clay pot usually used for
cooking. 'Bukyeya' is a clay tripod support usually built in a kitchen as a fire place for cooking and 'pɔtɔyowa' is a local clay pot mixer or grinder used for grinding vegetables. The teacher first accepts 'kukuo' as a correct response, then she herself gives 'bukyeya' as an example but follows it up with an instructional insistence for pupils to give examples in English. The pupils disregarded this instruction and gave an example in L1 (i.e. 'pɔtɔyowa') to which the pupils reacted by laughing. The teacher in an angry mood, quickly nominated another pupil. Although, this pupil’s utterance started with Twi (L1) and ended with an English example (i.e. Yeďe nwene a pot), the teacher accepted it and followed it with a praise. However, six events later, (i.e. event 166) a pupil gives another Twi example (sɛdwa) which, the teacher accepts and translates into English but, she gives the wrong translation. ‘Sɛdwa’ is not the same as toys as the teacher explained later. A closer translation is wood carving or pieces of sculpture. In spite of their ignorance of the English equivalents of local terms, they rarely admitted a deficiency in English. Most teachers during an informal interview cited the subject and the lesson topic as a factor determining their selection of language. For example, they pointed out that it was unusual for a native Twi speaker to use English to teach Twi. Pupils, they felt would have very few problems, if any, in following a lesson in Twi in a GL lesson. In science lessons however, they felt some topics and concepts needed to be explained in Twi before they could expect the pupils to fully comprehend them, especially so because of the high level of English proficiency demanded by the pupils’ textbooks.

The Excerpts (a) and (b) also show the high standards of English proficiency demanded by the pupils’ science textbooks.

Excerpt (a)

'Soils are different because they are formed from different types of rocks. Also, in some soils the pieces of rock (called mineral particles) are larger than in others. Look at some different types of soil. Feel them. Can you tell that some have larger particles in them than others?'

{CRDD 1985: 23}

Excerpt (b)

'When you look at the sky at night you will usually see the Moon. Unlike the Sun, the Moon does not produce light. It does, however, reflect light from the Sun. The Moon looks a different shape at different times of the month. This is because it is reflecting different amounts of light to the Earth.' {CRDD 1985: 52}
It is easy to see how unrealistic it is to expect pupils who have not mastered the mechanics of reading and who are hardly able to read in English to understand texts of such complexity. In fact, the English language used in the science textbooks is sometimes beyond that of the teacher. Extract 20 shows some problems teachers face in using English as the language of instruction in science. A teacher observed teaching 'Excerpt (a)' above asked the pupils to ‘taste’ the texture of the soil, when what was meant was ‘feel’.

Extract 20: Teacher Problems with the Use of Foreign Language for Instruction

<table>
<thead>
<tr>
<th>Observed Lesson</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>56 Tr. : You start from right. Hum? This my right. This is what? This is clay. This is sand and this is loam. Hein?</td>
<td>56 Tr. : You start from right. Hum? This my right. This is what? This is clay. This is sand and this is loam. Hein?</td>
</tr>
<tr>
<td>57 Row 1 : Yes madam.</td>
<td>57 Row 1 : Yes madam.</td>
</tr>
<tr>
<td>58 Tr. : Or black soil. Now you can taste the texture** Fa wo nsa susom. So ne nyinua mu si tiree. Aha. Okay go and sit down.</td>
<td>58 Tr. : Or black soil. Now you can taste the texture** Use your hands to feel it. Feel all three to the end. Aha. Okay go and sit down.</td>
</tr>
</tbody>
</table>

It was after some children had actually tasted the soil that a vernacular version was given to clarify what was meant by ‘taste’. This suggests that code-switching may sometimes be motivated by competence in one of the languages. Extract 21 shows the teachers’ inability to adjust their language to that of their pupils. They talked like the textbooks and were unable to use appropriate words to match the pupils’ proficiency in English. Here we see how the teacher insists on the textbook lexical item instead of accepting the words used by the pupil.

Extract 21: Teachers’ Insistence on Textbook Lexical Items

| 175 Tr. : Good. When we used the torch, that's the torch, you call it reflected light. But when we use the ball we don't call it reflected light. What do we call it? Yes, we call it what? | 175 Tr. : Good. When we used the torch, that's the torch, you call it reflected light. But when we use the ball we don't call it reflected light. What do we call it? Yes, we call it what? |
| 176 Chd. : Come back. | 176 Chd. : Come back. |
| 177 Tr. : Hein? | 177 Tr. : Hein? |
| 179 Tr. : By the way it was thrown. How do we call it? | 179 Tr. : By the way it was thrown. How do we call it? |
| 181 Tr. : Reflected ball or we shall call it reflection. All of you reflection. | 181 Tr. : Reflected ball or we shall call it reflection. All of you reflection. |
| 182 Chn. : Reflection. | 182 Chn. : Reflection. |
| 183 Tr. : Or in short you say reflected. | 183 Tr. : Or in short you say reflected. |
| 184 Chn. : [Talking together]. | 184 Chn. : [Talking together]. |
| 185 Tr. : Reflected, all of you reflected. | 185 Tr. : Reflected, all of you reflected. |


Appendix 5 (44) p 416 Vol. 2.
Therefore, although the pattern was different for Year 3 as compared to that of Years 4 and 5, the motivations were the same.

5.2.5 Pattern of Language Use in English Subject Classes

Table 15: Pattern of Language Use in English Subject Classes

<table>
<thead>
<tr>
<th>Class</th>
<th>Aborofo</th>
<th>Makaranta</th>
<th>Zongo</th>
<th>Wa-Para</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 3</td>
<td>100:0</td>
<td>100:0</td>
<td>93:7</td>
<td>98:2</td>
<td>98:2</td>
</tr>
<tr>
<td>Year 4</td>
<td>99:1</td>
<td>99:1</td>
<td>94:6</td>
<td>86:14</td>
<td>94:6</td>
</tr>
<tr>
<td>Year 5</td>
<td>100:0</td>
<td>100:0</td>
<td>78:22</td>
<td>100:0</td>
<td>92:8</td>
</tr>
<tr>
<td>All Classes</td>
<td>100:0</td>
<td>100:0</td>
<td>86:14</td>
<td>96:4</td>
<td>95:5</td>
</tr>
</tbody>
</table>

Note: 1) **Bold Print** in the table shows amount of unofficial language
2) The first figure in each ratio shows the amount of English and the second is that of Twi (i.e. in Year 3 for Zongo the ratio of 93:7 means 93% English and 7% Twi)

The study shows that in all grades English is the main language of instruction for teaching English as a subject. Despite the clear dominance of English, as shown in Table 15, the use of Twi appears to increase rather than decrease in each successive year.

5.2.6 Reasons for the Pattern of Language Use in English Subject Classes

The pattern of language use may be attributed to the mismatch between the pupils’ proficiency in English and the English used in their textbooks and the increasing length of the units. The teachers, therefore, resort to the use of Twi (L1) not only to resolve learner difficulties in understanding English and to sustain the pupils’ interest but also so they can complete the syllabus. Resorting to Twi is also motivated by the teachers’ inability to reformulate the concepts in English at the appropriate level because some texts are too complex. For example, the text marked ‘Unit 9’, a sample from the Year 4 English textbook, shows quite a complex syntax and vocabulary.

**Unit 9**

‘My Grandfather’s Clock’

1. My grandfather’s clock was too large for the shelf,
   So it stood ninety years on the floor.
   It was taller by half than the old man himself
   Though it weighed not a penny more.
2. It was bought on the morn
Of the day that he was born
And was always his pleasure and pride,
But it stopped short, never to go again
When the old man died.

3. Ninety years without stumbling, tick, tock, tick, tock;
His life's seconds' numbering, tick, tock, tick, tock;
It stopped short, never to go again
When the old man died.' (Ministry of Education, Ghana 1986:38)

It is unrealistic to expect pupils who have been learning English in the classroom for only four years to comprehend it, especially when they can hardly read a stanza without a teacher's help. Under such difficult circumstances, teachers simply resort to the vernacular to help pupils to comprehend the text. Extract 22 below shows teachers' resort to concurrent translation to help pupils understand the text.

Extract 22: Concurrent Translation Method

<table>
<thead>
<tr>
<th>Observed lesson</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 Tr.: Okay. Today we are going to see the importance of water or the uses of water.</td>
<td>15 Tr.: Okay. Today we are going to see the importance of water or the uses of water.</td>
</tr>
<tr>
<td>16 Chn.: Uses of water.</td>
<td>16 Chn.: Uses of water.</td>
</tr>
<tr>
<td>17 Tr.: Again</td>
<td>17 Tr.: Again</td>
</tr>
<tr>
<td>18 Chn.: Uses of water.</td>
<td>18 Chn.: Uses of water.</td>
</tr>
<tr>
<td>19 Tr.: Okay, <em>eden kora na nsuo yebe tumi de ay</em>? What are some of the uses of water? Mhum. Yes what are some of the uses of water? Yes.</td>
<td>19 Tr.: Okay, What sort of things can we do with water? What are some of the uses of water? Mhum. Yes what are some of the uses of water? Yes.</td>
</tr>
</tbody>
</table>

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Extract 23 below shows that the teacher does not appear to be able to adjust the discourse in the pupils' textbook to the pupils' proficiency. Instead of producing a 'simplified' summary of the text, he re-states it without any change. The summary is given in Twi. Faced with the problem of being unable to adjust to the pupils' proficiency because of poor summary skills in English, or the pressure of time to complete the syllabus, teachers simply resort to the use of Twi.
<table>
<thead>
<tr>
<th>Observed Lesson</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>'126 Tr. : Okay, now that we have understood the meanings of these new words, we are coming back to our passage, but before we read, I want to summarise the whole thing before we start reading: The hunter went near them and asked, 'What do you want in this forest at this time of the night?' They did not speak. 'Don't you know that you mustn't be here at this time?' Dapaah said, 'Sir, we came to look for snails but we lost our way. Please help us.' The hunter asked them, 'Where do you come from?' Dapaah answered, 'Domeabra Sir.' The hunter asked them to follow him. Soon they came to a road. He pointed to the left and said, 'This is the road to Domeabra'. The boys thanked him and went home. Now, the other time we read and saw that the three boys could not find their way home.</td>
<td>'126 Tr. : Okay, now that we have understood the meanings of these new words, we are coming back to our passage, but before we read, I want to summarise the whole thing before we start reading: The hunter went near them and asked, 'What do you want in this forest at this time of the night?' They did not speak. 'Don't you know that you mustn't be here at this time?' Dapaah said, 'Sir, we came to look for snails but we lost our way. Please help us.' The hunter asked them, 'Where do you come from?' Dapaah answered, 'Domeabra Sir.' The hunter asked them to follow him. Soon they came to a road. He pointed to the left and said, 'This is the road to Domeabra'. The boys thanked him and went home. Now, the other time we read and saw that the three boys could not find their way home.</td>
</tr>
<tr>
<td>Ye kan ne ye no, ye hunu se, afei ye kɔ duru baabi no na mmee ɔn mmmee ɔn ɔ no aye dee ben? Na wɔ nom ayera. Wɔnɔ nom enu kwan. Nit ɔhɔ a zina kwan.</td>
<td>When we read the text, we learnt that, we stopped at a point where the three boys were what? Were lost and could not find their way but suddenly who?</td>
</tr>
</tbody>
</table>


Language alternation in English subject lessons might also be due to the level of difficulty and complexity of the texts used in learning English which increase in each successive year. The difficulty becomes more acute in the higher grades and increases the need to use more and more vernacular expressions to resolve learning difficulties.

In summary, language alternation in English subject lessons can be attributed to the increasing complexity and difficulty of learning English in the higher school grades, the mismatch between the level of English in the officially recommended textbooks, the pupils’ proficiency in English and the teachers’ inability to adjust their English to suit the pupils.
5.2.7 Pattern of Language Use in GL Subject Classes

Table 16: Pattern of Language Use in Twi Subject Classes

<table>
<thead>
<tr>
<th>Class</th>
<th>Abor Z\lo</th>
<th>Makaranta</th>
<th>Zongo</th>
<th>Wa-Para</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 3</td>
<td>2:98</td>
<td>3:97</td>
<td>1:99</td>
<td>5:95</td>
<td>2:98</td>
</tr>
<tr>
<td>Year 5</td>
<td>1:99</td>
<td>2:98</td>
<td>0:100</td>
<td>xxxx</td>
<td>1:99</td>
</tr>
<tr>
<td>All Classes</td>
<td>2:98</td>
<td>5:95</td>
<td>1:99</td>
<td>4:96</td>
<td>3:97</td>
</tr>
</tbody>
</table>

Note: 1) Bold Print shows amount of unofficial language
2) The first figure in each ratio shows the amount of English and the second is that of Twi (i.e. in Year 3 for Abor\lo the ratio of 2:98 means 2% English and 98% Twi)
3) See Appendix 15 for data on which the percentages are based
4) xxxx indicates no lesson was recorded

There was relatively little use of switching in GL classes. In Year 3 Twi lessons had relatively the same amount of switching as English (i.e. 2% English see table 15 mean figure for Year3). In Year 4 there is slightly more switches in GL as compared to English lessons (6% English). However, in Year 5 there was almost no switching. The rise in Year 4 may be due to the increased use of English ‘formulaic expressions’. Teachers switch into these expressions at grade 4 because by this level most children are familiar with classroom expressions in English.

Extract 24: Cultural borrowed Words and Formulaic Expressions

<table>
<thead>
<tr>
<th>Observed lesson</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 Tr.: Afei obiara nh\e bo\k no mu na nh\e \words no a m\a\we\e agu en blackboard no so na nh\e bo\k no mu. Words no w\e bo\k no mu. ani h\e bo\k no mu na h\e\e agu blackboard no so no se wo h\e\e mu na kan. Ye reb\e kenkan.</td>
<td>15 Tr.: Now, everyone look into the book and on the words written on the \e blackboard and look again into the book. The words are in the book. So look into the book and on those on the blackboard to enable you read what is in the book. We are going to read.</td>
</tr>
</tbody>
</table>

Appendix 5 (40) p 373 Vol. 2.

Switches may also be due to the use of technical words and cultural or core borrowed words (see Extract 24). The words ‘book’, ‘words’, and ‘blackboard’ are all cultural borrowed words which function as ‘formulaic’ classroom expressions.

Another reason for switches into English is that teachers usually try to introduce some English vocabulary in advance in GL lessons before they are met in English.
lessons. Teachers also make cross references to topics studied in English to help learners understand the same topics or concepts in GL (Twi) (See Extract 25).

**Extract: 25: Cross Reference to Similar Topics Studied in English**

<table>
<thead>
<tr>
<th>Observed lesson</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>357 Tr. Wahunu nea swɛhɔ no? Hwan na we xe ase? Nea wɛ xe ayehye anim hɛ no</td>
<td>357 Tr. Have you seen what is there? Who understands it? The tag there.</td>
</tr>
<tr>
<td>358 Chd. Wɛse Efa nɪm bɔbɔ. bɔ na nɪm ammirika tu nso. eye ampa ana eye atɔrɔ</td>
<td>358 Chd. It says Efa is good at both football and athletics. Is it true or false?</td>
</tr>
<tr>
<td>359 Tr. Mno. Wahunu se wɛ xe ampa amna wa sane asan, wa ye abaa bi amna wa ye atɔrɔ. Nea eyɛ a na ye ye bi true or false. ebi na wɛ xe abaa ha no. Na, na Asante, ne Twi nono. Wɛse ampa ana atɔrɔ Mhum, Chd “B”.</td>
<td>359 Tr. Good. You see it has true then a bar and then false. This is as we do in English true or false. It is the same thing that is done here. This is the Asante or Twi version. It says true or false. Mhum, Chd “B”.</td>
</tr>
<tr>
<td>360 Chd “B”: Ampa</td>
<td>360 Chd “B”: True</td>
</tr>
</tbody>
</table>


The above example illustrates a teacher’s use of cross-reference to similar topics or concepts already studied in English to explain the instructional content in GL lessons. When teachers use a new concept in a GL which has been studied earlier in English, they did not hesitate to show the relationship between the two by making a cross reference to the English version to help learners understand the new concept in GL. In Extract 25, the pupils had earlier learnt ‘true or false’ question types in English, so the teacher’s cross reference was enough to help the pupils to grasp the concept in the vernacular. The use of the reference saved lesson time and allowed the teacher to avoid long grammatical descriptions in the L1.

**5.2.8 Reasons for Patterns of Language Use in Ghanaian Language**

In Ghanaian language subject lessons there was very little switching or use of English because both teachers and pupils are Twi native speakers. Occasionally, teachers checked that their pupils knew English equivalents of Ghanaian words which are infrequently used or are over-shadowed by their more commonly used English equivalents (see Extract 26). Some teachers also introduce English lexical items in GL lesson before they are formally read in English lessons. Extract 26 shows the teachers’ switch to English to check that the pupils knew the English equivalents of the Ghanaian words.
In Extract 26, the teacher requested a translation into English to check understanding and the pupils' ability to relate the concept in Twi to English. The check proved useful since the first child showed the association was still poor. A second motivation has to do with the common usage of English numerals in the Ghanaian society as explained earlier.

Extract 27 below, illustrates the teachers' cross checking of pupils' understanding of overshadowed Ghanaian language words. For example, 'bank' was used to monitor the pupils' understanding of the local vocabulary 'sika kurabia', which is little used nowadays. The words 'doctor' and 'lawyer' are borrowed institutional terms which have overshadowed their local equivalents- 'dunsini' and 'twetwagyefo' respectively.

In summary, switches from Twi to English in GL lessons are motivated by a concern for vocabulary development before the change of language in Year 4. Teachers'
cross checking of over shadowed GL words, and the influence of the topic of the lesson are also important.

5.3 Patterns of Language Use Between Schools and Teachers

5.3.1 Patterns of Language Use: Variations Between Schools

Table 17: Language Use Between Schools

<table>
<thead>
<tr>
<th>School</th>
<th>English</th>
<th>Math's</th>
<th>Science</th>
<th>Gh. Lang.</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>AbonDfo Primary School</td>
<td>100: 0</td>
<td>100: 0</td>
<td>94: 6</td>
<td>2: 98</td>
<td>69:31</td>
</tr>
<tr>
<td>Makaranta Primary School</td>
<td>100: 0</td>
<td>99: 1</td>
<td>64:36</td>
<td>5: 95</td>
<td>65:35</td>
</tr>
<tr>
<td>Zongo Primary School</td>
<td>86:14</td>
<td>68:32</td>
<td>18:82</td>
<td>1: 99</td>
<td>36:64</td>
</tr>
<tr>
<td>Wa-Para Primary School</td>
<td>96: 4</td>
<td>90:10</td>
<td>60:40</td>
<td>4: 96</td>
<td>69:31</td>
</tr>
<tr>
<td>ALL Schools</td>
<td>95: 5</td>
<td>86:14</td>
<td>52:48</td>
<td>2: 98</td>
<td>58:42</td>
</tr>
</tbody>
</table>

1) See Appendix 15 for the frequency figure on which the percentages are based

The data in Table 17 show variation in the patterns of language use in individual schools. The data for all schools show more frequent use of English (58%). However, this overall result masks the realities in individual subjects. In GL subject classes almost no English is used (2%). In mathematics, English is mostly used (86%). There is, however, variation between schools - ranging from 100% use of English in AbonDfo school to 68% use of English in the Zongo primary. In science, unlike mathematics there is overall an almost equal use of Twi and English (52% English and 48% Twi). Again this obscures the variation between individual schools which range from 94% use of English in AbonDfo school to 18% in Zongo primary school. In the English subject the overall results show very little use of Twi (5%). There is, however, variation between the schools - ranging from the use of 100% English in both AbonDfo and Makaranta primary schools to 86% use of English in Zongo primary. The overall pattern of the frequency of the use of English and Twi was similar in all schools except Zongo, where the pattern showed a dominant use of Twi.

5.3.2 Reasons for Variation in the Pattern of Language Use Between Schools

The characteristics of the individual schools are discussed in 4.1.2 so we proceed to discuss reasons for variation in different schools. Variation in the patterns of language use may be attributed to the following reasons:
• the location and status of the school
• the school and the individual teacher’s own language policy
• the head teacher and staff’s attitude to English and Twi
• the pupils’ proficiency in English
• the official language policy for the subject and the grade

In Aborigo primary school the following factors seem to explain the more frequent use of English.

(i) The location and status of the school
(ii) the pupils’ proficiency in English
(iii) the schools’ own language policy

Judged by its examination results, the school is a good one. It is located in the centre of Kumasi, the largest city after the capital. The urban locality of the school, its history as an experimental school and its attraction to educated parents explain the frequent use of English. In addition, the head-teacher constantly reminded the teachers to use English regularly in class in order to improve the pupils’ proficiency. The teachers themselves also often insisted on the pupils’ use of English.

Although Zongo primary school is located like Aborigo in Kumasi, it has a poor official status because of poor results recorded by its junior secondary school sector. Unlike Aborigo primary, it is located in a suburb of the city where it attracts migrant working class pupils who scarcely come into contact with English outside the classroom. In such schools teachers rely heavily on switches between English and Twi to ensure an understanding of lesson content as well as to ensure pupils’ participation in classroom interactions. In an informal interview both the head-teacher and staff expressed the conviction that the only way the school could achieve some measure of success in improving their pupils’ English was to combine English with the vernacular. Yet another explanation for the limited use of English in Zongo primary is the pupil-book ratio. Although located in the city, the scarcity of textbooks for all subjects was found to be even worse than it was in the rural
schools. Only the class teacher had a copy of the relevant textbooks and most of the children had no exercise books let alone textbooks. All these factors, which are also true of other schools, except Aborz)fo combined to produce the frequent use of Twi.

In Makaranta primary school the reasons for the frequent use of English are similar to those discussed for Aborz)fo. However an additional reason in Makaranta is the teachers' poor knowledge of the requirement of the language policy. The teachers had an inadequate understanding of the policy requirement on language use in mathematics for Year 3 (see 5.3.4 for evidence).

The Wa Para Military primary school’s frequent use of English is partly due to the school’s status as a good rural school and its location in a large village where it shared the same compound with a senior secondary school in which English was regularly used between students. In addition to its status, the head-teacher (who also taught grade 3), had concern for the development of the pupils’ English proficiency to meet the requirements of language medium change in Year 4. As a result he ignored policy regulations and switched to English as often as he thought necessary. However, this was helped by the use of English textbooks for science and mathematics and the use of the same symbols for representing numerals in both Twi and English.

Therefore motivations for the frequent use of English in all schools include the topics taught, the use of Roman numerals for both English and Twi, Ghana’s monetary system being based on English and the combined use of English textbooks with Twi language for instruction. Other reasons include the attitude of the head-teacher and staff, the school’s own language policy and the misinterpretation of the language policy (see 5.3.4).

5.3.3 Variations in Language Use Between Urban and Rural Schools

The characteristics of the individual schools are discussed in 4.1.2 so we proceed to compare variations in urban and rural schools Table 18 below shows the pattern of language use for rural and urban schools.
The main features of the data are:

- The increase in use of English in rural schools
- The fall and rise pattern of the use of English in urban schools
- The overall dominant use of English in rural schools against equal use of both languages in urban schools

Table 18: Number of Words of English and Twi used by Urban and Rural schools

<table>
<thead>
<tr>
<th>Teacher Class</th>
<th>Schools</th>
<th>Eng.</th>
<th>Twi.</th>
<th>Total.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TA&amp;TG</td>
<td>3</td>
<td>Aborofo</td>
<td>48:52</td>
<td>9177</td>
</tr>
<tr>
<td>TB&amp;TH</td>
<td>4</td>
<td>&amp; Zongo</td>
<td>37:63</td>
<td>4844</td>
</tr>
<tr>
<td>TC&amp;TI</td>
<td>5</td>
<td>Schools</td>
<td>62:38</td>
<td>10718</td>
</tr>
<tr>
<td>Urban</td>
<td></td>
<td></td>
<td>50:50</td>
<td>24739</td>
</tr>
<tr>
<td>Rural</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TD&amp;TJ</td>
<td>3</td>
<td>Makaranta</td>
<td>56:44</td>
<td>9764</td>
</tr>
<tr>
<td>TE&amp;TK</td>
<td>4</td>
<td>&amp; Wa Para.</td>
<td>64:36</td>
<td>9806</td>
</tr>
<tr>
<td>TF&amp;TL</td>
<td>5</td>
<td>Schools</td>
<td>88:12</td>
<td>10351</td>
</tr>
<tr>
<td>Rural</td>
<td></td>
<td></td>
<td>67:33</td>
<td>29921</td>
</tr>
<tr>
<td>ALL TEACHERS</td>
<td></td>
<td></td>
<td>58:42</td>
<td>54660</td>
</tr>
</tbody>
</table>

Overall, there is equal use of Twi and English in urban schools against the dominant use of English in rural schools. This picture of an equal use of English and Twi in the urban schools might be misleading because Zongo has an unrestrained use of Twi (64%) while the Aborofo school had (31%) Twi (Table 17). Generally, there is an increasing use of English in successive years in rural schools as compared to urban schools where the data show a fall and rise pattern. The urban schools show a frequency of 52% use of Twi in Year 3 while that for the rural schools is 44%. In Year 4 the use of Twi increased in the urban schools to 63% but that for the rural schools dropped from 44% to 36%. In Year 5 the urban schools use of Twi dropped to 38% and that for the rural schools markedly dropped to 12%.

The increase use of Twi in urban schools is unexpected because if the teachers followed the language policy directive, the pattern of language use should show an increase in the use of English and a fall in the use of the vernacular. Instead of changing to greater emphasis on English, the change is in favour of the Ghanaian language, a trend contrary to policy directives. Explanations for this trend include the misinterpretation of the policy which led to the unrestricted use of the vernacular.
(see section 5.3.4) and the desire to resolve teaching and learning difficulties arising from the very low standard of some pupils in the target language in one of the urban schools (see 6.5).

5.3.4 Variation in The Patterns of Language Use Between Teachers

Table 19 shows the teachers’ frequency of the use of English and Twi by subjects.

Table 19. Percent Ratio of Teachers Use of English and Twi by Subjects

<table>
<thead>
<tr>
<th>Teacher</th>
<th>School</th>
<th>Local</th>
<th>Year</th>
<th>English</th>
<th>Math's</th>
<th>Science</th>
<th>Gh. Lang.</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Lower Primary Sector</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TA</td>
<td>Abonofo Urban</td>
<td>3</td>
<td>100:0</td>
<td>100:0</td>
<td>89:11</td>
<td>2:98</td>
<td>75:25</td>
<td></td>
</tr>
<tr>
<td>TD</td>
<td>Makaranta Rural</td>
<td>3</td>
<td>100:0</td>
<td>100:0</td>
<td>39:61</td>
<td>3:97</td>
<td>62:38</td>
<td></td>
</tr>
<tr>
<td>TJ</td>
<td>Wa-Para Rural 3</td>
<td>98:2</td>
<td>71:29</td>
<td>20:80</td>
<td>5:95</td>
<td>48:52</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Upper Primary Sector</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TB</td>
<td>Abonofo Urban</td>
<td>4</td>
<td>99:1</td>
<td>xxxx</td>
<td>xxxx</td>
<td>2:98</td>
<td>41:59</td>
<td></td>
</tr>
<tr>
<td>TE</td>
<td>Makaranta Rural</td>
<td>4</td>
<td>99:1</td>
<td>100:0</td>
<td>93:7</td>
<td>10:90</td>
<td>70:30</td>
<td></td>
</tr>
<tr>
<td>TH</td>
<td>Zongo Urban 4</td>
<td>94:6</td>
<td>87:13</td>
<td>7:93</td>
<td>1:99</td>
<td>36:64</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TK</td>
<td>Wa-Para Rural 4</td>
<td>86:14</td>
<td>99:1</td>
<td>60:40</td>
<td>3:97</td>
<td>58:42</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TC</td>
<td>Abonofo Urban 5</td>
<td>100:0</td>
<td>100:0</td>
<td>99:1</td>
<td>1:99</td>
<td>74:26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TF</td>
<td>Makaranta Rural 5</td>
<td>100:0</td>
<td>98:2</td>
<td>61:39</td>
<td>2:98</td>
<td>64:36</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TI</td>
<td>Zongo Urban 5</td>
<td>78:22</td>
<td>79:21</td>
<td>46:54</td>
<td>0:100</td>
<td>50:50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TL</td>
<td>Wa-Para Rural 5</td>
<td>100:0</td>
<td>100:0</td>
<td>100:0</td>
<td>xxxx</td>
<td>100:0</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ALL TEACHERS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>95:5</td>
<td>86:14</td>
<td>52:48</td>
<td>2:98</td>
<td>58:42</td>
</tr>
</tbody>
</table>

Note: 1) The first figure in each ratio shows the amount of English and the second is that of Twi (e.g. in English subject for Year 3, TA’s ratio of 100:0 means 100% English and 0% Twi).
2) The bold print shows the amount of unofficial language use.
3) xxxx indicates no lesson was recorded.
4) See Appendix 15 for the frequency figures on which these percentages are based.

The results show teachers mostly used English in all subjects except in GL subject and science lessons in Year 3. For both English and GL lessons the predominant language of instruction is English and GL respectively. For the content subjects of mathematics and science the data show greater use of Twi in science lessons against the background of a generally dominant use of English in mathematics, both in the lower and the upper primary schools. It also shows that all teachers used both English and Twi in their lessons. In other words ‘language alternation’ was common to all teachers. Although the data show variation in language use patterns between teachers and subjects the main features of interest, in the lower primary school, are the predominant use of English in mathematics and Twi in science in Year 3. A
similar pattern of language use is observed at the upper primary school where the main features of interest are TL’s unusual use of English in all lessons, the high frequency of the use of Twi in Zongo primary school and the high frequency of the use of English in Makaranta primary school. The overall use of English by most teachers was high - with two-thirds of the teachers using English regularly. Of the eight content lessons taught at the LPS, only two were predominantly taught in the official language of Twi. Of the remaining six, two were exclusively taught in English and the rest in mixed language.

Similarly, in the upper primary school, of the fourteen lessons taught, four were exclusively taught in English, the rest were taught mainly through English but with some use of Twi. An unexpected observation in the data is TL’s exclusive use of English in all lessons. Although his school’s status as a good rural school led to an expected frequent use of English, its rural location, and the experience with the three other schools predicted a combined use of both languages. His pattern of language use can be explained by his personal teaching style. In a post observation interview, it emerged that individual teacher’s own language preferences also influenced their selection of classroom language. Eleven of the twelve teachers involved in the study felt their pupils’ language competence in English influenced the relative amounts of Twi they used in their lessons. However, TL felt otherwise and expressed a strong opinion in favour of the use of English.

Another reason that appeared during the interview was the influence of the older members of staff. Teacher ‘TI’ explained that the head-teacher and older members of staff encouraged her to code-switch to ensure comprehension and encourage the pupils’ participation. She also added that she gave up her all-English approach because of the attitude of the pupils. She explained that once English only was in operation the pupils fell silent and most would simply not talk, no matter how she tried to encourage them. Apart from complaining to the head that she used too much English, which the pupils did not understand, they often shied away from her outside class. In her own words: “Wo taa ka boro fo kyere wom ara na wom
dwanedwane wo°. [When you speak English often to them they avoid getting closer to you]. So to encourage participation in classroom interaction she had to combine English with the L1.

Another intriguing feature of the data in Table 19 is the pattern of language use in Zongo primary school. Contrary to expectation, the pattern is very different from that of the other schools. Although frequent use of English was expected in the school, because of its urban location, the low level was not altogether unexpected in view of the school’s poor status. The infrequent use of English may be explained in terms of the teachers’ attitude, training and experience, pupils’ needs, and the teachers’ views about language learning. Others are the general misinterpretation of the language policy, and the school inspectors’ advice on classroom language use. In a post observation interview, the teachers said the pupils’ proficiency in English contributed to their frequent use of L1. Although they maintained that the combined use of English and Twi was educationally beneficial to their pupils, they still felt that with higher ability groups more English could be used. However, their belief in the appropriateness of the use of the local language alongside English was not based on theory but was based purely on experience.

Teachers in Zongo primary school were generally aware of the policy guidelines and taught their lessons mostly in the recommended language. Although they explained their language use by referring to the policy guidelines in a post observation interview, their general interpretation of the policy is questionable. TG taught mathematics, science and Ghanaian language mostly in Twi because it was the designated official language for the lessons in Year 3. This teacher used a lot of English because he had an English mathematics textbook. TH taught mathematics predominantly in English but with some switches into Twi because, like most teachers, he assumed the policy conceded a gradual change of language in Year 4. However, he used 93% Twi in science, suggesting that he might have misunderstood the policy on language of instruction. TI who used both languages equally in the same school taught Ghanaian language entirely in Twi but alternated between English and Twi for English, mathematics and science. TI’s pattern may be
explained by her inexperience and imitation of more experienced teachers. She attributed her level of the use of Twi in science and other subjects to her pupils’ low English language proficiency and to the encouragement of the head-teacher and the more experienced teachers. This teacher was in her first year of teaching compared to the other teachers who were over 50 years old and all had similar qualifications and teaching experience of between 21 and 25 years. They did their teacher training at a period when the national education policy encouraged the use of mother tongue education.

In Table 19 the data also show an unusual use of English for Makaranta Borfo primary school, a low status poor rural school, where one might expect greater use of Twi, but which shows a class by class proportion comparable to that of Aborfo, the good urban school. The reasons for Makaranta’s frequent use of English include the poor interpretation of the language policy, pupils’ needs, and the head-teacher and staff’s attitude to English. One explanation for this was the transfer of the head and some teachers during the period when the school obtained poor results and the arrival of a new head-teacher with two new members of staff soon after. TD appears to have misinterpreted the policy guidelines. He taught English language in English in Year 3 but taught mathematics, a subject to be taught in the local language, entirely in English because of his positive attitude to English and because he felt that the knowledge of English was essential for the school, the parents and the community.

Although English textbooks were used for teaching both mathematics and science, the teacher considered mathematics to be an English taught subject because the use of English numerals was common in the community and lottery companies facilitated a discussion of numerals in English. However, he regarded science as a Twi language subject because of the technical and scientific vocabulary which needed explanation in the local language. He used local examples to help the pupils to understand the relevant concepts. To a large extent, this encouraged the combined use of Twi and English in science. The same reason explains TF, TH, TI and TK’s pattern of language use in science. For example, in Extract 28. below TD simply did not know how to express ‘condense’ in Twi because it has no corresponding
equivalent. The teacher makes it clear that the concept of ‘condense’ is foreign and he does not know how to say it in Twi (i.e. in exchange 227 ‘So there is something called ‘condense’ and in exchanges 235 and 237 ‘So that condense’).

Extract 28: Untranslatable Foreign Technical Vocabulary

<table>
<thead>
<tr>
<th>Observed lesson</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>227 Tr.: Se ye noa nsuo na so ye kataa so a, nsuo no a ebe tuo no, ya yefe no gas no. Adee yede akata so no wo be: hunu so na ne nyinaa aba ades: no so. Na ye kia bira bi condense. Condense all of you.</td>
<td>227 Tr.: When we boil the water and we cover it, the water vapour that rises which we called gas, the cover we have used, you will see that it collects on it. So there is something called condense. Condense all of you</td>
</tr>
<tr>
<td>228 Chn.: Condense.</td>
<td>228 Chn.: Condense.</td>
</tr>
<tr>
<td>229 Tr.:</td>
<td>Condense.</td>
</tr>
<tr>
<td>230 Chn.: Condense.</td>
<td>230 Chn.: Condense.</td>
</tr>
<tr>
<td>231 Tr.: Condense.</td>
<td>231 Tr.: Condense.</td>
</tr>
<tr>
<td>232 Chn.: Condense.</td>
<td>232 Chn.: Condense.</td>
</tr>
<tr>
<td>233 Tr.: Okay eh</td>
<td>233 Tr.: Okay eh</td>
</tr>
<tr>
<td>234 Chn.: [Talking together].</td>
<td>234 Chn.: [Talking together].</td>
</tr>
<tr>
<td>235 Tr.: Na condense no</td>
<td>235 Tr.: So that condense</td>
</tr>
<tr>
<td>236 Chn.: [Talking together]</td>
<td>236 Chn.: [Talking together]</td>
</tr>
<tr>
<td>237 Tr.: Na condense no, se ye kase condense a. keep quiet.....</td>
<td>237 Tr.: So that condense, if we say condense then, keep quiet.....</td>
</tr>
</tbody>
</table>

Appendix 5 (14) Year 3 science p 151 Vol. 2.

TE, a Year 4 teacher in the same school as TD, simply understood the policy to mean a complete ban on the use of the vernacular and made every effort to avoid Twi, though she failed to do so. This explains her 99% English in English language, 100% English for mathematics, and 93% English for science. She was also perhaps scared that the researcher might be an official of the Ministry of Education and was therefore cautious.

TK felt the pupils’ ability in English was an obstacle to its effective use as the sole language of instruction while TL, in the same school was simply hostile to the use of Twi as the language of instruction. He did not see any value in the local language. TJ ‘s pragmatic concern for his pupils’ needs is a good example of idiosyncratic language use. Concerned about his pupils’ poor knowledge of English and the need for a transition to English in Year 4, he ignored policy recommendations and used his personal judgement to alternate between Twi and English in class because he felt it was the most realistic approach to helping the pupils to acquire English. This seems commendable because teachers need flexibility in the classroom use of
language not only for overcoming the difficulties of teaching and learning as they arise, but also for an effective and meaningful education which will be beneficial to the students.

5.4 Language Alternations: Frequency, Direction and Functions

This section presents the results of the study of classroom language use in Ghanaian primary schools at the micro level. This deals with 'language alternation' which at the beginning of the chapter was defined as a cover which embraced 'code-mixing', 'borrowing', and 'code-switching' after Myers-Scotton 1992. This micro analysis of 'language alternation' is divided into quantitative and qualitative analysis as described in 4.3.5. The results are presented by schools, subjects, and grades showing the frequency and direction of switches. In addition reasons for the switches are discussed. The unit of analysis for counting switches from one language to the other is the 'speech event' or 'speaker turns'. The number of switches is obtained by adding together the number of speaker turns containing utterances from both languages, and speech events in the embedded language (See sect. 4.3.4 for details).

5.4.1 Quantitative Analysis: Frequency and Direction of Code-Switching by School Grades

In this section, the study presents the results of code-switching by grade (i.e. the lower primary school, here after abbreviated as LPS and the upper primary school, henceforth abbreviated as UPS). The percentages in Figures 3 to 9 in sections 5.4.1 to 5.4.7 are based on the raw data in Appendix 19. Figure 3 below shows the frequency and direction of code-switching by grade.

The main issues in Figure 3 are:

- the higher frequency of Twi into English switches in Year 3 and the reverse in Years 4 and 5
- decreasing frequency of switches as the grade increases
- the overall difference between two Year group (4 and 5) and Year 3
• the overall greater frequency of switches from Twi into English (i.e. L1→L2).

Figure 3: Frequency and Direction of Code-Switching by Grades

The overall switch pattern in Figure 3 shows a greater frequency of switches from Twi into English (L1→L2) than switches from English into Twi (L2→L1). There was a total of 62% L1→L2 switches (i.e. 41.9% in Year 3, 10.9% in Year 4 and 9.4% in Year 5) against the background of 38% switches from English into Twi (L2→L1) which is made up of 8% in Year 3, 14% in Year 4 and 15.8% in Year 5.

The code-switching frequency for school grades showed a difference between two grades (i.e. Years 4 and 5 with 24.9% and 25.2% respectively) and Year 3 with 49.9% switches, a pattern suggesting decreasing use of switches in higher school years. The high frequency of Twi→English switches in Year 3 is partly due to Twi being the official language for the grade at the time of the study so that most teachers who taught at that grade used it as the matrix language. Motivations for teacher switches into English include the need to develop the pupils’ vocabulary in preparation for the change in Year 4. Other explanations for switches into L2 are the subject and its topic and the unavoidable use of cultural borrowed words especially in science and mathematics. (See sect. 5.2.7 Extract 24, Sect. 5.2.8 Extract 27, and Sect. 5.3.4 Extract 28 for examples and explanations).

The information in Figure 3 also shows a decreasing frequency of switches from Twi into English (L1→L2) as the grade increases. As the official language at the higher
grades is English, it is realistic to expect more switches from English into Twi. The few switches from Twi into English in this grade were due to some teachers’ disregarding the policy and teaching some English language subjects in Twi because of their pupils’ low proficiency in English. However, for switches from English into Twi (L2→L1) the evidence shows an increasing frequency in each successive year. Again the change of language in Year 4 is one explanation for the pattern while the other is the increasing difficulty of learning English in successive grades (See section 5.2.2. and 5.2.4).

5.4.2 The Frequency and Direction of Code-Switching by Subjects

Figure 4 shows the frequency and direction of code-switching by subjects.

Two patterns of code-switching emerged. Firstly, in English and Ghanaian language subjects there was one-direction of switch but in mathematics and science switches were in both directions. This was because some teachers began their lessons with English as the matrix language, but as the lesson developed, they switched to the L1 matrix language (see sect. 4.3.4). Superimposed on these two patterns is a three way grouping. Firstly, in English lessons there were fewer switches (12%) compared to Ghanaian language and mathematics in which there was almost equal code-switching (i.e. 21% and 22% respectively). The pattern of switch in mathematics differed from that of Ghanaian language in terms of the dual direction of switches, with 10% L1 → L2 and 12% L2 → L1. There was, however considerable use of
code-switching in science (45%). The pattern for science was similar to that for mathematics. It showed 31% switches in the \( L_1 \rightarrow L_2 \) and 14% \( L_2 \rightarrow L_1 \). The reasons for the switches are not different from those explained for the patterns of language use for the different subjects (see Sections 5.2.2, 5.2.4, 5.2.6, and 5.2.8).

5.4.3 The Frequency and Direction of Code-Switching in Mathematics by Grades

Figure 5 shows the frequency and direction of code-switching in mathematics by grades.

Figure 5: Frequency and Direction of Code-Switching in Mathematics by Grades

The results for mathematics show more frequent use of code-switching in Year 3 than in Years 4 and 5 together. Most switches in mathematics were in Year 3 and the direction of switch shows 16% \( L_2 \rightarrow L_1 \) and 46% \( L_1 \rightarrow L_2 \). However, there were fewer switches in Years 4 and 5, all in the direction of \( L_2 \rightarrow L_1 \), suggesting a change in the language of instruction. The main explanation for the frequent switches in mathematics in Year 3 in \( L_1 \rightarrow L_2 \) direction is that the teachers taught the lesson mostly in GL. Other motivations include the use of the same numerals for English and Twi, the teachers' poor knowledge of the requirements of the language policy, the pupils' poor proficiency in English, and the use of an English textbook (see 5.2.1 for discussions).
5.4.4 The Frequency and Direction of Code-switching in Science by Grades

Figure 6 Frequency and Direction of Code-Switching in Science by Grades

<table>
<thead>
<tr>
<th>Grade</th>
<th>Frequency</th>
<th>Direction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yr. 5</td>
<td>15%</td>
<td>L1-L2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>L2-L1</td>
</tr>
<tr>
<td>Yr. 4</td>
<td>L2-L1</td>
<td>14%</td>
</tr>
<tr>
<td>Yr. 3</td>
<td>L1-L2</td>
<td>9%</td>
</tr>
<tr>
<td></td>
<td>L1-L2</td>
<td>21%</td>
</tr>
</tbody>
</table>

Figure 6 presents the frequency and direction of the use of code-switching in science by grades. It shows a greater frequency of code-switching in Year 3 and similar patterns of switches for both Years 4 and 5. There were also more L2 → L1 switches than L1 to L2 switches (i.e. a total of 45% L1 → L2 and 55% L2 → L1 switches). Of the total switches in science, Year 3 alone had 53%, with 21% in the L1 → L2 direction and 32% L2 → L1. In Years 4 and 5 there was a total of 23% and 24% switches respectively. The reasons for the frequent use of switches in science have already been discussed in 5.2.2 in relation to the patterns of language use in science. Here we simply restate the main points which include the pupils’ low proficiency in English and the teachers’ lack of resources in English to reformulate ideas. In addition there is the pressure to complete the syllabus, and the increased difficulty and complexity of English language in successive grades. Others are the use of borrowed words and formulaic expressions.

5.4.5 The Frequency and Direction of Code-Switching in English by Grades

Figure 7 shows the frequency and direction of code-switching in English lessons by grades. Generally there are very few switches in English compared to science and mathematics. The data show an increased use of code-switching in successive years.
In Year 3 there were few switches (7%). In Year 4 there were more switches (48%) and in Year 5 teachers still relied on the use of switches (45%). The generally low frequency of switches in English can be accounted for by the English language teaching methodology and the strong emphasis on the use of English during the teachers’ initial training. Other important factors are the official support for English and the availability of textbooks and other teaching material for English.

Initial primary school teacher training programmes emphasise the use of English and English language teaching methodology. English is taught as a subject and also used for instruction in all subjects except Ghanaian language in the teacher training colleges. It is also defined as a core curriculum subject and given a greater time-table allocation of five hours a week as a subject in the first two years. In the 3rd year it has ten periods a week. Ghanaian Language by comparison has only two hours a week for only two years and it is also defined as a non-core subject. As a core subject English is compulsory and examined both as an internal subject in the schools and as an external subject by an examining body at the end of the three years of the initial teacher training programme. As a result teachers acquire a lot of skills in English language teaching to enable them to teach with as little recourse as possible to switches into other languages. This partly explains the infrequent switches in English subject classes. Another explanation for this is that there is greater official support for English language teaching than that for other subjects. The Ministry of Education supports and funds regular in-service training.
programmes for primary school teachers in English. It also provides more teaching material such as textbooks and supplementary readers for English far and above that given for other subjects. School inspectors are much more concerned about English language teaching methodology in primary schools than they are about other subjects especially GL. The official position on the use of English in English lessons is expressed in this quotation from the syllabus for primary schools in Ghana.

"Teachers using this syllabus are urged to teach English with as little recourse as possible to any language other than English, and to reduce to a minimum translation into the indigenous language. In this way a learner can be taken more quickly to the stage where he becomes bilingual in his use of English and the mother tongue. Examples abound in Ghana of the bilingual use of English and an indigenous language by people who have learnt their language by a method not based on translation" (Curriculum Research and Development Division Ghana Education Service 1992:5).

Therefore, the infrequent use of switches in English is a reflection of the official attitude on the use of L1 in English lessons.

5.4.6 The Frequency and Direction of Code-Switching in Ghanaian Language

Figure 8: Frequency and Direction of Code-Switching in Ghanaian Language by Grades

The frequency of switches in GL was comparable to that for mathematics. Like mathematics there was a regular use of switches in Year 3 (54%) compared to 62% in mathematics. In Year 4 it fell to 32% and it decreased further to 14% in Year 5. The frequent use of code-switching (i.e. Twi into English switches) in Year 3 is partly due to Twi being the official language for Year 3. As the official language, most teachers who taught at that grade used it as the matrix language. Motivations
for the teachers switches into English are similar to the reasons for the patterns of language use which were discussed in 5.2.5. Here we restate the main points which include the need to develop the pupils’ vocabulary in preparation for the language change in Year 4, the unconscious use of core borrowed English words, the topic, and the use of formulaic classroom English expressions were also important. Explanations in Years 4 and 5 include teachers’ checking the pupils’ ability to relate the same concept in the two languages, and teachers’ cross referencing to facilitate understanding (see 5.2.8 for details).

5.4.7 Variation in Frequency and Direction of Code-Switching by Schools

Figure 9: Frequency and Direction of Code-Switching by Schools

Figure 9 presents the overall frequency and direction of code-switching in individual schools. Noteworthy features of the data include:

- the high frequency of switches in Zongo school
- the more or less equal frequency of switches in both directions in Wa-Para school

The Zongo school’s distinctive switch pattern makes a rural-urban comparison unproductive because its greater switch frequency biases the results in favour of urban schools. However, there was a distinct pattern of switching between good schools on the one hand and poor schools on the other, whether they are in an urban or rural locality. The good schools used relatively fewer switches than the poor ones. The good urban school contributed fewer switches than the rural good school.
The poor urban school contributed fewer switches than the poor rural school. The good schools also contributed less to L2→L1 switches. The poor schools depended more on the use of L1 than the good schools. In the Zongo school the teachers expressed the view that since the pupils’ standard was so low, the only way they could be helped to understand was through the L1. In Makaranta school, however, the use of L1 was necessary to back up the L2 but they felt able to use more of the L2 than the Zongo teachers (see section 5.2.3 for teachers attitude to English). These findings seem to suggest that switching is an appropriate strategy for use in rural schools.

5.5 Variation in Frequency and Direction of Language Alternation by Teachers

Table 20: Variation in Frequency and Direction of Code-Switching by Teachers

<table>
<thead>
<tr>
<th>Teacher</th>
<th>Year</th>
<th>English</th>
<th>Mathematics</th>
<th>Science</th>
<th>GL</th>
<th>TOTALS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>L2-L1</td>
<td>L1-L2</td>
<td>L2-L1</td>
<td>L1-L2</td>
<td>L2-L1</td>
</tr>
<tr>
<td>TA</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td>TB</td>
<td>4</td>
<td>3 xxx</td>
<td>xxx</td>
<td>xxx</td>
<td>xxxx</td>
<td>32</td>
</tr>
<tr>
<td>TC</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>TD</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>103</td>
</tr>
<tr>
<td>TE</td>
<td>4</td>
<td>3</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>TF</td>
<td>5</td>
<td>1</td>
<td>0</td>
<td>6</td>
<td>0</td>
<td>26</td>
</tr>
<tr>
<td>TG</td>
<td>3</td>
<td>4 110</td>
<td>0</td>
<td>0</td>
<td>39</td>
<td>11</td>
</tr>
<tr>
<td>TH</td>
<td>4</td>
<td>24</td>
<td>0</td>
<td>16</td>
<td>44</td>
<td>2</td>
</tr>
<tr>
<td>TI</td>
<td>5</td>
<td>60</td>
<td>0</td>
<td>61</td>
<td>72</td>
<td>11</td>
</tr>
<tr>
<td>TJ</td>
<td>3</td>
<td>6 33</td>
<td>0</td>
<td>96</td>
<td>0</td>
<td>96</td>
</tr>
<tr>
<td>TK</td>
<td>4</td>
<td>34</td>
<td>0</td>
<td>4</td>
<td>57</td>
<td>24</td>
</tr>
<tr>
<td>TL</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Totals</td>
<td></td>
<td>135</td>
<td>110</td>
<td>125</td>
<td>219</td>
<td>265</td>
</tr>
</tbody>
</table>

1. Bold Print shows frequency of L1→L2 switches and the Normal Print shows L2→L1 switches
2. xxx shows there was no lesson recorded for the teacher in that subject

The data in Table 20 show the switches of individual teachers. Teacher TI had the highest frequency of 208 switches made up of 131 in L2→L1 direction and 77 in L1→L2 direction. This was followed by TD with a total of 182 but with most switches in the L1→L2 direction (i.e. 18 for L2→L1 and 164 for L1→L2 direction). TL can be considered as not contributing to the number of switches because he switched only once. This makes TC the lowest contributor with a total of 21. TB, TD, and TG switch more when the base language is Twi. TJ and TK switch
more when the base language is English. This suggests that their English language proficiency might be weak. TD’s switches can be explained by the rural location of the school, the school grade he taught, and preparing the pupils for a change of language in Year 4. TC’s few alternations can be attributed to his school’s language policy of English in all subjects other than Ghanaian language (see section 5.2.2. for details of Aborço school’s own language practice). The other explanation is the official language for the school grade the teacher taught (i.e. Year 5 has English as the official medium). In addition the location of the school in the heart of Kumasi, as well as the parental background of the pupils the school attracted, all contributed to TC’s low frequency of switches. TL’s pattern of language use is simply explained by the teacher’s personal teaching style (see section 5.2.2. for reasons).

TI’s high switch frequency can be attributed both to her pupils’ needs and to her poor concurrent translation methodology (see Extract 22).

Therefore, the teachers’ motivations for language alternation can be attributed to:

- teachers’ personal teaching style
- location of the school
- the language of instruction policy for the school grade taught
- learner needs
- concern for medium change in Year 4
- school’s own language policy practice
- teachers’ poor teaching methods

5.6 Results and Discussion of Language Alternation Functions by Subjects and Grades

5.6.1 Language Alternation Functions by Subjects

This section presents the qualitative analysis of ‘language alternation’ at the micro level as described in 4.3.5 by subjects. The discussion illustrates the various types by showing examples from the teachers’ lesson transcripts. Brief definitions of the categories used in the discussions are also given. The categories have been
abbreviated as follows; ‘SUB’ stands for substitution, ‘MAN’ for management, ‘CON’ for content, ‘EXP’ for explanation, ‘ACK’ for acknowledgement, ‘QUE’ for question, ‘RFA’ for request for action, ‘FEP’ for formulaic expression, ‘TRN’ for translation, and ‘DIR’ for directive. For a complete list of the definitions of these categories see section 4.3.6. and for details of the 35 categories see Appendix 7. Language alternation in this context is used as a cover term for ‘code-mixing’, ‘borrowing’ and ‘code-switching’.

5.6.2 The Frequency of Language Alternation Functions in Mathematics

Table 21 shows the frequency of code-switching functions for mathematics by grades. The overall findings for mathematics show language alternation was common for all grades of the primary school and the distribution occurs evenly in both directions and between functions.

Table 21: Frequency of code-switching Functions in Mathematics

<table>
<thead>
<tr>
<th>Year</th>
<th>SUB</th>
<th>MAN</th>
<th>CON</th>
<th>EXP</th>
<th>ACK</th>
<th>QUE</th>
<th>RFA</th>
<th>FEP</th>
<th>TRN</th>
<th>DIR</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>1.1-1.2</td>
<td>79</td>
<td>15</td>
<td>23</td>
<td>33</td>
<td>50</td>
<td>67</td>
<td>12</td>
<td>12</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>1.2-1.1</td>
<td>45</td>
<td>21</td>
<td>23</td>
<td>29</td>
<td>16</td>
<td>19</td>
<td>10</td>
<td>17</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>124</td>
<td>36</td>
<td>46</td>
<td>62</td>
<td>66</td>
<td>86</td>
<td>22</td>
<td>29</td>
<td>10</td>
<td>15</td>
<td>496</td>
</tr>
<tr>
<td>4</td>
<td>1.1-1.2</td>
<td>9</td>
<td>4</td>
<td>0</td>
<td>10</td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>1.2-1.1</td>
<td>1</td>
<td>4</td>
<td>0</td>
<td>0</td>
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<td>2</td>
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<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>10</td>
<td>8</td>
<td>0</td>
<td>10</td>
<td>5</td>
<td>7</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>45</td>
</tr>
<tr>
<td>5</td>
<td>1.1-1.2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>1.2-1.1</td>
<td>36</td>
<td>25</td>
<td>5</td>
<td>12</td>
<td>10</td>
<td>23</td>
<td>7</td>
<td>0</td>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>Total</td>
<td>1.1-1.2</td>
<td>88</td>
<td>19</td>
<td>23</td>
<td>43</td>
<td>55</td>
<td>72</td>
<td>12</td>
<td>12</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>1.2-1.1</td>
<td>82</td>
<td>50</td>
<td>26</td>
<td>41</td>
<td>26</td>
<td>44</td>
<td>19</td>
<td>17</td>
<td>2</td>
<td>21</td>
</tr>
<tr>
<td>Total</td>
<td>170</td>
<td>69</td>
<td>51</td>
<td>84</td>
<td>81</td>
<td>116</td>
<td>31</td>
<td>29</td>
<td>12</td>
<td>29</td>
<td>672</td>
</tr>
</tbody>
</table>

The data also show more alternations in Year 3 than in Years 4 and 5 together. For example, Year 3 recorded a total of 496 functions, Year 4 had a total of 45 and Year 5 had 131. ‘Substitution’ is the overall most frequently used function for all grades and for both L1 → L2 and L2 → L1 switches. Two other switching functions which are also frequently used in mathematics are ‘questions’ and ‘explanations’. In Year 3, L1 to L2 switches were more frequent than L2 to L1 switches. This is compatible with the use of GL as the official language for instruction. Other functions frequently used in Year 3 are ‘questions’ and ‘acknowledgement’. In Year 4 ‘explanation' and
'management' follow 'substitutions', but in Year 5 'management' and 'questions' follow 'substitutions'. The results for Year 4 show a considerable reduction in the number of alternations in both directions, but with L1 to L2 alternations still being more frequent. The dominance of L1 to L2 alternations suggests that the change in language of instruction has not been used in Year 4 and that teachers were still using mainly GL. The few instances of alternation of L2 to L1 in Year 4 function mostly as 'management devices' while those for L1 to L2 function mostly as 'explanation' and 'substitutions'. In Year 5, there is a marked increase in the frequency of alternation compared to the frequency in Year 4. However, they are all in the direction of L2 to L1, indicating the change in the language of instruction.

5.6.3 Illustrations of Code-Switching Functions in Mathematics

'Substitution' Switch Function in Mathematics

'Substitutions' involve the insertion of isolated borrowed cultural and core words as embedded foreign words in the Twi or English matrix language. The borrowed cultural words involve the use of words or expressions that stand for objects or concepts new to the matrix language's culture and are motivated by the lack of equivalent expressions in the matrix language. The borrowed core words involve the replacement of the words in the matrix language with one foreign to it (Myers-Scotton 1993). The reasons for this include the monitoring of local words that are often replaced by commonly used English equivalents; the use of commonly used English words in place of local equivalents to facilitate comprehension, and the use of local examples for illustrative purposes when the language of instruction is

Extract 29: L1 to L2 Substitution Function in Mathematics

<table>
<thead>
<tr>
<th>Observed Lesson</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>138 Tr. : Wzxse sə seven. One, two, three, four, five, six, seven. Se wahu. Wei hwee anum. Nii wode de hwee anum ye de baka wei sei ho a, ne mmeinu ye adaka mmeinu nanso ye nya seven swom. Seven, Rebecca wote ase?</td>
<td>138 Tr. : This is seven. One, two, three, four, five, six, seven. You see. This is in front of it. So you add what is inside it to this one. The two are two boxes but we have a total of seven between them. Seven. Rebecca do you understand?</td>
</tr>
</tbody>
</table>

English. Extract 29 shows code-switching to L1 functioning as ‘substitution’. The words ‘one, two, three, four, five, six, and seven’ are borrowed words which have been substituted for the GL words ‘baako, mmcinu, mmicnsa, enan, enum, nsia, and nson’. The English words could have been regarded as GL if the teacher had consistently used them on their own. However, this was not so because the teacher used both English and Twi words for numerals in the same lesson and thus demonstrated that he regarded them as belonging to separate languages.

‘Question’ Switch Function in Mathematics

It was noted earlier that Years 3 and 5 show ‘question function’ as one of the dominant functions. These switches are usually utterances that ask for information.

Extract 30: Code-Switching as Direct Question

<table>
<thead>
<tr>
<th>Observed lesson</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alfred : 1, 2, 3.</td>
<td>Alfred : 1, 2, 3.</td>
</tr>
<tr>
<td>64 Tr.: Gyina hɔ, Eunuch, wɔ hye ase no wɔ start te efiiri he?</td>
<td>64 Tr.: Stop there. When Eunuch started where did he start from?</td>
</tr>
</tbody>
</table>

Appendix 5 (32) Year 5 Mathematics p 303 Vol. 2.

They are often used because the teacher intends to involve the pupils or monitor their progress. In this way, they serve as feedback techniques for eliciting knowledge of the subject matter presented either immediately before the question or earlier. In Extract 30, Event 64 is an example (i.e. ‘Where did Eunuch start from?’) is itself self-explanatory and it is used not only for the purpose of acquiring information but also to guide the pupils’ progress.

‘Management’ Switch Function in Mathematics

The ‘management’ function is the teacher’s strategy for making a temporary shift away from the pedagogical frame to focus attention, to make an aside, or to prompt the pupils. Consider ‘Alright’ in the following example (Extract 31), which acts as a
boundary marker as well a focusing device and was used to prompt the pupils to participate in a classroom interaction.

Extract 31: Code-Switching as Prompt

<table>
<thead>
<tr>
<th>Observed Lesson</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>31 Tr. : Alright, eyes, eyes. Cedi coin. Se a yeyes no coins. Se eyes baako a coin. Mese yeyes no sas?</td>
<td>31 Tr. : Alright, it's enough, it's enough. Cedi coin. Many are called coins. When it is one it's a coin. What did I say it is called?</td>
</tr>
<tr>
<td>33 Chn. : Coin.</td>
<td>33 Chn. : Coin.</td>
</tr>
<tr>
<td>34 Tr. : Coin.</td>
<td>34 Tr. : Coin.</td>
</tr>
<tr>
<td>35 Chn. : Coins.</td>
<td>35 Chn. : Coins.</td>
</tr>
</tbody>
</table>


Apart from prompts, switches were also used as disciplinary or attention seeking devices. Extract 32 illustrates L1 switch as attention seeking device.

Extract 32: ‘Management’ Switch as an Attention Seeking Device

<table>
<thead>
<tr>
<th>Observed Lesson</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>84 Tr. : Now let us try and do number one for us. Let us try number one. And, and, we and take it as an example. Number one who can read the sentence? Mhmm. Read the sentence on the board. Hwe, swa board no so. Mese eyes dan? Na hwe ma nim ha. Number one, wesa dan na y_SUP_SUP?&gt;?</td>
<td>84 Tr. : Now, let us try and. Do number one for us. Let us try number one. And, and, take it as an example. Number one who can read the sentence? Mhmm. Read the sentence on the board. Look. It is on the board. What did I say it is? And pay attention to me here. Number one. What is it asking you to do?</td>
</tr>
<tr>
<td>85 Chd. : Seventy</td>
<td>85 Ss. : Seventy.</td>
</tr>
<tr>
<td>86 Tr. : No</td>
<td>86 Tr. : No.</td>
</tr>
</tbody>
</table>

Appendix 5 (28) Year 4 Mathematics p 268 Vol. 2.

‘Hwe, swa board no so’ (Look, it is on the board) and ‘Na hwe ma nim ha’ (And pay attention to me here) are in themselves self evident of the teacher’s call for attention. The motivation here is the desire to focus the pupils’ attention on major points in the lesson. The word ‘board’ is a culture borrowed word but it is also one of the institutionalised classroom expressions.

Extract 33 below, shows code-switching to L1 to discipline pupils. The teacher switched to the L1 to criticise the pupils’ behaviour. Although the use of English to discipline might have been predicted, its use here would not have been effective because most pupils would not have understood it.

The teacher chose the language the children understood best to show his disgust at the pupil’s behaviour and in that way he warned others from behaving in a similar manner.

‘Acknowledgement’ Switch Function in Mathematics

Another common switch function in mathematics is the ‘acknowledgement’. These switches are used to signal ‘acknowledgement’ or praise. However, when teachers were either satisfied or specially disappointed with the pupils, they signalled this by choosing Twi. The teacher’s words show affection for the individual pupil who successfully carried out the division. At the same time, it cautions pupils who failed to carry out the division successfully (see Extract 34).

Extract 34: Code-Switching as ‘Special Compliment’

<table>
<thead>
<tr>
<th>Observed lesson</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>148 AG.: Twenty</td>
<td>148 AG.: Twenty</td>
</tr>
<tr>
<td>149 Tr.: Sixty if you divide it by 4. Yes.</td>
<td>149 Tr.: Sixty if you divide it by 4. Yes.</td>
</tr>
<tr>
<td>150 Chd.: Sir, ten.</td>
<td>150 Chd.: Sir, ten.</td>
</tr>
<tr>
<td>152 Chm.: Fifteen.</td>
<td>152 Chm.: Fifteen.</td>
</tr>
<tr>
<td>153 Tr.: Fifteen. That’s very good. Clap for her. Very good. You have seen even a very small child has been able to. Even a very small child has been able to say it is fifteen. The Fifteen too we do not say fifteen minutes to, fifteen minutes. We say quarter to. Quarter past. Quarter to. All of you say it.</td>
<td>153 Tr.: Fifteen. That’s very good. Clap for her. Very good. You have seen even a very small child has been able to. Even a very small child has been able to say it is fifteen. The Fifteen too we do not say fifteen minutes to, fifteen minutes. We say quarter to. Quarter past. Quarter to. All of you say it.</td>
</tr>
</tbody>
</table>

Appendix 5 (36) Year 3 Mathematics p 339 Vol. 2.
Explanation Switch Function in Mathematics

In Year 4 the ‘explanation’ function is common. ‘Explanation’ involves the teachers’ use of exposition, reformulation or restatements to clarify earlier expressions. Extract 35 shows an example of switches to L1 to explain solutions to mathematical problems.

Extract 35: Code-Switching Functioning as ‘Explanation’

<table>
<thead>
<tr>
<th>Observed Lesson</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>113 Tr. : He, one minute ye 60 secs a, ant 2 min. wei eye 62 secs. One minute kora wose eye 60 secs. Na wow. 2 min a wose eye 62 secs.</td>
<td>113 Tr. : He, if one minute is 60 secs. Will 2 mins. Give you 62 secs? Even one minute gives you 60 secs. If you have 2 min do you get 62 secs.</td>
</tr>
</tbody>
</table>

Appendix 5 (28) Year 4 Mathematics p 269 Vol. 2.

5.6.4 Language Alternation Functions in Science by Grades

Table 22 below shows the results of language alternation functions in science by grades. See 5.6.1 for the definitions of the abbreviations in the table. ‘Language alternation’ here still refers to ‘code-mixing’, ‘borrowing’ and ‘code-switching’.

<table>
<thead>
<tr>
<th>SUB</th>
<th>MAN</th>
<th>CON</th>
<th>EXP</th>
<th>ACK</th>
<th>QUE</th>
<th>RFA</th>
<th>FEP</th>
<th>TRN</th>
<th>DIR</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 3</td>
<td>L1-L2</td>
<td>37</td>
<td>34</td>
<td>50</td>
<td>31</td>
<td>29</td>
<td>20</td>
<td>22</td>
<td>20</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td>L2-L1</td>
<td>52</td>
<td>41</td>
<td>61</td>
<td>65</td>
<td>17</td>
<td>30</td>
<td>28</td>
<td>0</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>89</td>
<td>75</td>
<td>111</td>
<td>96</td>
<td>46</td>
<td>50</td>
<td>50</td>
<td>20</td>
<td>56</td>
</tr>
<tr>
<td>Year 4</td>
<td>L1-L2</td>
<td>40</td>
<td>15</td>
<td>7</td>
<td>2</td>
<td>37</td>
<td>1</td>
<td>5</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>L2-L1</td>
<td>11</td>
<td>38</td>
<td>14</td>
<td>26</td>
<td>25</td>
<td>43</td>
<td>11</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>51</td>
<td>53</td>
<td>21</td>
<td>28</td>
<td>62</td>
<td>44</td>
<td>16</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Year 5</td>
<td>L1-L2</td>
<td>31</td>
<td>7</td>
<td>22</td>
<td>12</td>
<td>12</td>
<td>9</td>
<td>21</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>L2-L1</td>
<td>5</td>
<td>23</td>
<td>9</td>
<td>9</td>
<td>11</td>
<td>17</td>
<td>2</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>36</td>
<td>30</td>
<td>31</td>
<td>21</td>
<td>23</td>
<td>26</td>
<td>23</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td>L1-L2</td>
<td>108</td>
<td>56</td>
<td>79</td>
<td>45</td>
<td>78</td>
<td>30</td>
<td>48</td>
<td>22</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>L2-L1</td>
<td>68</td>
<td>102</td>
<td>84</td>
<td>100</td>
<td>53</td>
<td>90</td>
<td>41</td>
<td>2</td>
<td>31</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>176</td>
<td>158</td>
<td>163</td>
<td>145</td>
<td>131</td>
<td>120</td>
<td>89</td>
<td>24</td>
<td>71</td>
</tr>
</tbody>
</table>

The results show code-switching was common in science subject but there was variation between classes. In Year 3, a total of 620 code-switching functions were recorded compared to 304 for Year 4 and 212 for Year 5. When these figures are broken down and the direction of switch is considered, it is evident that L2 to L1
Switches (604) are more frequently used than L1 to L2 switches (532). However, the breakdown by grades shows Year 3 had considerably more L2 to L1 switches than Years 4 and 5. What emerges is not consistent with the official language policy in Year 3. That is to say most of the lessons in Year 3 were conducted in English since the result showed more L2 → L1 (329) than L1 → L2 (291) switches. In Year 4, the results show more L2 → L1 (182) switches than those for L1 → L2 (122) indicating a change in the language of instruction. However, in Year 5 there were more of L1 → L2 (119) than L2 → L1 switches (93). These results suggest that the official language is not being used. One explanation is that most of the lessons were conducted in the unofficial language and the other is that the lessons which were in English required the use of the L1 to support L2 use.

When the functions of code-switching are considered overall, it is clear that ‘substitution’ is the dominant function. It is also the dominant function for L1 → L2 switches. However, for L2 → L1 switches there is no clear dominance as ‘management’, and ‘explanations’ are more or less equally represented. When the function of switches is compared between grades it is no longer possible to contrast Year 3 on the one hand and Years 4 and 5 on the other. In Year 3 the three most frequently used function in order of frequency are ‘content’, ‘explanation’, and ‘substitution’. This frequent ‘content’ function is explained by the use of GL for instruction and the use of English textbooks. This encourages unofficial language use but with switches back to Twi to present the ‘content’, thus explaining the greater frequency of the ‘content’ function of switches into English. Year 4 has ‘Acknowledgement’ as the overall most frequently used function but when the direction of switch is taken into account the dominant function for L1 → L2 is ‘substitution’ and that for L2 → L1 is ‘question’. In Year 5, ‘substitution’ is the dominant function for the overall and for L1 → L2, while the ‘management’ function is the most frequently used for L2 → L1 switches.

Switches in science may be motivated by the need to explain technical and scientific vocabulary in the local languages. Although some English technical words have no equivalents in the local languages, some local examples which help to convey the
concept to pupils have no English equivalents. For some of those with English equivalents the teachers did not know the English versions. This to a large extent encouraged the combined use of Twi and English in science.

5.6.5 Illustrations of Code-Switching Functions in Science

‘Content’ Switch Function in Science

With the ‘content’ switch function, teachers usually present the new information in L1 not only to help understanding but to save time and quicken the pace of the lesson. At other times they paraphrase or re-phrase the statement or illustrate with an example to ensure understanding. However, when this approach fails to yield the desired results, the teachers followed it with other explanations including blackboard drawings, gestures or signals and prompts. In the lessons observed, English was often used to summarise lesson content. Sometimes when the matrix language is Twi teachers switched to English to summarise as illustrated in Extract 36 below.

Extract 36: Code-Switching to English to Present ‘Content’

<table>
<thead>
<tr>
<th>Observed Lesson</th>
<th>Translations</th>
</tr>
</thead>
<tbody>
<tr>
<td>165 Tr. : the nwunu se wa hunu? the nwunu.</td>
<td>165 Tr. : It will be very cold. Do you see that?</td>
</tr>
<tr>
<td>Afei desya hunu mmeinu nono. Yahunu liquid.</td>
<td>It will be very cold. Now, we have known two.</td>
</tr>
</tbody>
</table>

In the Extract 36, the teacher switched to English to develop the lesson and reinforce previous teaching.

‘Explanation’ Switch Function in Science

In Year 3 the results showed ‘explanation’ was the second most frequently used overall function of switching. Some concepts would not have been understood without switching into Twi. Some switches into L1 themselves contained L2 switches just as switches to L2 often contained L1 switches (see Extract 37).
### Observed Lesson

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tr.</td>
<td>Palm wine. Have you ever taken some?</td>
<td>Chd.</td>
<td>Yes</td>
</tr>
<tr>
<td>Tr.</td>
<td>Okay, enno nso ye liquid. Palm wine. Yes give me example. Another example. Aha!</td>
<td>Chd: Sugar</td>
<td></td>
</tr>
<tr>
<td>Tr.</td>
<td>Anwa. Ne Bor? fo ye ka no sii?</td>
<td>Chd.</td>
<td>Palm oil</td>
</tr>
</tbody>
</table>

### Translation

<table>
<thead>
<tr>
<th>Tr.</th>
<th>Oh no, no. am I have told you that I have started a new topic. That is liquids and I have given you an example of liquids. Water is a liquid. am palm wine. Do you know palm wine?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chd.</td>
<td>Yes sir.</td>
</tr>
<tr>
<td>Tr.</td>
<td>Palm wine. Have you ever taken some?</td>
</tr>
<tr>
<td>Chd.</td>
<td>Yes</td>
</tr>
<tr>
<td>Tr.</td>
<td>Okay, it is also liquid. Palm wine. Yes give me example. Another example. Yes!</td>
</tr>
<tr>
<td>Chd: Sugar</td>
<td></td>
</tr>
<tr>
<td>Tr.</td>
<td>Anything watery that you cannot hold is liquid. Do you understand? I gave you water and, I gave you palm wine. That the two are what? liquids. Yes!</td>
</tr>
<tr>
<td>Chd: Palm oil</td>
<td></td>
</tr>
<tr>
<td>Tr.: Palm oil. How do we say it in English?</td>
<td>Chd: Palm oil</td>
</tr>
</tbody>
</table>

Appendix 5 (14) Year 3 Science p141 Vol. 2.

To illustrate what is meant by a switch within a switch, consider speech event 16 in Extract 37. The event itself is a switch into the L1 but the sentences contain phrases which are switches back into English. For example, in ‘Ma ma water and ma ma palm wine se ne mmeinu ye eden?’. First, the two clauses in the compound sentence are joined together by the use of an English conjunction ‘and’ when they could have been joined with the use of a Twi conjunction ‘ena’. Taking the two clauses joined together as separate sentences, each sentence is completed with a ‘substituted English object i.e. ‘water’ and ‘palm wine’ although there are GL equivalents. A whole L1 sentence without a switch back into English should have read ‘Ma ma nsuo ena ma ma nsa fufuo se ne mmeinu ye eden?’ In Extract 37, the first switch to L1 ‘Nsa fufuo. Mmo anom bi da?’ was motivated by the teacher’s desire to monitor the understanding of ‘palm wine’. The second switch, ‘enno nso ye ‘liquid’ was used to explain that palm wine was also a kind of liquid. However, when the pupils’ response demonstrated a total lack of understanding, the teacher resorted to the intersentential switch into the L1 to explain the concept ‘liquid’. ‘Adebiara aye nsuoso ye ‘liquid’ a wo somu ara enye yie no yefre no ‘liquid’. Se wahunu?’ (Anything watery that you cannot hold is liquid. Do you
understand?) This switch itself was punctuated with intrasentential switches into English: 'liquid'. Next, the teacher linked his explanation to the earlier explanations, which were not understood, before his elicitation for some examples had the right response.

‘Substitution’ Switch Function in Science

Extract 38 shows two examples of code-switching. The first switch is an L1 substitute for local concepts because of the lack of direct English equivalents and the second switch is an explanation of what has been said earlier.

Extract 38: L2 to L1 Substitution Function

<table>
<thead>
<tr>
<th>Observed lesson</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>141 Tr.: Iodine. It is also poison. Thank you. Now we've got to know so many chemicals that if we eat we die. What about food? Food, food, food. Aduane paa ye die (Food-actually-we eat). Aduane bi wɔh ara wɔdi ara wɔbe wuo. Wɔbe wu wɔh ara. chi ne son? Yes Chd &quot;A&quot;. 142 Chd &quot;A&quot;: The food that animals have eat 143 Tr.: Okay, okay. The food that animals have eaten if you eat it you will die! That one is not poisonous food. Wahunu? But ss ye ka poisonous food ara, enno dey adauna no ankasa ye poison. Aduane bi nso wɔh ara, ss na asea. Wodi ara wo ye na ye wo ya. Wɔbe yare. But shisw wɔh wɔdi ara, enno dey wɔbe wu koraa. Sade ye ka DDT wodi ara wɔbe wuo. You will die instantly. Mum! Wɔbe wu wɔh ara. Na skyere se adaune bi saa na mepe. We have some leaves. It looks like kɔntommi.</td>
<td>141 Tr.: Iodine. It is also poison. Thank you. Now we've got to know so many chemicals that if we eat we die. What about food? Food, food, food. Food we actually eat. There are some food items as soon as you eat them you will die. You will die instantly there. What are some examples? Yes Chd &quot;A&quot;. 142 Chd &quot;A&quot;: The food that animals have eat. 143 Tr.: Okay, okay. The food that animals have eaten if you eat it you will die! That one is not poisonous food. You see? But when we say poisonous food we mean the food item itself is poison. We also have some food items that are rotten or spoilt. If you eat those you will have stomach pains. You will be sick or ill but there are others when you eat them you will die incessantly. As we already noted with DDT if you take it you will die. You will die instantly. Mum! You will die instantly. So that is the kind of examples I want. We have some leaves. It looks like kɔntommi.</td>
</tr>
</tbody>
</table>

Appendix 5 (2) Yr. 3 Science p 19 Vol. 2.

With the 'explanation' function, the L1 is used to explain what the teacher wants. Realising from the child's answer (speech event 142) that the information was not fully understand, the teacher provides a reformulation in the local language in speech event 143. The use of 'kɔntommi' illustrates the use of switches as substitutes
for local concepts, names and institutions which do not directly translate into English.

Turning to the expression ‘You will die instantly’, it is likely that the pupils would not have understood the expression without the L1 explanation ‘Wobe wu wɔ hɔ ara’. This reformulation also gives the extract a ‘translation’ function. Of course the teacher could have reformulated the sentence in English such as ‘You will die immediately’ or ‘You will die at once’. However, it is doubtful that even if the teacher had the resources in English to readily provide these reformulations that the pupils would understand them. It is necessary to take into account the fact that the pupils had only been learning English for a little over two years. The use of the L1 saved useful lesson time (see 5.2.2 for other examples). Where Twi is the matrix language substitutions may also serve as borrowed words for technical and scientific terms which are new to the culture ( See Extracts 17,24, and 27).

‘Acknowledgement’ Switch Function in Science

Switches may be used to evaluate, praise or reject, pupils’ responses to questions. Extract 39, below shows an L1 → L2 ‘acknowledgement’. In Extract 39, three types of switches are illustrated.

Extract 39. Code-Switching as ‘Acknowledgement’

<table>
<thead>
<tr>
<th>Observed Lesson</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>56 Chn.: Balloon</td>
<td>56 Chn. Balloon</td>
</tr>
<tr>
<td>57 Tr.: Right. a locator a ye a ye de gu mu ma aye kise kakraka no?</td>
<td>57 Tr.: Right. What do we put inside it to make it swell so big?</td>
</tr>
<tr>
<td>58 Chn.: Mframa</td>
<td>58 Chn. Air</td>
</tr>
<tr>
<td>59 Tr.: Mframa very good or?</td>
<td>59 Tr.: Air, very good or?</td>
</tr>
<tr>
<td>60 Chd.: Air</td>
<td>60 Chd.: Air, air very good or?</td>
</tr>
<tr>
<td>61 Tr.: Very good, or air ee meka kyere wose, biaia tokoro da bia no ye a na mframa swo ho. Na yebe hwe adee, se des des meka no ye nokware a. Tua no! Wo nsuo yi des yebe swe no na akyire yebe nya bi office ama wo.</td>
<td>61 Tr.: Very good, or air ee I told you that, in every empty space air is present. We shall observe something; to see if what I am saying is correct. The bottle! As for this your water we would use it and later get you some from the office.</td>
</tr>
</tbody>
</table>

Appendix 5 (29) Year 4 Science p 273 Vol. 2.
The first is the L2 switch ‘Right’ which was used both as a boundary marker and an ‘acknowledgement’ of the pupil’s response (i.e. balloon). As a boundary marker, it served as a focusing device for drawing the pupils’ attention to the main points in the lesson. Its use as an ‘acknowledgement’ was motivated by the need to provide feedback on the pupils’ efforts. The second switch, ‘very good’ acknowledged the pupils’ response and also commended a pupil for the correct response. Both the expressions “right and very good” also illustrate ‘formulaic’ switches into L2 from L1 using everyday classroom instructional language. As ‘formulaic’ expressions they illustrate switches motivated by an unconscious use of everyday instructional terminology. The third switch was the word ‘office’. This was motivated by the lack of an equivalent in the L1. As a cultural borrowed word, it illustrates the use of scientific and institutional terms as substitutes for concepts foreign to the culture of the matrix language.

‘Management’ Switch Functioning as Aside in Science

One category of ‘management’ code-switching function, which was not shown in the examples in mathematics is its use as an aside. Extract 40 illustrates this use. An ‘aside’ is a ‘management’ switch which involves the temporary suspension of the pedagogic procedural interaction to make a comment which is outside the teaching frame as illustrated in the switch ‘enka se wo yire firie’(Do not say you forgot).

Extract 40: Management Code-Switching Functioning as an ‘Aside’

<table>
<thead>
<tr>
<th>Observed lesson</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>144 Tr. : No because we have to do the activity. enka se wo yire firie. No not at all. Okay, so they do not mix. Water and kerosene do not what? Mix</td>
<td>144 Tr. : No because we have to do the activity. <em>Do not say you forgot</em>. No not at all. Okay, so they do not mix. Water and kerosene do not what? Mix</td>
</tr>
<tr>
<td>145 Chn. : [Talking together].</td>
<td>145 Chn. : [Talking together].</td>
</tr>
<tr>
<td>146 Tr. : Okay Chd.21</td>
<td>146 Tr. : Okay Chd.21</td>
</tr>
</tbody>
</table>

Appendix 5 (8) Year 5 Science p 74 Vol. 2.

The teacher in this switch temporarily suspended the teaching to comment on the pupils’ reluctance to bring teaching and learning material for demonstration purposes in a science lesson.
5.6.6 Frequency of Language Alternation Functions in English by Grades

Table 23 shows the frequency of code-switching functions for English by grades (See 5.6.1 for the definitions of the abbreviations in the table). When English is compared to other subjects the results show it had very few instances of code-switching functions.

Table 23: Frequency of Code-Switching Functions in English by Grades

<table>
<thead>
<tr>
<th></th>
<th>SUB</th>
<th>MAN</th>
<th>CON</th>
<th>EXP</th>
<th>ACK</th>
<th>QUE</th>
<th>RFA</th>
<th>FEP</th>
<th>TRN</th>
<th>DIR</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 3 1.2-L1</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>5</td>
<td>14</td>
</tr>
<tr>
<td>Year 4 1.2-L1</td>
<td>8</td>
<td>15</td>
<td>2</td>
<td>18</td>
<td>18</td>
<td>15</td>
<td>4</td>
<td>0</td>
<td>10</td>
<td>1</td>
<td>91</td>
</tr>
<tr>
<td>Year 5 1.2-L1</td>
<td>8</td>
<td>13</td>
<td>12</td>
<td>15</td>
<td>25</td>
<td>13</td>
<td>21</td>
<td>0</td>
<td>5</td>
<td>4</td>
<td>116</td>
</tr>
<tr>
<td>Totals</td>
<td>16</td>
<td>30</td>
<td>15</td>
<td>35</td>
<td>44</td>
<td>30</td>
<td>25</td>
<td>0</td>
<td>16</td>
<td>10</td>
<td>221</td>
</tr>
</tbody>
</table>

The overall results show four functions being frequently used. The most frequent is the ‘acknowledgement’. This is followed by the ‘explanation’ function and it is followed by ‘questions’ and ‘management’ which are equally represented. In Year 3, there were few code-switching functions compared to Years 4 and 5. The few instances were mostly used as ‘directives’. In Years 4, there was increased use of the code-switching functions. ‘Explanation’ and ‘acknowledgement’ functions were most frequently used. Two others which were also common were ‘question’ and ‘management’ functions. In Year 5, the three most frequently used functions were ‘acknowledgement’, ‘request for action’ and ‘explanation’. The motivations for these functions were similar to those identified in other studies (Guthrie and Guthrie 1987, Gibbons 1987, Lin 1990 and Ndayipfukamiye 1993). These were checking for the pupils’ understanding, acknowledgement, and attention seeking and directing the pupils to the main issues in the instructional material.
5.6.7 Illustrations of Code-Switching Functions in English

‘Question’ Switch Function

Extract 41 illustrates switches into Twi to ask questions (see event 332).

Extract 41 Code-Switching Functioning as a ‘Question’

<table>
<thead>
<tr>
<th>Observed Lesson</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>331 Chd.: Mensah and Dede get up early on Sunday. Then they do their housework quickly. After the housework then they then</td>
<td>331 Chd.: Mensah and Dede get up early on Sunday. Then they do their housework quickly. After the housework then they then</td>
</tr>
<tr>
<td>they</td>
<td>they</td>
</tr>
<tr>
<td>332 Tr. : _e<em>n</em> n* y* <em>a* *?</em></td>
<td>332 Tr. : <em>What is that too?</em></td>
</tr>
<tr>
<td>333 Chd. : [No response].</td>
<td>333 Chd. : [No response].</td>
</tr>
<tr>
<td>334 Tr. : Alright, come to the board again.</td>
<td>334 Tr. : Alright, come to the board again.</td>
</tr>
<tr>
<td>Read again.</td>
<td>Read again.</td>
</tr>
</tbody>
</table>

Appendix 5 (26) English Year 3 p 249 Vol. 2.

‘Management’ Switch Function

Extract 42: Code-Switching Functioning as ‘Management’

<table>
<thead>
<tr>
<th>Observed lesson</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>270 Tr. : [Distributes children’s books]. <em>Tenase. Tell her you won’t do it again</em>.</td>
<td>270 Tr. : [Distributes children’s books]. <em>Sit down. Tell her you won’t do it again</em>.</td>
</tr>
</tbody>
</table>

Appendix 5 (37) Year 3 English p 352 Vol. 2.

Extract 42 shows an example of code-switching functioning as ‘management’. The translation shows that the teacher switched to L1 to manage the class by asking the pupil to take his seat. It also functions as a directive. This is part of classroom management skill which teachers use to give or clarify instruction that required a non-linguistic response. ‘Tenase’ (sit down) did not require any linguistic response from the pupils.

‘Acknowledgement’ Switch Function

Event 90 in Extract 43 below serves dual functions. Firstly, it functions as an ‘acknowledgement’. It acknowledges by rejecting the pupils’ response to the question ‘What’s a junction?’ Secondly, by querying the pupils’ response it also functions as a ‘question’.

175
Extract 43 Code-Switching Functioning as 'Acknowledgement'

<table>
<thead>
<tr>
<th>Observed lesson</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>88 Tr. : What's a junction? Yes let me go to. What's a junction?</td>
<td>88 Tr. : What's a junction? Yes let me go to. What's a junction?</td>
</tr>
<tr>
<td>89 Chn. : Babia kai gyina</td>
<td>89 Chn. : The coach station</td>
</tr>
<tr>
<td>90 Tr. : Babia kai gyina?</td>
<td>90 Tr. : A coach station?</td>
</tr>
<tr>
<td>91 Chn. : [Laughter and talking together].</td>
<td>91 Chn. : [Laughter and talking together].</td>
</tr>
<tr>
<td>92 Tr. : What's a junction?</td>
<td>92 Tr. : What's a junction?</td>
</tr>
</tbody>
</table>

Appendix 5 (6) English Year 3 p 56 Vol. 2.

'Content' Switch Function in English

Extract 44 Code-Switching Functioning as 'Content'

<table>
<thead>
<tr>
<th>Observed lesson</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>136 Tr. : Very good, very good. The hunter asked them. 'what do you want at this time in this forest'. Se wahunu? chere a n b fo&gt; no ban akwadaa no w bisu w se dan? 'Daa na mo pa no anu wo yi mu bw forest yi mu?' Tie no yiyi a! Na me bisa wo question a w a tumi a answer. They did not speak. They did not speak. By the way according to the pronoun that we learnt “they” gyina h&gt; ma hwan no mo? Comfort, Constance.</td>
<td>136 Tr. : Very good, very good. The hunter asked them. ‘what do you want at this time in this forest’. Do you understand? What did the hunter ask the children when he got closer to them? ‘What do you want at this hour of the night in this forest?’ Listen carefully to enable you answer me when I ask a question. They did not speak. They did not speak. By the way according to the pronoun that we learnt “they” refers to whom? Comfort, Constance.</td>
</tr>
<tr>
<td>137 Constance: N’damfoz) mmesen sa no</td>
<td>137 Constance: The three friends</td>
</tr>
</tbody>
</table>

Appendix 5 (31) English Year 5 p 294 Vol. 2.

As already explained in section 5.6.5, content switch when the matrix language is English involves switches into the L1 to present the subject matter of the lesson. In Extract 44 the teacher first acknowledged and praised the pupil for the correct response in English. After repeating the pupils' response he switched into the vernacular to reinforce the pupil’s answer by asking the rhetorical question, ‘What did the hunter ask the children when he got closer to them?’ and followed it with the answer - ‘What do you want at this hour of the night’. Thus using the switch to actually teach.
5.6.8 Frequency of Language Alternation Functions in Ghanaian Language by Grades

Table 24 shows the frequency of code-switching functions for GL for all grades (See 5.6.1 for the definitions of the abbreviations in the table).

**Table 24: Frequency of Code-Switching Functions in Ghanaian Language by Grades**

<table>
<thead>
<tr>
<th></th>
<th>SUB</th>
<th>MAN</th>
<th>CON</th>
<th>EXP</th>
<th>ACK</th>
<th>QUE</th>
<th>RFA</th>
<th>FEP</th>
<th>TRN</th>
<th>DIR</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 3 L1-L2</td>
<td>72</td>
<td>58</td>
<td>9</td>
<td>6</td>
<td>32</td>
<td>3</td>
<td>31</td>
<td>27</td>
<td>4</td>
<td>10</td>
<td>252</td>
</tr>
<tr>
<td>Year 4 L1-L2</td>
<td>78</td>
<td>28</td>
<td>5</td>
<td>3</td>
<td>19</td>
<td>1</td>
<td>9</td>
<td>13</td>
<td>4</td>
<td>17</td>
<td>177</td>
</tr>
<tr>
<td>Year 5 L1-L2</td>
<td>12</td>
<td>15</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>14</td>
<td>16</td>
<td>3</td>
<td>4</td>
<td>71</td>
</tr>
<tr>
<td>Totals</td>
<td>162</td>
<td>101</td>
<td>15</td>
<td>10</td>
<td>55</td>
<td>5</td>
<td>54</td>
<td>56</td>
<td>11</td>
<td>31</td>
<td>500</td>
</tr>
</tbody>
</table>

All grades show code-switching as a common feature for all teachers though with varying degrees of use between classes. It also shows a decreasing use of switches with increasing grade. For example, Year 3 recorded 252, Year 4 had 177 and 71 for Year 5. The overall results show ‘substitution’ and ‘management’ functions as being dominant. However, when grades are compared these functions are not dominant in all classes. For example, in Year 5, the three most frequently used functions are, ‘formulaic expressions’, ‘management’, and ‘request for action’.

5.6.9 Illustrations of Language Alternation Functions in Ghanaian Language

‘Substitution’ Switch Function

In Extract 45, the word ‘park’ is an example of code-switching which functions as a ‘substitution’. In this example, the teacher used it as a means of teaching the new word ‘agodibia’.

**Extract 45: Code-Switching Functioning as ‘Substitution’**

<table>
<thead>
<tr>
<th>Observed lesson</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>267 Tr. : Se wo ahunu <em>park.</em> Bòbiya yadì agor주시* Se wo ahunu bòbiya yadì agorMo mìmì din. aha!</td>
<td>267 Tr. : You know the <em>park.</em> The playing field. You know where we play. Mention it. Yes!</td>
</tr>
<tr>
<td>268 Chn. : [Kasa]</td>
<td>268 Chn. : [Silence]</td>
</tr>
<tr>
<td>269 Chd. : He mo mua mo ano.</td>
<td>269 Chd. : Keep your mouths shut.</td>
</tr>
<tr>
<td>270 Tr. : Ye sì <em>agodibia.</em> Mo nka ma me nte.</td>
<td>270 Tr. : it is called playing field. All of you say it.</td>
</tr>
<tr>
<td>271 Chn.: Agodibia.</td>
<td>271 Chn.: Playing field.</td>
</tr>
</tbody>
</table>

Appendix 5 (13) Year 3 GL p 136 Vol. 2.
The pupils were familiar with the equivalent concept in English and so the teacher did not hesitate to use the English version as the base for introducing the new L1 word.

**‘Management’ and ‘Formulaic’ Switch Functions in GL**

In Extract 46, ‘Keep quiet’ is institutionalised classroom language and functions as classroom management device.

**Extract 46 Code-Switching Functioning as ‘Management’ and ‘Formulaic Expression’**

<table>
<thead>
<tr>
<th>Observed lesson</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>81 Tr. : Nti obi bisa wo se Makaranta a ehen he? Mampong</td>
<td>81 Tr. : If you are asked what town is near Makaranta what would you say? Mampong?</td>
</tr>
<tr>
<td>82 Chd. : [Kasa]</td>
<td>82 Chd. : [Silence]</td>
</tr>
<tr>
<td>83 Tr. : Keep quiet, keep quiet.</td>
<td>83 Tr. : Keep quiet, keep quiet.</td>
</tr>
<tr>
<td>84 Chn. : Sir, sir</td>
<td>84 Chn. : Sir, sir</td>
</tr>
</tbody>
</table>

Appendix 5 (13) GL Year 3 p 131 Vol. 2.

The teacher in this example used it to restore order after the disruption caused by the children bidding for a turn to answer the teacher’s question. It also serves as a ‘formulaic expression’ which is sometimes used by teachers to discipline, protest, or maintain order in class.

**‘Request for Action’ Switch Function in GL**

Extract 47 below shows an example of switches to English to ‘request for action’. The teacher switched to English to ask the pupils to read the new word after him.

**Extract 47 Code-Switching to L2 to ‘Request for Action’**

<table>
<thead>
<tr>
<th>Observed lesson</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Tr. : Yebo abe ye Twi akinkan. Na nea akinkan no, yebe sua ya den akyen se ye kan nea. Nii ye dikan abe sua anno. Menim. All of you.</td>
<td>1 Tr. : We have Twi reading. First, we learn the new words which will make the reading difficult for us. So we learn those first. ‘I know’. All of you.</td>
</tr>
</tbody>
</table>

Appendix 5 (19) Year 5 GL p 178 Vol. 2.

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5.6.10 Other Alternations Observed in the Study

Other alternation functions which did not receive attention earlier are discussed in this section. These include switches as ‘directives’ which require non-linguistic responses, ‘translations’, and ‘reinforcement’. Code-switching as a contextualisation devices is also discussed.

Language Alternations as ‘Directives’

(i) Non-linguistic Response

As part of classroom management skills teachers alternate between Twi and English or vice versa to give or clarify instructions that required a non-linguistic response. The response may be an action or a signal (see Extract 48).

Extract 48: Directive Switch - Teacher’s Instruction Requiring Non-Linguistic Response

<table>
<thead>
<tr>
<th>Observed lesson</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Tr.: Okay, pay attention. Now you must speak louder. Do you understand?</td>
<td>1 Tr.: Okay, pay attention. Now you must speak louder. Do you understand?</td>
</tr>
<tr>
<td>2 Chn.: Yes madam.</td>
<td>2 Chn.: Yes madam.</td>
</tr>
<tr>
<td>3 Tr.: <em>He ka wo ho na yi bag no firi hɔ.Man ka wo ho yi bag no firi hɔ.</em></td>
<td>3 Tr.: <em>He Quickly take away that bag there. Quickly take away that bag from there.</em></td>
</tr>
</tbody>
</table>

Appendix 5 (42) Yr. 4 Science p 391 Vol. 2.

In Extract 48 the instruction is an order for the pupil to remove an object before the start of the lesson. This did not require any verbal response from the pupil.

(ii) Non-vocalised response

Extract 49: Code-Switching Requiring a Non-Vocalised Linguistic Response

<table>
<thead>
<tr>
<th>Observed lesson</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>103 Tr.: Unit two. Page six. Unit two. Lets take two minutes to read silently. <em>Kan no wɔ wo tiri mu.</em></td>
<td>103 Tr.: Unit two. Page six. Unit two. Lets take two minutes to read silently. <em>Read inside your head [read silently]</em></td>
</tr>
<tr>
<td>104 Chn.: [Reading silently]</td>
<td>104 Chn.: [Reading silently]</td>
</tr>
</tbody>
</table>

Appendix 5 (27) Year 4 English p 255 Vol. 2.

Extract 49 illustrates directives that need a non-verbalised linguistic response from the pupils. The teacher switched into Twi to clarify an instruction given earlier. At times when teachers felt the pupils were slow to follow their instructions they
resorted to the use of Twi. The original instruction given in English was repeated in the local language and the result was a prompt response. In this respect, it also functioned as a 'translation'. In the example above when the original English instruction was given some children were still murmuring loudly but as soon as the vernacular version was issued the class immediately became silent. As it was said in a rather high pitch, it signalled to the pupils that any disobedience might receive unpleasant sanctions. There was clearly no pupil who could pretend not to have understood the instruction in the vernacular. As a result of the prompt response to the switch it can also be considered as an attention seeking device.

**Switching as 'Translation' from L1 to L2**

The presentation of routine lessons was facilitated in some respects by a reliance on 'translations' into the L1 or vice versa. Teachers did not hesitate to resort to L1 when they needed the resources of another language to help comprehension of content material and in some cases they requested translations from the pupils. They used this to check the pupils' understanding or ability to associate the vocabulary and concepts learnt in one language with the same concepts in another. Extract 50 below illustrates the teacher's request for pupils to translate from L1 to L2.

**Extract 50: Request for Translation from Twi into English**

<table>
<thead>
<tr>
<th>Observed Lesson</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>82 Chn &quot;Y&quot;: ƙraman.</td>
<td>82 Chn &quot;Y&quot;: Dog</td>
</tr>
<tr>
<td>83 Tr. : ƙraman. Ye ka ne borƙo sen?</td>
<td>83 Tr.: Dog. How do we say it in English?</td>
</tr>
<tr>
<td>84 Chn. : Dog</td>
<td>84 Chn: Dog</td>
</tr>
<tr>
<td>85 Tr. : Dog, dog. Nboa no bi hyehe$n$wiram</td>
<td>85 Tr.: Dog, dog. Some animals live in the bush</td>
</tr>
</tbody>
</table>

In speech event 83, 'ƙraman. Ye ka ne borƙo sen?' (Dog. How do we say it in English?) is a direct request for translation to English. The teacher, first acknowledges the accuracy of the pupil's response by repeating the pupil's utterance 'ƙraman' (dog). This is then followed by the request to translate it into English. The motivation for the request rests on the teacher's desire to monitor the pupils' ability to associate concepts learned in English with what they expect the children
know in the vernacular. However, some teachers engaged in concurrent translations which were perhaps motivated more by poor teaching methodology than by pupil needs and sound pedagogical principles (see Extract 22 for an example).

Switching as ‘Translations’ from L2 to L1

Extract 51, shows request for ‘translation’ by pupils from English to Twi.

### Extract 51: Request for Translation from English into Twi

<table>
<thead>
<tr>
<th>Observed Lesson</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>259 Tr.: Speak louder.</td>
<td>259 Tr.: Speak louder.</td>
</tr>
<tr>
<td>260 Chd.: Wɔse ne boa eye forty cedi.</td>
<td>260 Chd.: She said the price was forty cedi.</td>
</tr>
<tr>
<td>261 Tr.: Forty cedis ye ka ne Twi sen?</td>
<td>261 Tr.: Forty cedis. How do we say that in Twi?</td>
</tr>
<tr>
<td>262 Chn.: Forty cedis.</td>
<td>262 Chn.: Forty cedis.</td>
</tr>
<tr>
<td>263 Tr.: Ye ka ne Twi sen! English na ye ka no forty cedis. Wode kɔ Twi a ye ka no sen? Yes</td>
<td>263 Tr.: How do we say that in Twi! The English version is forty cedis. When you translate it to Twi how do you say it? Yes</td>
</tr>
<tr>
<td>264 Chd.: Cedi aduanan.</td>
<td>264 Chd.: Forty cedis.</td>
</tr>
<tr>
<td>265 Tr.: Okay. F.</td>
<td>265 Tr.: Okay. F.</td>
</tr>
</tbody>
</table>

This was motivated by the teacher’s desire to check if pupils were familiar with the vernacular form of the word because the English is more commonly used. Although, the matrix language for the lesson as a whole was English, in these speech acts the matrix language is Twi. The pupils’ response in speech event 262 was spontaneous. The pupils did not wait for the teacher to nominate a speaker, indicating that most pupils were more familiar with the English numeral system than that of Twi (L1). It also shows that some pupils did not know the local equivalents. It is possible that some children may even consider the English version as the L1, especially those children living in urban areas. This is likely because of the spontaneous response of ‘forty cedis’ which followed the request for the vernacular version (For other examples see Extract 2 section 4.4.2).

### Alternation Functions as ‘Contextualisation’ Strategy

An aspect of ‘content’ switch not illustrated in the examples given earlier is the ‘contextualisation’ function (see Extract 52 below). This involves the teachers’
alternations that provide context to help clarify the meanings of the vocabulary used in the text. In other words, the switch provided a wider knowledge of the world on which the interpretation is based and made meaningful.

Extract 52: Code-Switching as ‘Contextualisation Device’

<table>
<thead>
<tr>
<th>Observed lesson</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>395 Chn.: Rubbish</td>
<td>395 Chn.: Rubbish</td>
</tr>
<tr>
<td>396 Tr.: Ss ye pra ye dan mu a, ye dan mu aye fi. Na ya pra no, wo huna se nya ye sisa, yoboaba wura no ano. Na ye kɔ tu guo!</td>
<td>396 Tr.: When we sweep our room, when our room is dirty. After sweeping, you see that we often collect, we gather the rubbish together. Then we throw it away!</td>
</tr>
<tr>
<td>397 Chn.: Yes sir.</td>
<td>397 Chn.: Yes sir.</td>
</tr>
<tr>
<td>398 Tr.: eke! That is rubbish. eke wohul.</td>
<td>398 Tr.: Okay! That is rubbish. Okay do you see that! That is rubbish. Let spell it. Rubbish. All of us let us spell it and see.</td>
</tr>
</tbody>
</table>

Appendix 5 (27) Yr. 4 English p 264 Vol. 2.

In Extract 52, the teacher’s switch does not directly give the precise equivalent of the English word “rubbish”. This was pedagogically useful because by this contextualisation the teacher avoided the possible confusion with the concept of weeds (unwanted plants) which is also realised in the vernacular through the same word ‘wura’.

Code-Switching Functioning as a ‘Reinforcing Device’

Extract 53 illustrates the use of explanations to clarify instruction and as such can be seen as a ‘reinforcing device’ as well as a ‘translation’.

Extract 53: Code-Switching as a ‘Reinforcing Device’

<table>
<thead>
<tr>
<th>Observed lesson</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>239 Tr.: The pen is under the table. Say the word under. The pen is under the table. Yes who can make another sentence? Yes! Mine is pen. Don't use the pen.</td>
<td>239 Tr.: The pen is under the table. Say the word under. The pen is under the table. Yes who can make another sentence? Yes! Mine is pen. Don't use the pen.</td>
</tr>
<tr>
<td>239 Chd.: The book is under the table.</td>
<td>239 Chd.: The book is under the table.</td>
</tr>
<tr>
<td>240 Chd.: The book is under the table.</td>
<td>240 Chd.: The book is under the table.</td>
</tr>
</tbody>
</table>

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‘enfa pen no enba’ is an alternative reformulation of "Don't use the pen". However, its correct translation in the vernacular means "don't bring the pen".
This immediately suggested to the pupils that they could repeat the teacher's sentence and substitute the pen with an object of their own choice. To make the substitution easier for the pupils the teacher repeated the original English sentence. The pupils' example demonstrated that they followed the vernacular meaning proposed by the teacher. At worst, the teacher's switch was a direct translation of "don't use the pen". 'Ka wo des' (Select your own example) provides a clearer explanation of what the teacher wants done than that given in English ('Yes! Mine is pen').

5.7 The Structure of the Teachers' Language Alternation

For switches from L2 into L1 teachers introduced the main concepts of their lessons in the official language (L2). However, faced with the problem of their pupils' poor comprehension of the official language they switched to Twi (the unofficial language) to explain, clarify or recapitulate what was said earlier in the official language. This was then repeated in the official language again to make the association stronger. Thus giving it an L2→L1→L2 structure (see 4.5.5 for more details). Similarly, for switches from Twi (L1) into English (L2) teachers first presented the content in the L1 to satisfy the official policy requirement. Where the concept involves an item of grammar (i.e. a lexical item, especially a noun phrase) the teachers give the English equivalent to satisfy their concern for developing enough vocabulary and expressions in English (L2) in preparation for L2 use in Year 4. This L2 equivalent is often repeated a number of times to enable the pupils to memorise it. After the memory exercise, there is often a summary or monitor of the original L1 item. Thus giving an L1→L2→L1 structure (see 5.2.4 Extract 13 for details).
5.8 Role of Pupils’ ‘Language Alternation’

Although language alternation by pupils was not the object of the study it is certainly a topic that needs further investigation. This study observed that language alternation is useful to the teachers and pupils alike (see Extract 54).

Extract 54: Pupils’ Code-Switching

<table>
<thead>
<tr>
<th>Observed lesson</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>82 Portia: Denominator no sere ade kor two and two. Ni mbeta nu baako aye me LCM. Mede LCM no bse k&gt; ak&gt; kye first fraction denominator no. Mede two, mede LCM no sky.</td>
<td></td>
</tr>
<tr>
<td>83 Tr.: No you are rather going to divide the LCM by the denominator of the first fraction</td>
<td></td>
</tr>
<tr>
<td>84 Portia: Mede L, mede denominator, first fraction denominator no bsk&gt; ak&gt; kye LCM no. Mbe nya one.</td>
<td></td>
</tr>
<tr>
<td>85 Tr.: No, when you get your answer what do you do again before. Okay, when eh, we got the answer what did we do?</td>
<td></td>
</tr>
<tr>
<td>86 Portia: We shall multiply the answer by the numerator.</td>
<td></td>
</tr>
<tr>
<td>87 Tr.: Yes we shall multiply the answer by the numerator of the fraction which we are dealing with.</td>
<td></td>
</tr>
<tr>
<td>88 Portia: Answer one no a me nya ye no mede bsk&gt; ak&gt; timesi numerator no, na ma nya one. Na mede addition akye k&gt;. Na maba second fraction. Mede L, denominator no sbk&gt; ak&gt; kye LCM. Mbe nya one, na mede one no ak&gt; ak&gt; kye, na mede one no ak&gt; ak&gt; timesi numerator no. sino nso ye two. Mbe nya two. Na mede one no aka two no ho. Mbe nya three. Na mede LCM no akye ase. Na mwa.</td>
<td></td>
</tr>
<tr>
<td>89 Tr.: Good. Clap for her.</td>
<td></td>
</tr>
<tr>
<td>82 Portia: The denominator are the same two and two. So I take one as the LCM. I divide the LCM by the first fraction’s denominator. I divide by two, I use the LCM to divide</td>
<td></td>
</tr>
<tr>
<td>83 Tr.: No you are rather going to divide the LCM by the denominator of the first fraction</td>
<td></td>
</tr>
<tr>
<td>84 Portia: I use the L, I use the denominator, first fraction’s denominator to divide the LCM. I get one.</td>
<td></td>
</tr>
<tr>
<td>85 Tr.: No, when you get your answer what do you do again before. Okay, when eh, we got the answer what did we do?</td>
<td></td>
</tr>
<tr>
<td>86 Portia: We shall multiply the answer by the numerator.</td>
<td></td>
</tr>
<tr>
<td>87 Tr.: Yes we shall multiply the answer by the numerator of the fraction which we are dealing with.</td>
<td></td>
</tr>
<tr>
<td>88 Portia: The answer one I had I use it to multiply the numerator, and I get one. Then I have my addition sign. Then I come to the second fraction. I use the L, denominator to divide the LCM. I get one then I use the one to divide, then I use the one to multiply the numerator which is 6 two. I get two. Then I the add one to the two and get three. Next I put the LCM under it. Then I have finished.</td>
<td></td>
</tr>
<tr>
<td>89 Tr.: Good. Clap for her.</td>
<td></td>
</tr>
</tbody>
</table>

Appendix 5 (22) Yr. 5 Mathematics p 201 Vol. 2.

It enabled pupils to participate in the classroom interaction and talk the language of the subject, about which Lemke (1989) made the following comment:

"Even when given the opportunity, students are reluctant to try speaking the language of the subject. They would rather answer with a single word, which requires no explicit semantic connection and no possible errors of syntax or usage. They would rather read aloud the textbook’s language or answer with a gesture and no language at all" (Lemke 1989:138)
The teachers' acceptance of a pupils' use of the mother tongue in combination with loan words enabled some of the pupils to participate fully in classroom talk and to speak the language of the subject. In Extract 54, the pupil's utterance draws upon the grammar and words of two languages. The words 'denominator', 'LCM', 'fraction' and 'times' all belong to mathematics. There are no equivalents to these in Twi. In the sentence “Na mede akɔ timesi numerator no na ma nya one”. The word times (multiply) has an auxiliary morpheme suffix [-i ] to allow for its adaptation into the L1. Its use was motivated by its status as a core borrowed word which is often used as a formulaic everyday classroom expression.

5.9 Summary and Conclusion

In this section, I have analysed the pattern of classroom language use and various instances of 'language alternation' by teachers in Ghanaian primary classrooms. An answer to the question 'What is the language of instruction for both language and content subjects and to what extent does this relate to the official language policy?' has been put forward. Other questions answered include: 'When do teachers alternate language?' and 'Why do teachers switch languages?' or 'What are the functions of teachers and pupils' switches?' The answer to the question, 'What is the language of instruction in content and subject lessons in Ghanaian primary classrooms?' is simply 'alternation between English and a Ghanaian language'. The study found English alternating with GLs in content lessons in the lower primary classes (P1-3) where the language of instruction was GL, and again in the upper primary schools where the language of instruction was English. This is similar to the findings of Ndayipfukamiye (1993). He found L1 alternating with L2 (French) in Burundi. However, they differ from his for L1 lessons in which he found no evidence of alternation. He also found that there were clear communicative functions for the use of the vernacular. The Ghanaian teachers' routine presentation of content material in their lessons made possible the extensive use of language alternation, without which some concepts and communicative directives in the lessons could not have been understood. The switches from English to Twi or L1 (mother tongue) show its use as an alternative resource in the hands of teachers for repetitions or
reformulation to reinforce information or to ask questions. Teachers use language alternation as a way of explaining content or to monitor the pupils' understanding of information given earlier. The mother tongue is used as a boundary marker for changes in topic. It is used to attract or focus the pupils' attention on major points in the instructional material. When introducing new concepts or vocabulary the teachers used switches as a means of contextualising the explanations or definitions.

The data show that all functions to which switches from English into Twi were put in the instructional material were replicated in the use of English switches. For example, in L1→L2 switches substitutions of untranslatable technical terms, names of institutions and scientific concepts were replicated in L2-L1 switches with substitutions of formulaic routine classroom expressions, names of special food items, and local concepts without direct word for word translations into English. Teachers routinely switched code to clarify instructional information, to request for action and to give directives. They were also used to evaluate the pupils' responses and to manage classroom activities. The teachers also asked the pupils to translate from the L1 to L2 or from L2 to L1.

The use of the L2 in Twi matrix language and switches into L2 in Twi matrix language were sometimes not due to the lack of equivalents in the other language or to the utterances being formulaic classroom expressions. Usually, there was an alternative expression in the other language. Switches in both directions were both intersentential and intrasentential. A greater proportion of switches from Twi into English was observed than switches from English into Twi. The frequent use of English in Twi (L1) lessons, show clear communicative functions for the use of English. These functions included 'management', 'acknowledgements', and 'explanations'. They are also used for focusing attention on major points in the instructional material. This is contrary to Ndayipfukamiye (1993:81) who observed Kirindi lessons in Burundi. He explains that there was no language alternation in his respondents L1 lessons.

While confirming that Twi is used for these functions an important finding of this study is that language alternation may also be motivated by the resources available to the teacher and pupils. For example, the combined use of Twi and English
textbooks motivated switches into English. The design of the textbook also motivated switches into English. When teachers use an English textbook together with Twi language of instruction and the design of the textbook shows some highlighted words, but without any instruction as to how they should be interpreted, some teachers think they should be taught in the target language as a means of vocabulary development.

Although some evidence suggests switches may be motivated by lack of resources in one of the languages this hardly explains the classroom motivation for switches. Classroom language alternation should be viewed both as a deliberate and a spontaneous response to the difficulties of learning and teaching. It is a way of balancing the conflicting pressures of honouring the official regulations at the same time as catering for the pupils’ needs in relation to the change of language in later years. Teachers use switches into the pupils’ stronger language in order to overcome teaching and learning difficulties. It is unrealistic to assume that teachers and pupils who share a common language can learn a new language entirely through the use of the new language without switches into the language they both know already. In a study designed to explore some psychological and educational implications of receiving school instruction through a foreign language, Opoku (1994) concluded that:

'Much of what is taught and learned through the medium of English may... be overtly or covertly referred to the more developed mother tongue's representational system for semantic analysis and interpretation and then "translated" to English if a response is required. Thus much learning at a low level of educational experience may involve SEMANTIC TRANSFER from English to the mother tongue and from the mother tongue to English' (Opoku 1994:28)

The analysis also showed that although language alternation is common for all teachers there was variation between teachers, schools and classes and even between the same teacher in different subjects. For example, teacher ‘TL’ did not switch at all except on one occasion when in a science lesson his re-formulations in the target language, use of gestures and demonstrations all failed. TI frequently switched in all subjects but did so little in GL. TD frequently switched in science and mathematics but did not switch at all in English. Although teachers in the Zongo primary school
frequently switched in all subjects there was little alternation in the Aborzfo primary school. The data also show that there were frequent alternations in science and mathematics in both directions but there was little use of alternations in English and Ghanaian language.

The study also found a regular sequence of alternation for both (L1 to L2) and (L2 to L1). The teachers present the content first in the L1 or L2 (as the case may be to satisfy the policy requirement), then they switch to give the equivalent in the unofficial language, before switching back to the official language, thus having either an (L1 → L2 → L1) or an (L2 → L1 → L2) structure. As Lin (1990:116) noted in Hong Kong this could not have developed by accident. It shows the teachers' understanding of the requirements for teaching a foreign language to very young pupils in an unnatural situation. Contriving a natural situation is not enough to ensure comprehension and subsequent acquisition. The use of the mother tongue is essential since it forms the basis for the clarification of concepts. Opoku (1994) points out that although the word 'dog' may mean the same animal to a British and a Ghanaian child, to one it is a friend and a companion, while to the other it is a hunting animal (Opoku 1994:26).

Another important finding of the study is that language alternation enabled some pupils to participate in classroom talk. The teachers’ acceptance of the pupils’ use of the mother tongue in combination with loan words enabled some of the pupils to participate fully in classroom talk and to speak the language of the subject (see section 5.8 Extract 54). Even in learning the vernacular (i.e. Twi), switches into English (L2, or a foreign language) help pupils grasp whatever that they are trying to learn. It is essential that the use of L1 in L2 lessons is appreciated. In conclusion, the study recommends that if teaching and learning are to be more effective in the primary school, it is important that ‘language alternation’ is recognised as a valuable method.
CHAPTER SIX
GENERAL QUESTIONNAIRE RESULTS AND DISCUSSIONS

6.1 General Questionnaire Results

This chapter reports the results of teachers' responses to a questionnaire which was used to collect data on personal information, language attitudes, and classroom language use. (See Appendix 9). First it presents the general results, within which it takes account of the lower (classes 1 to 3 hence LPS) and upper (classes 4 - 6 henceforth UPS) divisions of the primary school where a different language for instruction is used. Later, it discusses the results of pupils' reading proficiency test in both English and a Ghanaian language for pupils in Year 5.

6.1.1 Questionnaires: Distribution and Return

Table 25 National Distribution of Survey Questionnaire in Ghana

<table>
<thead>
<tr>
<th>Region</th>
<th>District</th>
<th>Number sent out</th>
<th>Number not returned</th>
<th>Number returned</th>
<th>Number returned blank</th>
<th>Number fully completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern</td>
<td>Tamale</td>
<td>108</td>
<td>28</td>
<td>80</td>
<td>15</td>
<td>65</td>
</tr>
<tr>
<td>Central</td>
<td>Fosu</td>
<td>108</td>
<td>18</td>
<td>90</td>
<td>6</td>
<td>84</td>
</tr>
<tr>
<td>Western</td>
<td>Sekondi and Takoradi</td>
<td>108</td>
<td>49</td>
<td>59</td>
<td>3</td>
<td>56</td>
</tr>
<tr>
<td>Volta</td>
<td>Akatsi</td>
<td>108</td>
<td>60</td>
<td>48</td>
<td>0</td>
<td>48</td>
</tr>
<tr>
<td>Greater Accra</td>
<td>Tema and Accra</td>
<td>108</td>
<td>31</td>
<td>77</td>
<td>1</td>
<td>76</td>
</tr>
<tr>
<td>Upper West</td>
<td>Wa and Nadowli</td>
<td>108</td>
<td>28</td>
<td>80</td>
<td>0</td>
<td>80</td>
</tr>
<tr>
<td>Brong Ahafo</td>
<td>Bechem and Berekum</td>
<td>108</td>
<td>25</td>
<td>83</td>
<td>0</td>
<td>83</td>
</tr>
<tr>
<td>Upper East</td>
<td>Bolga and Tonga</td>
<td>108</td>
<td>12</td>
<td>96</td>
<td>0</td>
<td>96</td>
</tr>
<tr>
<td>Ashanti</td>
<td>Kumasi and Mamponkeng</td>
<td>132</td>
<td>13</td>
<td>119</td>
<td>0</td>
<td>111</td>
</tr>
<tr>
<td>Eastern</td>
<td>Aburi and Akropong</td>
<td>108</td>
<td>22</td>
<td>86</td>
<td>4</td>
<td>82</td>
</tr>
<tr>
<td>ALL</td>
<td>Ghana</td>
<td>1104</td>
<td>286</td>
<td>832</td>
<td>29</td>
<td>781</td>
</tr>
</tbody>
</table>

Table 25, shows the regional and national distribution of the questionnaires. The selection of districts and schools for the distribution of the questionnaire was influenced by the location of teacher training colleges, whose principals and heads of language departments were relied upon to distribute the questionnaires with the help of their students.
Table 25 shows that the Ashanti region had the highest frequency of questionnaires. The study was based there and the returns from other regions, which had not been completed, were redistributed by the researcher who resided there. Of the 1104 questionnaires distributed, 781 were returned fully completed and it is these which were used for the analyses.

### 6.1.2 Information on Teachers in the Study

This section provides information on the teachers who completed the questionnaires. The same information was collected from LPS teachers with L1 language of instruction and UPS teachers with L2 for instruction. The questionnaire asked for information on the teachers' qualifications, teaching experiences, level of classes taught, sex, age, and urban or rural distribution.

(a) Qualifications

Table 26 shows the distribution of the teachers’ qualifications for both the lower and upper primary schools.

#### Table 26 Distribution of Teachers by Qualifications

<table>
<thead>
<tr>
<th>Levels</th>
<th>All</th>
<th>LPS</th>
<th>UPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Trs.</td>
<td>P1-3</td>
<td>P4-6</td>
<td>Qualifications</td>
</tr>
<tr>
<td>9</td>
<td>6</td>
<td>3</td>
<td>Untrained Middle or secondary school Leavers (Pupil-Teachers)</td>
</tr>
<tr>
<td>5</td>
<td>2</td>
<td>3</td>
<td>Untrained High School or 'A' Level Pupil-Teacher</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>0</td>
<td>Two-year Post Middle Certificate 'B' Teachers</td>
</tr>
<tr>
<td>29</td>
<td>20</td>
<td>9</td>
<td>Two-year Post 'B' Certificate 'A' Teachers</td>
</tr>
<tr>
<td>578</td>
<td>298</td>
<td>280</td>
<td>Four-year Post-Middle Certificate 'A' Teachers</td>
</tr>
<tr>
<td>9</td>
<td>4</td>
<td>5</td>
<td>Two-year Post Secondary Certificate 'A' Teachers</td>
</tr>
<tr>
<td>127</td>
<td>44</td>
<td>83</td>
<td>Three-year Post secondary Certificate 'A' Teachers</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>2</td>
<td>Three-year Specialist Teachers</td>
</tr>
<tr>
<td>1</td>
<td>0</td>
<td>1</td>
<td>Three-year Diploma Certificate Teachers</td>
</tr>
<tr>
<td>1</td>
<td>0</td>
<td>1</td>
<td>Professional Graduate Teachers</td>
</tr>
<tr>
<td>764</td>
<td>377</td>
<td>387</td>
<td>Total Valid cases</td>
</tr>
</tbody>
</table>
The key features of Table 26 are:

- The dominance of the certificate 'A' 4-year trained teachers at both levels of the primary school
- The very low figures for other categories of teachers except the 3 year post secondary certificate 'A' at both levels
- The equal distribution of all categories between the two sectors of the primary school.

Table 26 shows a roughly equal distribution of teachers for both LPS and UPS. It also shows the certificate 'A' 4-year post-middle teachers as the dominant group in both sectors of the primary school. The dominance of this group was because it was the group extensively trained immediately after independence in 1957. They were trained to fill vacancies left by departing expatriates and to meet the teacher requirement for the post independence expansion in educational facilities. For over thirty years this remained the main teacher qualification for primary school teaching. It was raised to the certificate 'A' 3-year post-secondary in 1974, a group unequally distributed between LPS and UPS. The many members in UPS may be explained in terms of the general consideration that they are a more competent academic group than the certificate 'A' 4-year group because of their greater time of studies. The high frequency of this group may be accounted for by it being the only initial teacher training programme in operation in 1995. Although the other qualifications are still valid the Ministry of education has stopped training teachers in these categories. Originally, the 3-year specialist and the 4-year diploma teachers were trained for teacher training and secondary schools. However, now they are posted to junior and senior secondary schools. The very low numbers of graduate professional primary school teachers is because the training programme has only just started with the first teachers graduating in 1994.

(b) Age Distribution

Table 27 shows the distribution of the ages of primary school teachers who participated in the study. It shows a roughly equal distribution for all age bands except bands 1 and 2.
Table 27 Distribution of Teachers by Age

<table>
<thead>
<tr>
<th>Age Bands</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Level Below</td>
<td>20-25 Years</td>
<td>26-30 Years</td>
<td>31-35 Years</td>
<td>36-40 Years</td>
<td>41-45 Years</td>
<td>46-50 Years</td>
<td>50 and Above</td>
</tr>
<tr>
<td>LPS</td>
<td>4</td>
<td>17</td>
<td>65</td>
<td>47</td>
<td>76</td>
<td>53</td>
<td>48</td>
<td>45</td>
</tr>
<tr>
<td>UPS</td>
<td>3</td>
<td>47</td>
<td>76</td>
<td>78</td>
<td>53</td>
<td>48</td>
<td>45</td>
<td>29</td>
</tr>
<tr>
<td>All classes</td>
<td>7</td>
<td>64</td>
<td>141</td>
<td>149</td>
<td>110</td>
<td>104</td>
<td>96</td>
<td>74</td>
</tr>
</tbody>
</table>

The key feature is the roughly equal distribution of teachers in all age bands other than the bands 1 and 2 who numbered about seventy. The very poor representation of the group is due to the rather long time it took an individual to qualify as a teacher.

Table 28 summarises the information on how a teacher becomes qualified in Ghana and helps to explain the low frequency of very young teachers in the data. The relatively low figure for the age band 2 is explained by the low annual output of teachers from the training colleges now as compared to the massive production in the early independence era.

Table 28: The Length of Time it Takes to Qualify as a Teacher in Ghana

<table>
<thead>
<tr>
<th>Qualification</th>
<th>Start</th>
<th>Pr. Sch.</th>
<th>Mid. Sch.</th>
<th>Sec. Sch.</th>
<th>Tr. Train.</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>A4Yr</td>
<td>6</td>
<td>6</td>
<td>4</td>
<td>-</td>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td>A3Yr</td>
<td>6</td>
<td>6</td>
<td>2 or 3</td>
<td>5</td>
<td>3</td>
<td>22 or 23</td>
</tr>
<tr>
<td>1987</td>
<td>6</td>
<td>6</td>
<td>JSS 3</td>
<td>SSS 3</td>
<td>3</td>
<td>21</td>
</tr>
</tbody>
</table>

Before 1987, a child started primary school at age six, spent six years at primary school, 2-4 years at middle school, five years secondary and 3-4 years in teacher training before qualifying as a teacher. This makes the youngest teacher 20 for the certificate ‘A 4-year’ group and 22 for the certificate ‘A 3-year’ post-secondary group. With the phasing out of the certificate ‘A’ 4-year group in 1994 and the major educational restructuring in 1987, the youngest qualified teacher today is twenty-one. The child still starts school at age six, does six years primary, six years junior and senior secondary education and three years teacher training.
(c) Teaching experience

Table 29 shows the number of years teaching for teachers participating in the survey. It shows more than 70% (524 out of 766) of the teachers had over 5 years experience of teaching. Only about 30% of the teachers had less than 5 years teaching experience.

Table 29: Distribution of Teachers by Experience

<table>
<thead>
<tr>
<th>Band</th>
<th>0-5 yr</th>
<th>6-10 yr</th>
<th>11-15 yr</th>
<th>16-20 yr</th>
<th>21-25 yr</th>
<th>26-30 yr</th>
<th>31+ years</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>LPS</td>
<td>88</td>
<td>98</td>
<td>34</td>
<td>32</td>
<td>73</td>
<td>36</td>
<td>18</td>
<td>379</td>
</tr>
<tr>
<td>UPS</td>
<td>136</td>
<td>100</td>
<td>31</td>
<td>24</td>
<td>53</td>
<td>34</td>
<td>9</td>
<td>387</td>
</tr>
<tr>
<td>All classes</td>
<td>224</td>
<td>198</td>
<td>65</td>
<td>56</td>
<td>126</td>
<td>70</td>
<td>27</td>
<td>766</td>
</tr>
</tbody>
</table>

The high frequency of the less experienced teachers is partly explained by the departure of many teachers to look for greener pastures in the mid-eighties and the establishment of a remedial teacher training programme to fill the numerous vacancies created. Although the distribution shows more teachers in the age bands 1 and 2 in the UPS than in the LPS, generally the overall pattern is the same for both groups.

(d) Sex Distribution

Table 30 shows the distribution of teachers by sex in the study by class and location.

Table 30. Distribution of Teachers by Locality and Sex

<table>
<thead>
<tr>
<th>Class</th>
<th>Frequency</th>
<th>Urban</th>
<th>Rural</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>126</td>
<td>63</td>
<td>63</td>
<td>94</td>
<td>31</td>
</tr>
<tr>
<td>2</td>
<td>128</td>
<td>73</td>
<td>55</td>
<td>85</td>
<td>40</td>
</tr>
<tr>
<td>3</td>
<td>129</td>
<td>72</td>
<td>57</td>
<td>92</td>
<td>35</td>
</tr>
<tr>
<td>LPS Totals</td>
<td>383</td>
<td>208</td>
<td>175</td>
<td>271</td>
<td>106</td>
</tr>
<tr>
<td>4</td>
<td>133</td>
<td>67</td>
<td>66</td>
<td>83</td>
<td>47</td>
</tr>
<tr>
<td>5</td>
<td>135</td>
<td>73</td>
<td>62</td>
<td>58</td>
<td>75</td>
</tr>
<tr>
<td>6</td>
<td>128</td>
<td>73</td>
<td>55</td>
<td>32</td>
<td>49</td>
</tr>
<tr>
<td>UPS Totals</td>
<td>396</td>
<td>213</td>
<td>183</td>
<td>173</td>
<td>216</td>
</tr>
<tr>
<td>Overall Total</td>
<td>779</td>
<td>421</td>
<td>358</td>
<td>444</td>
<td>322</td>
</tr>
</tbody>
</table>

It shows there were many more female teachers than male. However, it shows a roughly equal distribution of teachers in both the urban and rural areas and between LPS and UPS. The distribution by sex showed a dominance of females at LPS.
Perhaps the female dominance at LPS may be motivated by the belief in the Ghanaian community that women are generally more able to handle younger children than men because of their motherly role.

6.2 General Questionnaire Results: Findings on Classroom Language Use

6.2.1 Introduction: Language Used for Classroom Subjects

This section presents the results on the teachers’ reported pattern of language use in school and their attitude to the use of GL and English for instruction. It is important to note that the teachers found no difficulty in understanding the questions and answering them. Their responses to section ‘A’, on the teachers individual pattern of language use in relation to the different subject lessons in class and the different subject lessons outside class but in the school did not show any single category with a dominant score. There were three response categories i.e. ‘always in English’, ‘in English more than L1’, and ‘in English and L1 equally’ which showed higher frequency of responses. Henceforth the response options are referred to by the following abbreviations: ‘AE’ for ‘always in English’, ‘EML’ for ‘in English more than L1’, ‘ELE’ for ‘in English and L1 equally’, ‘MLE’ for ‘more in L1 than English’ and ‘AL’ for ‘always in L1’. In section “B”, on attitudes to GL and English, used for instruction at both levels of the curriculum the spread of scores shows a swing towards English on most items.

6.2.2 General Results: Language for Instruction at Lower and Upper Primary Schools

Table 31 presents the results of the survey on the language teachers claim to use for teaching different subjects in the primary school curriculum. The discussion makes comparisons between the survey results and that of the classroom observation study reported in chapter 5. ‘Language alternation’ here as in chapter 5 is used as a cover term for ‘code-mixing’, ‘borrowing’ and ‘code-switching’.
Table 31: The Language of Instruction at the Lower and the Upper Primary Schools

<table>
<thead>
<tr>
<th>Subject</th>
<th>Sector</th>
<th>N</th>
<th>(AF) freq.</th>
<th>(FML) freq.</th>
<th>(ELE) freq.</th>
<th>(MLE) freq.</th>
<th>(AL) freq.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 English language</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>LPS</td>
<td>N=369</td>
<td>251</td>
<td>86</td>
<td>27</td>
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<td>4</td>
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<td></td>
<td>UPS</td>
<td>N=338</td>
<td>326</td>
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<td>2 Gh. language</td>
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<td></td>
<td></td>
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<td>LPS</td>
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<td>7</td>
<td>10</td>
<td>9</td>
<td>42</td>
<td>293</td>
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<tr>
<td></td>
<td>UPS</td>
<td>N=350</td>
<td>9</td>
<td>8</td>
<td>18</td>
<td>52</td>
<td>263</td>
</tr>
<tr>
<td></td>
<td>Overall</td>
<td>N=711</td>
<td>16</td>
<td>18</td>
<td>27</td>
<td>94</td>
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<tr>
<td>3 Mathematics</td>
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</tr>
<tr>
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<td>115</td>
<td>153</td>
<td>41</td>
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</tr>
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<td>UPS</td>
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<td>187</td>
<td>162</td>
<td>39</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Overall</td>
<td>N=762</td>
<td>240</td>
<td>277</td>
<td>192</td>
<td>42</td>
<td>17</td>
</tr>
<tr>
<td>4 Elem. Science</td>
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<td>157</td>
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<td></td>
<td>Overall</td>
<td>N=763</td>
<td>215</td>
<td>246</td>
<td>210</td>
<td>76</td>
<td>16</td>
</tr>
<tr>
<td>5 Life Skills</td>
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<tr>
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<td>LPS</td>
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<td>37</td>
<td>81</td>
<td>140</td>
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<td>1</td>
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<tr>
<td></td>
<td>Overall</td>
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<td>187</td>
<td>235</td>
<td>209</td>
<td>108</td>
<td>21</td>
</tr>
<tr>
<td>6 Agric. Science</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>LPS</td>
<td>N=371</td>
<td>36</td>
<td>78</td>
<td>134</td>
<td>99</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>UPS</td>
<td>N=391</td>
<td>143</td>
<td>160</td>
<td>68</td>
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<td>Overall</td>
<td>N=762</td>
<td>179</td>
<td>238</td>
<td>202</td>
<td>118</td>
<td>25</td>
</tr>
<tr>
<td>7 Social Studies</td>
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<td>82</td>
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<td>87</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>UPS</td>
<td>N=388</td>
<td>161</td>
<td>166</td>
<td>46</td>
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<td></td>
<td>Overall</td>
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<td>248</td>
<td>189</td>
<td>100</td>
<td>27</td>
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<td></td>
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<td>LPS</td>
<td>N=374</td>
<td>28</td>
<td>57</td>
<td>135</td>
<td>107</td>
<td>47</td>
</tr>
<tr>
<td></td>
<td>UPS</td>
<td>N=386</td>
<td>81</td>
<td>159</td>
<td>99</td>
<td>48</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Overall</td>
<td>N=760</td>
<td>109</td>
<td>216</td>
<td>234</td>
<td>155</td>
<td>53</td>
</tr>
<tr>
<td>9 Physical Educ.</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>LPS</td>
<td>N=374</td>
<td>71</td>
<td>104</td>
<td>122</td>
<td>61</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>UPS</td>
<td>N=386</td>
<td>206</td>
<td>124</td>
<td>48</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Overall</td>
<td>N=760</td>
<td>277</td>
<td>228</td>
<td>170</td>
<td>67</td>
<td>18</td>
</tr>
</tbody>
</table>

Red colour shows dominant frequency and blue shows direction of emphasis.

The results for classroom language use suggest that the form of language which teachers used for instruction is 'language alternation'. The majority claim for all subjects other than languages and physical education is either the equal use of English and GL (ELE) or the predominant use of English (EML).

The main features of interest in Table 31 are:

- The high frequency who report that they always use English for teaching English when taught as a subject
- The high frequency who report regular use of L1 in a GL.
- The tendency for a majority of teachers to claim the use of mixed language in all content subjects.
Generally the results on the language which teachers actually used for instruction show a strong correlation with the findings of the language teachers used for instruction in the classroom observation reported in chapter 5. For example, while in the survey the results showed 75% of the teachers reporting exclusive use of English when it is taught as a subject, that of the classroom observation study showed 80% of the teachers observed using 90-100% English. A similar pattern emerges when the results are broken down for LPS and UPS. While the results for the observation study showed 98% use of English at the LPS, that of the survey shows 68% use of English. This disparity is explained by the fact that only one class represented the three LPS classes in the observation study while all members of the group were represented in the survey. The results for the UPS showed 84% of the respondents reporting the exclusive use of English and in the classroom observation study, the average for the UPS was 93% use of English. Again the explanation is as above.

Similarly the pattern for GL in the survey is not different from that of the classroom observation study. For example, the survey showed 78% of the teachers reporting the exclusive use of GL while that for the classroom study showed teachers using over 90% Twi (GL). Again when this result is broken down for LPS and UPS it is not different. For example, for the LPS, the survey shows 81% of the teachers reporting the exclusive use of GL while the classroom observation shows 98% use of GL for Year 3. For the UPS the survey showed 75% reporting exclusive use of GL and the classroom observation study showed 98% use of GL. The difference is again explained in the number of representatives for each study.

The data for the LPS shows teachers claiming to use both English and GL for instruction of all subjects. The majority consistently claim to use both languages equally (ELE). However, the pattern for UPS differs because for half the school subjects the majority claim they always use English (AE) and the other half the majority claim to use more English than GL (EML).

In mathematics and science, the results show that 'language alternation' is the pattern of classroom language use. The tendency is for teachers to report that they used more
English than GL. For example, in mathematics, the results show 277 (36.4%) of the teachers reporting the predominant use of English (EML), 240 (31.5%) the exclusive use of English (AE) and 192 (25.2%) equal use of both languages (ELE). However, this obscures the situation when it is applied at LPS and UPS. For example, the results for LPS mathematics show 153 (41%) reporting the equal use of English and GL (ELE) and 115 (31%) the predominant use of English. The pattern for the UPS differs from all class results because the majority claim they always used English (AE). For example, 187 or 48% report that they exclusively use English but this claim is undermined by a total of 201 (52%) reporting that they either use English predominantly or they used both languages equally. This response indicates the general use of ‘language alternation’. A similar pattern was revealed for science. The results for science show ‘language alternation’ as the main form of instruction in the primary school. The pattern shows 246 (32.2%) of the survey respondents reporting the predominant use of English (EML), 215 (29%) exclusive use of English (AE) and 210 (27%) the equal use (ELE) of both languages. Again this obscures the pattern for LPS and UPS. For example, for LPS, the majority of 148 (40%) reported equal use (ELE) of both languages while for UPS the report shows 165 (43%) reporting the exclusive use of English (AE), and a total of 219 (56%) reporting the use of mixed languages (i.e. predominant use of English (MEL) and (ELE). These results show that teachers rely on frequent language alternation in the classroom for teaching.

For all other subjects, a similar pattern was reported. For example, the Life skills’ report shows 187 (24.6%) exclusive use of English (AE), 235 (30.9%) reporting the predominant use of English (EML), and 209 (27 %) reporting equal use of both languages (ELE). However, results for LPS for the same subject show a majority of 140 (38%) reporting an equal use of both languages (ELE) and that for the UPS show 150 (39%) reporting the exclusive use of English (AE) and 154 (39.8%) reporting the predominant use of English (MEL). Apart from cultural studies, the pattern of language use for agricultural science, and social studies show alternation between English and GL. All these support the finding that teachers’ classroom language is one of a mixture of English and Ghanaian languages (See chapter 5).
6.2.3. General Results: Teachers Language for Classroom Functions

This section presents the results on the teachers' views on what language they use for performing some classroom functions. 'Language alternation' here as in chapter 5 is used as a cover term for 'code-mixing', 'borrowing' and 'code-switching'. Table 32 shows overall information for the primary school as a whole, and information for LPS and UPS. The results show teachers reporting the exclusive use of English in the seventeen functions surveyed as follows:

- Eleven for the whole primary (functions 1, 2, 5, 7, 8, 9, 10, 13, 14, 16, and 17)
- fourteen in UPS (functions 1, 2, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 16, and 17)
- and three in the LPS (functions 5, 14, and 16).

Table 32. Results of the Frequency of Code Used for Classroom Functions

<table>
<thead>
<tr>
<th>FUNCTIONS</th>
<th>Total</th>
<th>(AE)</th>
<th>(EML)</th>
<th>(ELE)</th>
<th>(MLE)</th>
<th>(AL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Introduce lesson topic to class</td>
<td>LPS N=378</td>
<td>110</td>
<td>95</td>
<td>114</td>
<td>42</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>UPS N=396</td>
<td>263</td>
<td>90</td>
<td>41</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>General N=774</td>
<td>373</td>
<td>185</td>
<td>155</td>
<td>44</td>
<td>17</td>
</tr>
<tr>
<td>2. Present lesson content</td>
<td>LPS N=371</td>
<td>81</td>
<td>98</td>
<td>121</td>
<td>53</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>UPS N=388</td>
<td>207</td>
<td>129</td>
<td>48</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>General N=759</td>
<td>288</td>
<td>227</td>
<td>169</td>
<td>57</td>
<td>18</td>
</tr>
<tr>
<td>3. Give explanations of content</td>
<td>LPS N=373</td>
<td>32</td>
<td>87</td>
<td>146</td>
<td>66</td>
<td>42</td>
</tr>
<tr>
<td></td>
<td>UPS N=388</td>
<td>134</td>
<td>160</td>
<td>78</td>
<td>15</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>General N=761</td>
<td>166</td>
<td>247</td>
<td>224</td>
<td>81</td>
<td>43</td>
</tr>
<tr>
<td>4. Specify examples</td>
<td>LPS N=362</td>
<td>61</td>
<td>81</td>
<td>131</td>
<td>62</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>UPS N=381</td>
<td>150</td>
<td>147</td>
<td>61</td>
<td>14</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>General N=743</td>
<td>211</td>
<td>228</td>
<td>192</td>
<td>76</td>
<td>36</td>
</tr>
<tr>
<td>5. Give routine commands on discipline and classroom organisation</td>
<td>LPS N=379</td>
<td>114</td>
<td>112</td>
<td>106</td>
<td>31</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>UPS N=395</td>
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<td>114</td>
<td>42</td>
<td>3</td>
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</tr>
<tr>
<td></td>
<td>General N=774</td>
<td>347</td>
<td>226</td>
<td>148</td>
<td>34</td>
<td>19</td>
</tr>
<tr>
<td>6. Give rubrics of class assignment e.g. explain task to be done</td>
<td>LPS N=377</td>
<td>49</td>
<td>85</td>
<td>132</td>
<td>72</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>UPS N=392</td>
<td>146</td>
<td>152</td>
<td>70</td>
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<td>3</td>
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<tr>
<td></td>
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<td>195</td>
<td>237</td>
<td>202</td>
<td>93</td>
<td>42</td>
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<tr>
<td>7. Give explanations of work on the board</td>
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<td>111</td>
<td>128</td>
<td>56</td>
<td>15</td>
</tr>
<tr>
<td></td>
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<td></td>
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<td>272</td>
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<td>16</td>
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<tr>
<td>8. Give instructions for homework</td>
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<td>80</td>
<td>144</td>
<td>62</td>
<td>37</td>
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<tr>
<td></td>
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<td>115</td>
<td>61</td>
<td>17</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>General N=762</td>
<td>242</td>
<td>195</td>
<td>205</td>
<td>79</td>
<td>39</td>
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</table>
9. Explain meaning in a reading aloud lesson

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<th>General</th>
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</thead>
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<td>96</td>
<td>114</td>
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10. Check understanding of new vocabulary, phrases and sentences

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<td>31</td>
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</table>

11. Talk to individual pupils in class

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<td>111</td>
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<tr>
<td></td>
<td>25</td>
<td>6</td>
<td>31</td>
</tr>
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</table>

12. Talk to a group or group work in class

<table>
<thead>
<tr>
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<th>LPS</th>
<th>UPS</th>
<th>General</th>
</tr>
</thead>
<tbody>
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13. Provide corrections on errors in class

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</thead>
<tbody>
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<td></td>
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14. Send pupils on errands to other teachers or head teacher

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<td></td>
<td>34</td>
<td>7</td>
<td>41</td>
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</table>

15. Create humour in class

<table>
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<th>UPS</th>
<th>General</th>
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</thead>
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</tr>
<tr>
<td></td>
<td>60</td>
<td>12</td>
<td>72</td>
</tr>
</tbody>
</table>

16. Praise pupils’ work in class

<table>
<thead>
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<th></th>
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<th>UPS</th>
<th>General</th>
</tr>
</thead>
<tbody>
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<td>N=375</td>
<td>N=392</td>
<td>N=767</td>
</tr>
<tr>
<td></td>
<td>86</td>
<td>61</td>
<td>51</td>
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</tr>
<tr>
<td></td>
<td>15</td>
<td>3</td>
<td>6</td>
</tr>
</tbody>
</table>

17. Give summaries of lesson content

<table>
<thead>
<tr>
<th></th>
<th>LPS</th>
<th>UPS</th>
<th>General</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td>N=391</td>
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</tr>
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<tr>
<td></td>
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<td>24</td>
</tr>
</tbody>
</table>

| Key: Red indicates a simple majority percent and blue shows direction of emphasis. |

The main points of interest in Table 32 are:

- The tendency for many teachers to report the exclusive use of English.
- The tendency for many teachers at UPS to report the exclusive use of English for many functions
- The tendency for LPS teachers to report the equal use of English and GL.

The results show a variation in the pattern of language use. Generally, there is the predominant use of English for all classes but with some ‘language alternation’ between English and GL. Of the seventeen classroom functions surveyed the results for all classes show teachers reporting the exclusive use of English for eleven, the
predominant use of English for five (i.e. functions 3, 4, 6, 11 and 12) and equal use of both languages for one (function 15). This general picture however obscures the pattern for LPS and UPS. For example, in the LPS teachers reported the exclusive use of English in only 3 of the 17 functions. They also reported the predominant use of English in only one (i.e. function 10) and for the other thirteen functions they reported the equal use of the two languages. Therefore, for the LPS the main pattern of classroom language use is ‘language alternation’. However, the results for UPS shows the exclusive use of English in 14 of the 17 functions surveyed, and for the other 3 functions they reported the predominant use of English (functions 3, 6, and 15).

The only function for which LPS teachers reported predominant use of English is for checking understanding (item 10). However, this seems inappropriate and is unexpected. At this level one might expect the greater use of the L1 for checking vocabulary and not English. Although one possible explanation for this is misunderstanding of the question, the researcher is inclined to believe that this is unlikely. My experience as a teacher trainer and during the classroom observation is that teachers use a formulaic expression to check understanding, ‘Do you understand?’ and the automatic response is ‘Yes Sir/madam’, when the reality is that the children do not really understand. The teacher is aware that the pupils do not understand and the learners are aware that the teacher knows they do not understand. Yet they carry on without making further efforts to ensure that real understanding takes place. This is perhaps the result of the culture of teaching and learning that has developed over the years. Pupils hardly question what the teacher says because they have come to perceive the teachers as givers of knowledge and themselves as receivers and the teachers see the children as receivers of knowledge. This is also motivated by the need not to waste time so as to enable the teachers to complete the syllabus. In addition, the pupils are very much aware that any claim of not understanding might be interpreted by the teacher as being unnecessarily rude, especially when a visitor is around. Other possible explanations for the response are that teachers thought the item applied only to English lessons. The teachers may have interpreted their use of English to request the learners to give L1 equivalents of
vocabulary items as a way of using English to check the vocabulary. However, teachers could be right because in most subjects the textbooks they use are in English and most define the vocabulary in English, so they could be asking the pupils to reproduce the definitions in English. The different patterns for LPS and UPS can be explained in terms of the official language for each level. The pattern for the two levels shows that both levels have been influenced by the official policy because they both predominantly reported the use of the official language of instruction.

6.3 Results for Estimated Speaking Time in Subjects

Table 33: Teachers’ Estimate of Spoken Time for Language Codes in Four Subjects

<table>
<thead>
<tr>
<th>ENGLISH LANGUAGE</th>
<th>Lower Primary School</th>
<th>Upper Primary School</th>
<th>All Classes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated Time</td>
<td>MA SC LS CS</td>
<td>MA SC LS CS</td>
<td>MA SC LS CS</td>
</tr>
<tr>
<td></td>
<td>N378 N369 N376 N134</td>
<td>N392 N387 N387 N303</td>
<td>N770 N776 N763 N763</td>
</tr>
<tr>
<td>Never (0-20%)</td>
<td>10 16 21 29</td>
<td>8 4 9 9</td>
<td>18 20 30 38</td>
</tr>
<tr>
<td>Rarely (21-40%)</td>
<td>60 59 80 103</td>
<td>29 36 35 59</td>
<td>89 95 115 162</td>
</tr>
<tr>
<td>Sometimes (41-60%)</td>
<td>149 149 156 133</td>
<td>67 99 118 135</td>
<td>216 248 274 268</td>
</tr>
<tr>
<td>Often (61-80%)</td>
<td>119 105 91 86</td>
<td>174 153 143 124</td>
<td>293 258 234 210</td>
</tr>
<tr>
<td>Very often (81-100%)</td>
<td>40 40 28 23</td>
<td>114 95 82 62</td>
<td>154 135 110 85</td>
</tr>
</tbody>
</table>

Key: Bold Print shows the simple majority figure. MA = mathematics, SC = science, LS = life skills, CS = cultural studies.

Table 33 shows results for all classes, LPS and UPS teachers estimate of the amount of time they devoted to the use of English, GL and a combination of the two, in the priority areas of mathematics, science, life skills and cultural studies. The results show most teachers in LPS used 41 to 60% of the lesson time speaking English and teachers in UPS reported that they used 61 - 80% of the time speaking English in 3 subjects and in one, most spent 41 - 60% time. In the LPS, where we expected most teachers to report a greater amount of time using the L1, because it is the official language for instruction, the result shows that 41-60% of time was spent using the L1 in all four subjects. This is an admission of the unofficial use of switches into English by the group and it supports the findings on the language which teachers reported as using for classroom functions. The two together support the findings of the observation study on classroom language use which was reported in chapter 5.
Information for the UPS which has English as the official language shows the predominant use of 61-80% time for speaking English in mathematics, science and life skills. For the cultural studies however, the same group estimated 41-60% for using English. The estimate for cultural studies is more realistic as the subject lends itself to the use of the vernacular more than the other subjects. The pattern of response suggests that teachers alternate language between English and the L1 with a tendency to use more English in most subjects. This supports the pattern observed in the detailed classroom observation study.

6. 4 Results of Estimated Competence of Pupils in English Language Skills

The teachers were asked to estimate the competence of pupils in English and a Ghanaian language for two reasons. The first was to ascertain the validity of the complaints from sections of the Ghanaian public, parents and teachers about the deteriorating academic standards of primary school pupils and the second was to compare the estimates with the results of an unofficial test administered to all class 5 pupils to obtain a rough idea of the pupils’ reading proficiency in a science text. The findings show that the teachers’ estimates supported the complainants. They lamented the fact that many pupils cannot listen, speak, or read and write to an adequate standard in both English and Ghanaian language. Also most teachers claimed that the majority of their pupils were simply not fluent even in their local language and could not participate effectively in discussions of everyday activities, even though the Ghanaian language taught in most schools was the first language of the pupils. This reveals a worrying picture.

Skutnabb-Kangas (1976) describing the academic performance of Finnish immigrant children in Sweden found that in everyday situations the children could converse in both their first and second languages. However, their academic language and literacy skills in both languages lagged behind that of their every day language use. If Ghanaian children in the primary school are not fluent in everyday language use in L1,
it is difficult to see how they can learn a second language, which they hardly ever use, for basic communication let alone for carrying out cognitively demanding academic language skills. This situation needs redressing and one way to achieve this is to develop fluency in the L1 before developing the L2. However, if this cannot be attained, an alternative would be to encourage 'language alternation' in their initial study of the second language, until they have mastered it sufficiently to benefit from its use as a language of instruction.

6.5 Results of Pupils’ Reading Ability

6.5.1 Cloze Test Results: Year 5

To find out the reading proficiency of the pupils in English and a Ghanaian language, an unofficial reading proficiency test was designed and used with class 5 pupils. It was used in four schools to assess the validity of complaints by teachers, parents and the general public that the academic performance of the pupils in Ghanaian primary schools has deteriorated. The test took the form of a cloze test and was based on the University of Edinburgh cloze test (For details of the construction of the test see section 4.4.5). The results are not only very depressing but show strong support for the complainants (see Appendix 11a-d). Figure 10 shows the range of pupil scores.

Figure 10: Cloze Test Results for English Language
In three of the four schools the results were very poor. In these three schools scores of most pupils were within the range 0-20%. The number of pupils in each school who scored outside this range was 2-5%. It was only in one school (Aborfo School), the good urban school, that scores were recorded in other ranges (i.e. 26 pupils (43%) within the range 0-20%, 27 pupils (44%) within the 21-40% range, 5 pupils (8%) in range 41-60% and 3 pupils (5%) within the 61-80% range, but none in the 81-100% score range). Makaranta had (46) 98% of the pupils in this range while Zongo and Wa Para Military schools had all their pupils within the 0 - 20% range. Table 34 shows the statistics for English for each school.

Table 34: Statistics for English Examination

<table>
<thead>
<tr>
<th>School</th>
<th>Population</th>
<th>Mean</th>
<th>Std. deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aborfo</td>
<td>N = 61</td>
<td>mean = 5.1</td>
<td>Std = 3.4</td>
</tr>
<tr>
<td>Makaranta</td>
<td>N = 47</td>
<td>mean = 0.57</td>
<td>Std = 1.2</td>
</tr>
<tr>
<td>Zongo</td>
<td>N = 21</td>
<td>mean = 0.38</td>
<td>Std = 0.67</td>
</tr>
<tr>
<td>Wa Para Military</td>
<td>N = 37</td>
<td>mean = 0.78</td>
<td>Std = 0.78</td>
</tr>
</tbody>
</table>

The performance for Twi was no better.

Figure 11: Cloze Test Results for Twi Language

Again it is only in Aborfo school that the results show a spread across the full range with 34 pupils (58%) within the range 0-20%, 15 pupils (25%) between 21-40%, 8 pupils (13%) in the range 41-60% and 4 pupils (7%) within the range 61-80%. In all
other schools scores are concentrated in the range 0-20%. Table 35 shows the statistics for Twi for the individual schools.

Table 35 Statistics for Twi Examination

<table>
<thead>
<tr>
<th>School</th>
<th>Population</th>
<th>Mean</th>
<th>Std. deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aborfo</td>
<td>N = 61</td>
<td>mean = 4.5</td>
<td>Std = 4.4</td>
</tr>
<tr>
<td>Makaranta</td>
<td>N = 47</td>
<td>mean = 0.38</td>
<td>Std = 1.1</td>
</tr>
<tr>
<td>Zongo</td>
<td>N = 21</td>
<td>mean = 0.67</td>
<td>Std = 1.96</td>
</tr>
<tr>
<td>Wa Para Military</td>
<td>N = 37</td>
<td>mean = 0.89</td>
<td>Std = 2.23</td>
</tr>
</tbody>
</table>

6.5.2 Reasons for Poor Performance

There are a number of explanations for the poor performance. First it is possible that the test was too difficult for P5 pupils. However, the test was selected from a recommended textbook for the grade and the topic ‘Keeping Healthy’ was general knowledge, and was one that children could be expected to be familiar with. Secondly, six P5 teachers from other schools were asked about the suitability of the test for P5. A similar checking procedure was followed with the Twi version. It is therefore not easy to explain the poor performance of the Year 5 pupils for both languages. However, four possible reasons are the rationale given to pupils for the test, the strict examination conditions, the suitability of the test for the grade, and the poor reading ability of the pupils. With regard to the examination conditions, two main reasons identified are the strict supervision and pupils lack of familiarity with printed examination papers.

One possible reason for poor performance is the explanation given to pupils as the rational for the examination and the research as a whole. At the beginning of the research and just before the examination, the pupils were made to understand that the purpose of the examination was to detect learning difficulties which Ghanaian children faced in both English and Ghanaian languages. It was also explained that every item in the test is associated with a particular learning difficulty. Therefore, any item most learners get correct will be interpreted as meaning that Ghanaian children have no difficulty with that learning problem. Therefore, the education authorities would not
find solutions for the difficulty due to that item. So, as the representatives of Ghanaian primary school children, they should be honest and sincere in the conduct of the test. They should not teach their friends nor ask for help because the test results will not be published and their teachers would not see them either. All the study is interested in is helping to identify the learning difficulties of Ghanaian primary school children. This rationale was given in the vernacular (Twi) to ensure comprehension.

The pupils followed the objectives of the study. No pupil made any attempt to copy or seek help or to help another child in any of the four schools that took part. The presence of the researcher throughout the examination ensured that teachers could not give help to their pupils, even if they wanted to. Therefore, the results are an honest reflection of the pupils’ abilities in both English and Twi. The second reason for the poor performance is linked to the supervision and the conduct of the examination. Apart from Aborfo school, all pupils of the other three schools were using a printed examination paper for the first time. Usually, classroom examinations are written on the board and read out before they answered the questions thereby helping those who cannot read by themselves, but in this test, they were required to read the text themselves and many who could not read simply returned a blank sheet (see Appendix 11 ‘F’). Others just wrote down portions of the text which had no bearing to the answers on the answer sheet (see Appendix 11 ‘E’). A subsidiary reason arising from the conduct of the examination is the type of supervision. The normal end of the year examination is usually supervised by the class teacher alone and the seating arrangement is the one used during normal classes. Sometimes the teachers sit outside chatting on the veranda leaving the pupils to write the examination, but this was not the case in this study. Although, the classroom organisation was not disturbed the examination was supervised by the researcher, the class teacher and the head teachers who paid regular visits during the course of the test.

A third reason for the pupils’ poor performance could be that the test was not suitable for the grade. Although, it was based on the class text material it is possible that the design itself was not suitable for the class. Apart from being the first time most pupils
were doing a test on printed material it was their first encounter with a cloze test and this might explain the poor performance. Although the text was taken from the pupils science textbook for class 5 (see Appendix 10a), the language might nevertheless be higher than the ability of most pupils. The poor results might be associated with the level of English being too high for the pupils. This result therefore confirms the claim that the level of language in science, English and mathematics textbooks is too high for the pupils. Sadly, if pupils have to learn from texts which are beyond their ability, it is difficult to see how progress can be made. This may partly account for the general deterioration in performance of primary school pupils academic ability in English which has lately been the subject of much concern among parents, teachers and the press in Ghana. A fourth reason is the low ability of the pupils who were sampled. Most of the pupils cannot read nor write in either English or a Ghanaian language. Even in classroom interactions, it was difficult for their teachers to get them to express themselves beyond formulaic expressions in English.

When it is recognised that the sample for the study was a representative sample of good and poor schools within the Ghanaian primary education system, it becomes clear that the Ministry of education, the teachers and parents, and all who are concerned about the deteriorating performance in education should do something about improving the situation because the results are not only discouraging but also very alarming.

6.6 Attitudes of Teachers to the Language of Instruction

6.6.1 Introduction

This section presents the results on teachers’ attitudes to the use of English and GL as the languages of instruction. Firstly, the study recognises that a positive attitude to one language does not necessarily mean a less positive attitude to the other (Baker1995:90). Secondly, it recognises that individual items tend by themselves to be unreliable when used to judge attitudes (Baker 1995:83).
According to Baker (1995), earlier studies on bilingual language attitudes kept the languages under study apart because the questions were designed to reflect either a positive or a negative attitude to one language as a single entity. This meant that the languages were viewed as being in competition. The lack of questions concerning both languages meant that each language was considered as a threat to the other, so that any gain for one language meant a loss for the other. This approach, he argues, suggests that bilingualism is not advantageous (Baker 1995:76).

In section ‘B’ of the questionnaire, the participants’ views were sought on their attitudes to teaching in English and a Ghanaian language. These included questions with both positive and negative attitudes to each language as a single entity as well as questions with integrated viewpoints, though the study does not believe that bilingualism is disadvantageous. I also recognise that most people tend to follow the suggestions given to them. However, I was keen to avoid directing the thoughts of the respondents, which explains why I included questions on contrasting opposites. Through this approach, it hoped to get opinions on bilingualism without actually suggesting it to them.

### 6.6.2 Definitions of Language Attitudes

According to Baker (1995) attitude is a term which lacks a precise and generally accepted definition. Baker (1995) claims that attitude is a hypothetical construct used to explain the direction and persistence of human behaviour. Attitudes are a convenient and efficient way of explaining consistent patterns of behaviour. Attitudes are latent and inferred from the direction and persistence of external behaviour. Attitudes often manage to summarise, explain and predict behaviour (Baker 1995:11). Ajzen (1988:4) argues that an attitude is a ‘disposition to respond favourably or unfavourably to an object, person, institution or event’ (Ajzen 1988:4 cited in Baker 1995 ibid.) In educational research, Baker (1995) states that attitude is regarded both as input and output. It therefore serves both as a predisposing factor which affect the outcomes of education, as well as being an outcome in itself. He also explains that attitude components may be classified into three groups: cognitive, affective and
conative or action components. The cognitive component deals with thoughts and beliefs. The affective component concerns feelings of love or hate and the conative component deals with the readiness for action. However, he points out that compatibility is not always achieved between the cognitive and affective components. A person may overtly express a favourable attitude to a language while covertly having a negative feeling for its use in education. Defence mechanisms and socially desirable responses may disguise inner attitudes (Baker 1995:12).

Following Baker (1995) a five-point attitude response questionnaire was designed to investigate the teachers' attitude to languages used for instruction. The attitude questions were part of a general questionnaire that surveyed the teachers' language use in classrooms. The design avoided asking respondents a direct question. It simply asserted a view which was followed with five response options. It asked respondents to give one of five responses to each item:

- Strongly Agreed (SA)
- Agree (A)
- Neither Agree Nor Disagree (NAND)
- Disagree (D)
- Strongly Disagree (SD)

(For motivations and questionnaire construction see 4.3.3, and for attitude questions see section B of Appendix 9a qts 17-40, pp 448-453, Appendix 9b questions 17-40 pp 461-465, Appendix 9c qts 17-40 pp 472-476, Appendix 9d qts 17-40 pp 483-487, Appendix 9e qts 17-40 pp 496-502 and Appendix 9f items 1-25 pp 505-506.

Before discussing the results, it is important to state that the respondents had no difficulty in expressing their views on the items. However, it is difficult to say the extent to which responses reflected the teachers' misinterpretation and their interpretation in relation to realities of the classes they taught. On most items, there was a spread of scores across the five options. The 'Neither Agree nor Disagree' option was used very rarely: on all items it received less than 10% of the responses. I suspect that the very few respondents who did not want to express a view used it. It could also have been used as a means of avoiding items which were considered as irrelevant, ambiguous or difficult.
6.7 Attitudes of Teachers to the Language for Instruction in the Lower and Upper Sectors of the Primary School

This section reports the results on attitudes to teachers’ use of English and GL for instruction at LPS (classes 1 - 3) and UPS (classes 4 - 6) using Table 36.

Table 36. The Frequency of Responses to Language Attitude Items

<table>
<thead>
<tr>
<th>Item</th>
<th>LPS (Classes 1 - 3)</th>
<th>UPS (Classes 4 - 6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The uses of Ghanaian language as medium of instruction in classes to three contributes to primary school pupils’ poor academic performance in English.</td>
<td>freq. 191</td>
<td>freq. 227</td>
</tr>
<tr>
<td>2. I am unable to teach Ghanaian language properly because I did not receive adequate training in how to teach Ghanaian language during my teacher training.</td>
<td>freq. 126</td>
<td>freq. 124</td>
</tr>
<tr>
<td>3. I would not want to become Ghanaian language teacher because such teachers are not respected.</td>
<td>freq. 28</td>
<td>freq. 37</td>
</tr>
<tr>
<td>4. The use of a Ghanaian language medium of instruction throughout the primary school will improve basic education examination results.</td>
<td>freq. 58</td>
<td>freq. 31</td>
</tr>
<tr>
<td>5. A Ghanaian language should be the sole medium of instruction in the six years of Basic primary education.</td>
<td>freq. 35</td>
<td>freq. 17</td>
</tr>
<tr>
<td>6. Only one Ghanaian language should be taught in all Ghanaian primary schools.</td>
<td>freq. 55</td>
<td>freq. 72</td>
</tr>
<tr>
<td>7. English language should be the sole medium of instruction in the six years of Basic Primary Education.</td>
<td>freq. 196</td>
<td>freq. 229</td>
</tr>
<tr>
<td>8. School children in each region should learn only one dominant language of the region.</td>
<td>freq. 196</td>
<td>freq. 220</td>
</tr>
<tr>
<td>9. Posting of newly trained teachers should be to their home regions to enable them teach Ghanaian language.</td>
<td>freq. 183</td>
<td>freq. 200</td>
</tr>
<tr>
<td>10. Posting of teachers should be outside their home regions to force them to speak English to their pupils most of the school time.</td>
<td>freq. 206</td>
<td>freq. 220</td>
</tr>
<tr>
<td>11. The practice where all primary school teachers teach both English and a Ghanaian language should be stopped.</td>
<td>freq. 94</td>
<td>freq. 141</td>
</tr>
<tr>
<td>12. Primary school teachers should have officially permission to use both Ghanaian language and English in each lesson as medium of instruction (i.e. Teachers should be allowed to translate, code mix and code switch in the two languages).</td>
<td>freq. 229</td>
<td>freq. 197</td>
</tr>
<tr>
<td>13. A pass in a Ghanaian language should be a condition for promotion of primary school teachers.</td>
<td>freq. 134</td>
<td>freq. 123</td>
</tr>
<tr>
<td>14. A pass in a Ghanaian language should be a condition for admission to Junior secondary school (J.S.S) pupils to the Secondary school (S.S.S.).</td>
<td>freq. 167</td>
<td>freq. 176</td>
</tr>
<tr>
<td>15. A pass in English language should remain a condition for admission to the senior secondary school (S.S.S.).</td>
<td>freq. 339</td>
<td>freq. 322</td>
</tr>
<tr>
<td>16. A pass in English language should remain a condition for admission of teacher trainer to colleges.</td>
<td>freq. 341</td>
<td>freq. 326</td>
</tr>
<tr>
<td>17. A pass in Ghanaian language should be a condition for admission of teacher trainer.</td>
<td>freq. 168</td>
<td>freq. 175</td>
</tr>
<tr>
<td>18. A pass in English language should remain a condition for admission of students to the university.</td>
<td>freq. 325</td>
<td>freq. 313</td>
</tr>
<tr>
<td>19. Parents will be happy if primary school pupils are literate in Ghanaian language by the end of class six.</td>
<td>freq. 215</td>
<td>freq. 223</td>
</tr>
<tr>
<td>20. Parents will be happy if primary school pupils are literate in English language by the end of class six.</td>
<td>freq. 342</td>
<td>freq. 350</td>
</tr>
<tr>
<td>21. I combine English and Ghanaian language in most of my lessons in the primary school (i.e. I code mix and code switch between a Ghanaian language and English).</td>
<td>freq. 298</td>
<td>freq. 223</td>
</tr>
<tr>
<td>22. I think that the combined use of English and Ghanaian Language (code-mixing and code switching) in a lesson is educationally beneficial to the pupils.</td>
<td>freq. 308</td>
<td>freq. 253</td>
</tr>
</tbody>
</table>

210
In discussing the data in Table 36, I have combined responses to the ‘strongly agree’ and ‘agree’ options into one category of ‘agree’ which is abbreviated as ‘A’. I have also combined the ‘strongly disagree’ with ‘disagree’ option to form the category ‘disagree’, which is represented by the letter ‘D’. The ‘neither agree nor disagree’ option is left untouched, thus giving the three responses of ‘A’ = Agree, ‘D’ = Disagree and ‘NAND’ = Neither agree nor disagree. On the whole, the results show that teachers are very positive towards English. It also shows that teachers are generally tolerant of both English and the L1. Finally, the results also support the findings of the classroom observation and show that ‘language alternation’ is the unofficial method of instruction at all levels in the primary school. Of the 25 items surveyed at both levels ten were pro-English responses at both levels. These pro-English items were 1, 4, 5, 6, 7, 13, 15, 16, 18, and 20. Three items which were pro-Gl responses at both levels were 2, 3, and 19. Nine others showed ambivalence at both levels and these were 8, 9, 10, 11, 12, 14, 17, 21, and 22. There were three which showed ambiguity (23, 24, and 25) and three others favoured bilingualism (11, 21, and 22).

6.7.1 The Dominance of Favourable Attitudes to English

On the whole, teachers regarded the use of English for instruction as contributing to a good academic performance. The ten pro-English responses show English is the preferred language of instruction for the entire six years of primary education. This might be influenced by the belief that a greater exposure to the target language enhances a knowledge of it. Teachers also want a pass in English to be a condition for each of the following:
• admission of junior secondary school students into senior secondary school
• admission of trainees into teacher training colleges and
• admission of students for university degrees

These results are possibly due to English being the national language and is considered to be a greater unifying agent for the Ghanaian society than any indigenous language, at least for the literate group. Certain sections of the Ghanaian community do not favour the single indigenous language which is potentially the candidate for a national language. English also has a greater amount of teaching material compared to the local languages. In addition, many elderly teachers believe that the apparent success of colonial education was due to its sole use of English and the prohibition of the local languages in class. This however is unfortunate because it suggests that education simply means a knowledge of English which sadly is the view held by most Ghanaians. The idea that colonial education only used English for instruction is erroneous because the sole use of English in colonial education stopped with the Phelps-Stoke Committee Report (1927), British Educational Policy in Africa, which recommended the use of indigenous languages in education. Teachers also want newly trained graduates to be posted outside their home regions to force them to speak English to their pupils most of the time. Teachers also feel that parents would be happy if primary school pupils were literate in English by the end of year six. An interesting contrast here is the degree of variation in the 'strongly agree' options for items 20 and 19 (i.e. Item 19 is a response to how parents will feel about their children's literacy in a Ghanaian language and item 20 is the same question for English). The responses show 12% strongly agree with item 19 as against 44% for item 20 (See Appendix 9f). This seems to suggest that teachers feel that parents will be much happier if pupils are literate in English. The reason for this is simply the narrow interpretation of education in terms of a knowledge of English, which they are well aware correlates with income, prestige of employment and general economic advantages (Gibbons 1987:6).
Table 36 also shows that the LPS and UPS teachers have the same response to all the items except one. This was the question about whether or not newly trained teachers should be posted to their home regions, to enable them teach a Ghanaian language. The LPS teachers, whose official language of instruction is the LI, showed 183 in favour and 184 against (with 13 abstaining). However, the UPS teachers showed for the same question 200 in favour and 174 against (with 19 abstaining). A possible explanation for this is that the LPS teachers who use a Ghanaian language regard the LI as an obstacle to the acquisition of the eventual language for learning. But the UPS teachers, who are faced with real communication problem with pupils in English, feel that an effective teaching of the LI at the lower primary school might bridge the gap and encourage the pupils to have a more positive attitude to the learning of English.

Although the responses did not indicate any problem with the teaching of GL, information from elsewhere suggests that teachers did have some problems. For example, during the classroom observation, one of the head-teachers drew my attention to the fact that one of the teachers had to get tuition from a colleague in order to teach GL for my observation. I could not observe this because I did not dictate the lesson they taught. Although I used the school time-table as a guide it was not strictly followed. I also had to wait until I was invited because I was careful to avoid having any negative effect on the teacher’s performance. Attitudes to GL seem to show a continuum. At one end is the positive response in favour of the use of GL and at the other end is the negative sentiment of viewing the GL as an obstacle to progress in learning L2. Both groups have a favourable attitude towards the use of English for instruction. Both also firmly rejected the suggestion that the LI should be the sole language of instruction for the 6-year primary course and voted in favour of the use of English as the only language for primary education. The figures show for the LPS 336 (88%) rejecting the use of LI with only 35 supporting and 9 ‘NAND,’ and in the UPS 373 (94%) rejected the view with 17 in favour and 3 abstaining. However, for the use of English for the same purpose the LPS recorded 196 (51%) in favour with 162 (42%) opposed and 24 (7%) abstaining. The UPS registered 229
(58%) in favour, 141 (36%) opposed and 23 (6%) did not express any opinion. Both groups also wished to continue the use of a pass in English as a condition for admission to all levels of education above the primary school. They rejected the view which suggested the acceptance of the L1 as a condition for admission into higher institutions of learning. For example, for admission into senior secondary school from the junior secondary school the results show 339 (89%) in opposition with 36 (9.5%) in favour for the LPS and 322 (82%) opposed and 60 (15.3%) in favour in the UPS with 4 (1.5%) and 11 (2.7) respectively expressing no opinion. Perhaps this is motivated by the erroneous impression that the knowledge of English is synonymous with higher academic achievement and because of the economic advantages associated with a knowledge of English in Ghana.

6.7.2 Attitudes Towards Classroom Bilingualism

Most teachers are tolerant of bilingualism involving English and the L1. Information in Table 36 also show 55% of the teachers supported the view that official permission should be granted for them to use both English and L1 in all subjects on the school curriculum. Teachers also preferred bilingual education to language specialisation. Over 70% think the combined use of English and Ghanaian language is educationally beneficial to the pupils. Additionally, they feel parents would be happy if primary school pupils are literate in both English and a Ghanaian language by the end of year six. While advocating the use of English as the sole language of instruction for the six years of primary education, they still feel it is respectable to be a Ghanaian language teacher. Similarly, the same teachers supported posting newly trained teachers to their home regions to enable them teach Ghanaian language and outside it to force them to speak English most of the time to their pupils. They also rejected the proposition that individual primary school teachers should not teach both English and Ghanaian language. Above all, they supported the view that ‘language alternation’ should be officially recognised as a method of instruction at the primary school. Perhaps teachers showed a positive attitude towards both English and the L1 because they recognised the need to develop and maintain the vernaculars while realising the
need for exploring the advantages of the L2 (English) for internal cohesion, international relations and for the pursuit of knowledge in science and technology.

6.7.3 The General Admission of the Use of Language Alternation.
The third aspect of the results in Table 36 is the open admission by teachers that they unofficially used ‘language alternation’ as the method of instruction at all levels in the primary school. Over 68% of the respondents admitted combining English and Ghanaian language in most of their lessons and over 70% admitted that they used their personal discretion to change from a Ghanaian language into English.

Conclusion and Summary
The results of the questionnaire distributed to primary school teachers indicate that in all subjects teachers alternate between English and a Ghanaian language. There is no one language which is used as the only language of instruction in all lessons. The teachers' opinion also favoured the use of both English and a Ghanaian language for instruction. They considered the use of English as contributing to good academic performance, but also thought the Ghanaian language aided pupils' comprehension of the L2. They rejected language specialisation and supported the view that all teachers should teach both English and Ghanaian language subjects. Above all, they supported the idea of official recognition for the use of both English and a Ghanaian language in the same lesson. In other words they supported classroom ‘language alternation’ as a relevant method of teaching at the primary school. Teachers also reported that the literacy level for both English and Ghanaian language among primary school pupils was very poor. A reading proficiency test conducted for all Year 5 pupils in both English and Twi supported the teachers view of poor literacy in both languages. Therefore, in conclusion, this study recommends that if classroom learning is to be more effective and meaningful to pupils at the primary school it is important that policy planners reconsider the official recommendation for language use at the primary school and acknowledge classroom ‘language alternation’ as a relevant methodology for teaching in the Ghanaian primary schools.
CHAPTER SEVEN
CONCLUSION AND RECOMMENDATIONS

7 Implications and Recommendations of the Study

7.1 General Observations of the Findings

7.1.1 Introduction

In recent times, Ghanaian parents, teachers and the general public have expressed dissatisfaction with the academic standards of children passing out of basic primary education schools. The general complaint is that most children after six years of primary education have failed to acquire basic skills in reading, writing and numeracy in English and in the relevant Ghanaian language. They are also unable to express themselves effectively in either language. Generally, there are divided opinions on the issue. Parents are mostly worried with the pupils' inability to acquire basic skills in English while the educated elite are concerned with pupils' failure to acquire basic skills in reading, writing and numeracy in both English and GL. In response to the concern about deteriorating standards of English and Ghanaian languages in the primary school and in order to find out a way to promote more effective teaching of English and Ghanaian languages at the primary school, this study set out to examine the language use of Ghanaian primary school teachers in relation to the language policy at that level.

For some time now, the policy of using the mother tongue for the first three years of primary education has been subject to criticism, with sections of the Ghanaian community viewing it as the cause of the deteriorating academic standards of Ghanaian primary school children. The Ghanaian public, teachers, some education authorities, and ministers of state attribute the inability of Ghanaian pupils to express themselves in English at all levels of education to the policy. The Association of Teachers of Ghanaian Languages (ATGL) had this to say:

"ATGL has taken note of the fact that a section of the Ghanaian public attributes the inability of students to express themselves in good English to the national policy that the medium of
The same association noted that the failure of many Ghanaian children to communicate, read and write adequately in either English or the relevant Ghanaian language can be attributed to the fact that the policy of using the mother tongue has never been implemented.

'It is the conviction of ATGE that the policy is by no means the cause of SSS (senior secondary school) candidates' inability to communicate, read and write in English and Ghanaian language. Their problem is rather due to the fact that the policy has never been fully implemented.' (Atakpa 1993:4)

Although views collected from various interested groups indicate that many people still believe the claim that the use of L1 as language of instruction in the first three years of primary schooling contributes to pupils’ poor performance in English, the findings of a detailed study of Ghanaian primary school teachers' language use does not support the view (See chapter 5 section 5.1.1 pp 125-126).

7.1.2 THE POLICY ON THE LANGUAGE OF INSTRUCTION

A central finding of this study is that, although the policy requires the use of a Ghanaian language for instruction in the first three years of primary education, the actual classroom practice is one of ‘language alternation’ with a tendency towards using English more frequently. At the upper primary school (classes 4-6), where the policy requires the use of English, the pattern of language use is again that of alternation between English and Ghanaian languages with the emphasis on English. Results of the national survey reported in 6.5.1 of teachers’ account of what language they use at both levels appears to confirm the prevalence of ‘language alternation’ with a tendency towards the use of more English at both the lower and upper primary schools.

The present study of the language use pattern of twelve primary school teachers in Ghana has demonstrated a wide range of classroom ‘language alternation’ similar to patterns of use identified in other studies (Lin 1990, Merritt et al 1992, Ndayipfukamiye 1993, Arthur 1993, Pennington 1995). This study found no
evidence that classroom code-switching is educationally harmful. On the contrary, the indication is that it can be educationally beneficial. The teachers’ alternations between English (L2) and Twi (L1) were used as a resource for restatements to reinforce information and questions, to seek and focus attention on major points in the instructional material and to provide context for explanations and definitions (see chapter 5 Extracts: 30-32 pp 164-165, Extract 35 p 167, Extract 37 p 170 and Extract 52 p 182).

Other researchers Guthrie and Guthrie (1987), Lin (1990), Pennington (1995), Merritt et al (1992), Ndayipfukamiye (1993), Canagarajah (1993) and Adendorff (1996) have all shown that classroom ‘language alternation’ between the target language (L2) and the local language (L1) is used for repetition or for a reformulation to reinforce questions or information.

Pennington (1995:102), points out that

‘As teachers become accustomed to teaching in two tongues, their code use can become both more automatized, as an unconscious response to the moment by moment requirements and difficulties of teaching, and also more planned, as a deliberate strategy to achieve certain purposes in the classroom’.

‘Language alternation’ in Ghanaian Language (L1) as a subject, unlike Ndayipfukamiye’s (1993) study of Kirindi lessons in Burundi, shows frequent use of ‘language alternation’ between Twi (L1) and English (L2). In Ghana teachers used the switches as attention seeking devices to both maintain the pupils’ attention on major points in the instructional material and also to restrict pupils’ participation to relevant statements from which they could develop the ideas they intended to cover. By this process, the teacher and pupils negotiated a meaning and moved towards an understanding of the content of the subject under discussion. All code-switching functions for switches from L2 to L1 in the instructional material were replicated in the code-switching functions for Twi into English (L1→L2) switches. Code-switching from one language into the other were also used by teachers to clarify instructional information, requests for action, give directives, organise and maintain order, and give feedback.
The data in this study, also seem to suggest that code-switching from one language into the other helped to reinforce the proficiency development of each language. For example, through study skills, English (a foreign language) can be used to help pupils understand Twi (the mother tongue: see Extract 25 and 45). Similarly, Twi is used to bridge the gap in the study of English (see 5.2.5 Extract 22). The findings show that 'language alternation' facilitates pupils’ participation in classroom talk. The teachers acceptance of the pupils use of the mother tongue in combination with loan words enabled some of the pupils to participate fully in classroom talk and to speak the language of the subject (see section 5.8).

The study also shows that, when languages are taught as subjects, ‘language alternation’ is relatively infrequent and the predominant language is often the language itself. English is the dominant language for teaching English as a subject in both the lower and upper primary schools, just as GLs are dominant languages for teaching GL. However, science and mathematics were the subjects with the greatest frequency of code-switching between languages (see 5.2.2 and 5.2.4 for reasons). Therefore, in the lower primary school although officially the subjects were designed to be taught through GL they were frequently taught using English. However, at the upper primary classes subjects designed to be taught in English language were mostly taught in English but with some alternations into GL.

In lower primary classes mathematics was predominantly taught in English to the extent that entire lessons were often taught in English, contrary to official policy. A very small number of teachers at this level taught mathematics in the L1. At upper primary classes, teachers’ predominant language for use in mathematics is English. The use of the vernacular is relatively infrequent. Although the overall uses show little variation, individual teachers’ pattern shows up to over 20% use of the vernacular. Science was frequently taught using the unofficial language at both levels. In lower primary classes, where the official medium is Ghanaian language it was taught mostly through Twi. In the upper primary classes, where the official
language for instruction is English, it was used more frequently but with some alternations into Twi.

Although the results for all schools, irrespective of their location, show a pattern of language use in the ratio of 58:42 in favour of English, the results show greater use of English in rural schools than in urban ones where there was an equal use of English and Twi. The reasons for this include the high standard of English in the pupils' science textbooks, pupils' poor comprehension of the target language and teachers' personal teaching styles (see 5.2.1 for others). There was a greater use of English in rural schools than in urban schools where the ratio was roughly equal. The poor urban school used Twi more often than the poor rural school. The poor rural school used English more frequently than poor urban school. The good urban and good rural school more frequently used English than L1 and had the same ratio of language use (see 5.3.3, Table 18). The results for 'alternations functions' did not show any marked difference in the patterns observed in urban and rural schools. Differences in the patterns for functions of 'language alternation' were only significant in relation to the status of the school. The good urban school showed relatively less switch function than the good rural school and the poor urban school more than the poor rural school. The two good schools showed less alternation functions as compared to the two poor schools (see 5.3.3).

7.1.3 PUPILS' LANGUAGE PROFICIENCY RESULTS

The language proficiency of the pupils in English and Twi, as measured by the unofficial test, shows poor results in either language. The most frequent score for the unofficial test for schools in the study was zero for both English and Twi. The results for English showed 2.3% mean score per pupil while that for Twi showed 2%. This result may have been obtained because the test was not really suitable however, in spite of the possible inappropriateness of the test, my personal observation is that the children can neither read nor write adequately in either English or Twi. Teachers were also generally aware of the pupils' poor
competence in both languages and it is estimated that only a range of 0 - 20% pupils were capable of performing the skills of reading and writing appropriate to their levels in both languages. The teachers' estimation was supported by the results of the unofficial test (see 6.5.)

7.2 Language Attitudes Results

The findings indicate that teachers clearly have a positive attitude towards English which did not seem to have a negative influence on attitudes towards the vernacular. The teachers viewed the use of English as contributing to good academic performance and over 70% of the respondents also thought that the combined use of English and Ghanaian languages was educationally beneficial to the pupils. However, in spite of favourable attitudes towards 'language alternation' and positive views about the combined use of the two languages, teachers still considered that having a vernacular language for instruction in the first three years was an obstacle to progress in English.

7.3 Implications for Primary Schools and Teacher Training Colleges Curriculum Development

The evidence of the pattern of language use in Ghanaian primary schools does not confirm the public supposition that it is the use of Ghanaian language, for instruction in the lower classes, that militates against higher academic performance in English, because at all levels of the primary school the official policy is rarely put into practice. Solutions to this do not reside in legislation since this cannot be enforced in the classroom. The teachers' language choice in the classroom is determined by a need to resolve teaching and learning difficulties as they arise and not by legislative considerations (Guthrie and Guthrie 1987). A better solution to the language policy in education is to identify the pattern of language use, study the useful aspects as well as the harmful ones, then discuss these techniques to teachers to enable them to use them more effectively. If legislation is necessary, it
should be based on what is practical and realistic, taking into account the constraints of the system.

The implications of these analyses for language curriculum development for primary schools and teacher education, suggests that 'language alternation' is essentially a form of sociolinguistic contextualisation behaviour which serves as an interactional resource for bilingual teachers (Adendorff 1996:400). It seems to me that legislation on language use in the classroom and the prohibition of 'language alternation' in particular is due to the policy being formulated which lacks contact with the reality of the classroom in a multilingual context. One might argue that a prohibition of 'language alternation' in the classroom is due to hasty conclusions derived from ignorance of the classroom situation.

The formulators of the language policies in education can be likened to the passer-by who hears much noise coming from a class and assumes that it is the result of the teacher having lost control. However, on entering the classroom, he may find that students are engaged in an activity which involves animated discussion in groups, with the teacher participating as a monitor (Wright 1992:104, cited by Nunan 1996:41). Thus, something which makes little sense to an outside observer may make perfect sense to those inside the action (Nunan 1996:47). 'Language alternation' can be meaningless to the outsider. However, to the teacher and the student it is a useful resource for negotiating meaning and carrying out the daily classroom routine. Thus, the proscription of classroom 'language alternation' in a multilingual context is the direct result of ignorance of the value of 'language alternation' in classroom discourse. This study sets out to clarify the problem and to suggest how the knowledge gap about primary school language use and about 'language alternation' in particular might be reduced.

Secondly, this study aims to make policy-makers aware of the need to revise the language policy and the role of 'language alternation' in the primary school classrooms. 'Language alternation' and the use teachers and pupils put it to are important questions that need to be considered by future teachers and by formulators of language policy education in a bilingual and multilingual context.
Language policy formulators must address this problem so that future teachers can be prepared for the role of ‘language alternation’ in classroom interactions. “Language alternation” is an essential resource which has the potential to improve teaching and learning as well as to ease the transfer of classroom knowledge to community knowledge in multilingual classrooms.

If teachers and participants in policy formulation are to understand the important role of ‘language alternation’ in primary education, then it is necessary to give priority to raising their awareness of its sociolinguistic and educational value as a resource in the hands of bilingual teachers.

7.4 The Need to Sensitise Future Teachers to Language Alternation Studies

Many scholars writing on second language teaching are generally weary of the use of the mother tongue (Wilkins 1974, Krashen 1982, Swain 1982, and Stevens 1984). Most seem to hold the view that the monolingual principle of using the target language as the instructional medium is the ideal method of teaching a second or foreign language. However, this study shows that Ghanaian classroom practice does not conform to that ideal. The mother tongue is often used alongside the target language as a strategy which enhances the acquisition of the target language and understanding of the subject matter. Teachers showed variation between subjects, classes, and schools, and their understanding of their pupils’ needs and the distinctive nature of every subject as well as the pupils’ individual differences.

In spite of the variation, most teachers admitted that if they had had pupils with a high proficiency they would have used English in line with the language policy. They used alternation only because they wanted to exploit its benefits for their pupils. They experience a sense of guilt because, on the one hand, they are required to use English throughout, by the official language policy, while on the other hand they know their pupils’ proficiency and understand this is impossible. The national
language policy does not meet the realities of the situations in which these teachers work, so they ignore the policy. A similar situation was revealed by the results of the national survey. Because of these limitations the continued operation of the national policy is indefensible. It is necessary to find a way of allowing the teachers to follow the dictates of their profession so that effective learning takes place. They have found that 'code alternation' is one way of achieving this and they should not be made to feel guilty because of this.

It was pointed out earlier that English incursions helped the pupils and teachers to make sense of what was taught and learnt (Extract 25). Therefore, it is not hard to see the need to appreciate and acknowledge the use of the indigenous language (L1) in learning a foreign language (L2) which, in the Ghanaian case, is English. This is because in Ghana the language most primary school children know and understand best is a GI, and not English. The combined use of English with the relevant GI will not only ensure that learning and intellectual development take place simultaneously but will also ensure the smooth acquisition of the foreign language and transfer of knowledge.

Early use of the foreign language for instruction, when the pupils can hardly comprehend a word, leads to frustration for the pupils and to a suspension of learning and intellectual development until the pupils acquire a better standard in the foreign language. The main reason for using the primary English courses and the English language for instruction to develop the pupils' language from the level of 'complete Beginner' to that of secondary pupil cannot be achieved through the sole use of English. 'Language alternation' between English and Twi is one of the ways teachers use to solve the problem of communication in the classrooms. It was employed in refined and expert ways to manage problems in the classroom. Classroom 'language alternation' has communicative relevance for both the teacher and the pupil and it needs to be recognised as such.
In conclusion, this study recommends that if classroom learning is to be effective and meaningful to pupils and teachers alike at the primary school it is important that:

- policy planners reconsider the present official recommendation for language of instruction at the primary school
- teacher education policy-makers consider introducing 'language alternation' component into:
  
  (i) the 38 post-secondary Diploma Awarding teacher training colleges
  
  (ii) teacher education in-service courses
  
  (iii) and the B Ed pre-service at the University of Winneba

- the use of mother tongue teaching be revised in all teacher education programmes producing teachers for primary schools.

Finally, it recommends that if meaningful teaching and learning is to be achieved at the primary school, it is important that code-switching is recognised as a relevant pedagogic method for teaching and learning in Ghanaian primary schools.

7.5 The Use of English for Instruction in the Second Language Context

 Much of the literature suggests that an early introduction to the language which is to be used as the language of instruction is the most effective way of learning that language. For example, Stevens (1984) points out that the early introduction of second language learning is an advantage because it ensures that the pupils have an adequate time to study it (Stevens 1984:1). She also reports seventeen findings that showed that there was successful learning of second languages based on immersion programmes, which used only L2 for instruction. The children showed no detrimental effects to their mother tongue skills. All the children, the report noted, achieved a degree of competence in the second language far superior to the results for regular foreign or second language classes (Stevens 1984:5-7). The notion that younger children pick up second languages more easily than older
learners is clearly challenged by evidence of areas in which the latter do better (Spolsky 1989-98). However, she also cautioned that success depended on the amount of time spent and on the strategies used. Unfortunately, in Ghana there is neither the time, teaching resources nor teachers in primary schools with the relevant training and experience to develop these strategies.

I am not suggesting that the use of English in education should be discontinued. I recognise that English is essential and necessary in Ghana for a number of reasons. Most importantly, apart from its international role, English is a language with a greater potential to unite the people of Ghana at the national level than any single local language. To strengthen this point, it is noteworthy that, all parliamentary debates that suggested the promotion of any indigenous Ghanaian language as the national language have met with rejection (Laitin and Mensah 1991:143). Since English cannot be abolished and yet the dominant use of English does not promote the effective teaching and learning, an alternative option is to recognise ‘language alternation’ as a relevant method in Ghanaian primary schools.

This would mean reorganising teacher training to take account of the reality of classroom language use and provide ‘language alternation’ studies as one of the components of the language courses. This will not only provide guidance on its effective use but also expose the trainee teachers to ‘principled’ and ‘unprincipled’ forms of ‘language alternation’. For example, one principled form of ‘language alternation’ is the use of substitutions of local words without direct equivalents in the target language either because it is a local concept or an institutional name. Another example is the use of alternations for the purpose of reformulating and elucidation when restatements in the target language have failed to have the intended effect. An example of an unprincipled form of alternation is the continuous translation of every utterance, or what I describe as ‘unrestrained translations’. If this approach is to be put in practice, in-service programmes for teachers are necessary in order to enable them to appreciate the beneficial uses of ‘language alternation’.
As Adendorff (1996:400) pointed out, any programme which aims at sensitising trainee teacher to ‘language alternation’ should consider the fundamental insights sociolinguists have gained about the general nature of language and its use in society. In the subsequent sections, I intend to discuss ‘language alternation’ studies that this study is proposing for a reorganised teacher education programme and in-service training programme for serving teachers in Ghana.

7.6 Teacher Training Curriculum: Language Alternation Programme for Primary School Teachers

7.6.1 Introduction
The activities proposed are not meant for non-graduate primary school teachers because they clearly could be too demanding. They are intended for undergraduate teacher trainees of the universities of Cape Coast and Winneba. The University of Winneba is training graduate teachers for teaching in primary schools, and it would be more appropriate to encourage this group to engage in the activities suggested. The activities are complex and also need equipment not likely to be obtained by teacher trainees in teacher training colleges. In the teacher training colleges for post secondary trainees it would be sufficient to have introductory periods with their tutors playing the role of the main researchers and the students acting as research assistants. The various components of the programme are discussed below.

7.6.2 Contrasting Views of Language and Language Use
The programme should have comparative studies which involve both views of language and language use. The trainee teachers and those in the in-service programme should compare the Ghanaian version of standard English to the ‘Broken’ or ‘Pidgin’ English used in the market or school campuses among students. The purpose of this is to make them aware of the difference and to enable them to identify and recognise the functional roles of each code as well as the essence of bilingual or multilingualism.
7.6.3 Developing Positive Attitudes Towards Classroom Language Alternation

By studying the literature on 'language alternation' trainee teachers should be encouraged to regard 'language alternation' in the classroom as a healthy practice. They should be encouraged to discard the erroneous idea that using more than one language in the class is wrong. The idea that 'language alternation' in the classroom is wrong may be due to ignorance and a purists attitude which perhaps result from lack of personal experience with the educational value of 'language alternation' in the classroom. Students should be taught that having an additional language resources is an asset to be proud of and that there is no need to be ashamed of or neglect 'language alternation' in class.

7.6.4 The Role of Language and Identity

Trainee teachers need to be become aware of the role of language with regard to social identity. Language is not a neutral signalling system but a positive carrier of social meaning because language is used to express the identity and values of its users (Adendorff 1996:401).

7.6.5 The Role of Language and Power

Students need to be exposed to the role of language with regard to power. They need to know that the ability to communicate effectively encompasses within it elements of power. It is especially important for the teacher to be aware of the power of 'language alternation' since they have an influential leadership role especially in the rural areas, where they initiate development. They must use both English and GLs in dealing with parents, developing the pupils' language and dealing with local politicians.

Primary education in Ghana is now under the control of district assemblies where both English and GLs are officially used. Teachers should be able to use both English and the relevant GL in dealing with local politicians and parents who will probably demand only English instruction for their children. The knowledge of the educational value of 'language alternation' will help them to convince parents and
local politicians of the need for the use of the local language in education. They also need the local language to help the understanding of new concepts which are introduced in English. It is difficult to imagine how one can understand a concept in a language which is not understood.

7.6.6 Legislation and Language Planning

Students need to understand that, although language planning through legislation aids the acquisition of a powerful tool for some members of society, at the same time it can frustrate the aspirations of others (Adendorff 1996:400). Everyone can recognise that in a multilingual society, legislation in favour of one language may provoke negative views but it can also provoke civil disturbances. By contrast, ‘language alternation’ is acceptable as it can unite people. If legislation cannot be avoided as part of the reorganisation of teacher training, then it will be necessary for future teachers to become aware of policy requirements by making their study a compulsory component of the programme.

7.6.7 Ethnographic Field Studies and Analysis of Language Alternation Data

As Adendorff (1996:403) notes:

‘Having captured their data and noted pertinent contextual information, teacher trainees need to analyse it and interpret the meaning of the code switches’.

Students need to be aware of different methods of collecting and analysing data on ‘language alternation’. In this way, they will not only gain more insight into the reality and value of ‘language alternation’ but also gain useful experience in research techniques which can help them work and develop professionally.

Nunan (1996:41) cites Gebhard and Ueda-Montonaga (1992:190) as saying that:

‘As I explore my teaching by describing-recording, transcribing, and coding communications-rather than by seeking prescriptions and judgements from others, patterns are broken both consciously and unconsciously. I have sought alternatives in teaching and found them. After I found that I have alternatives, I felt freer and more secure about deciding on activities for the students. Throughout the internship, I have learnt how to see teaching more clearly and differently. In other words I realised how much more I can do...’
The above quotation briefly summarises the value of ethnographic studies proposed for trainee teachers in 'language alternation'. However, this will be more relevant at university. I therefore recommend that undergraduate students preparing for a career in primary school should be encouraged to do research on various aspects of classroom 'language alternation'. For initial trainee teachers doing post secondary teacher-training courses, the study should be limited to periods of teaching practice.

7.6.8 The Use of Diaries

Another approach to enable students to become aware of the role and value of the alternation between and among languages on various different occasions is to encourage them to make a diary record of their teaching practice. After their teaching practice they should get help in editing them and in writing brief reports for school or class journals. In editing them, students should be encouraged to maintain the original flavour though there is the need to remove personal issues and change personal names in order to protect the identity of the informants. They should also be encouraged to retain the 'language alternation' sections. These reports could later be used as material for discussion and the interpretation of the code-switching sections. Again this will be more realistic and practical with the university students.

7.6.9. Role Play or Classroom Concert

To make students aware of the role and value of 'language alternation' they could be guided in role playing a game I call 'Neutralising Disagreement between Social Groups' which I devised through personal experience (see Appendix 12 for details of the game. Also see Appendix 13 for tools and methods of data collection and analysis).
7.7 Conclusions

7.7.1 Introduction
This study generally endorses ‘language alternation’ as a device to aid effective learning. However, the pattern of use should vary according to the pupils' proficiency in L2. That is to say, from P1-3, the emphasis should be more on the pupils’ L1 than it is at present. From P4-6, one would expect the emphasis to move towards English as the proficiency of the pupils increases. However, in situations where the proficiency is poor, continued use of L1 is recommended.

This recommendation is based on the recognition that children learn more easily in their mother tongue and are more readily able to express their ideas and reactions in the mother tongue than in a second language (Kwarpong 1967). Cardenas (1986:47) credits Bruce Gaarder with drawing the parallel between learning a second language and learning through studying by observation of the environment through a window. He suggests that the pupils arrive at school studying their environment through a blue window. At school where only English (a second language) is used the children are told:

"From now you must learn to use the rose window for interacting with your environment. Then the blue window is covered and the child is left staring at a blank wall instead. Should the child say, 'I don't see any rose window,' the school will reply: 'that’s because we haven’t built it yet, but if you keep looking at the blank wall, we will eventually put a pink window there.'" (Gibbons 1991:66)

As Cardenas has pointed out, staring at a blank wall does very little to help or aid learning. This study will therefore fully endorse a pattern of ‘language alternation’ which places more emphasis on the child’s mother tongue in classes 1-3 than is the practice in Ghanaian primary schools.
7.8 Recommendations

7.8.1 Language of Instruction

7.8.2 Summary: The Language of Instruction

Having discussed the findings and the implications for curriculum development at both the primary and teacher education levels this study recommends the following:

- The current policy of using Ghanaian language for the first three years should be continued with efforts made to ensure its effective implementation. However, provision should be made for exceptionally poor schools to change to English as language of instruction in Year 5.

- Although the results show that not all ‘language alternation’ is helpful to learners, however, the findings suggest that it could on the whole be educationally beneficial and should therefore be officially recognised at the primary school.

- Teacher education needs reorganisation to tackle the issues of mother tongue language of instruction in the primary school more vigorously (see 7.5 and 7.6).

- ‘Language alternation’ studies should be made a component of initial teacher training programmes.

- The Ghanaian version of standard English be considered for classroom use.

Although the mother tongue should be retained in the first three years of primary education I recommend the following changes:

The study of English as a subject should be introduced in Year 2 to ensure that the entire first year is devoted to the study of Ghanaian language with all subjects on the school curriculum being taught and studied through Ghanaian language. In Years 2 and 3, the Ghanaian language should still remain the language for instruction in all subjects other than English which will be taught in English with emphasis on oral work in Year 2, and the teaching of reading and writing in English being introduced in Year 3.
The recommendations are made in the belief that a sound mastery of the mother tongue is a solid foundation for the study of a second language. The child learns better and faster during the initial stages if the language for instruction is a language the child understands well. The ability to understand helps sustain interest in the learning process but lack of it breeds frustration and loss of interest and consequent dropout from school. I also believe that a firm grasp of literacy and academic skills in the mother tongue will enable the Ghanaian primary school child to attain higher proficiency in the second language (English) which will enable the pupils to communicate more effectively by the end of primary education than they do at present.

It seems to me unnecessary to stress that a high quality of education matters and that the important question is not how many school children have passed through the system but whether school knowledge transfers into the home and community knowledge when the pupils have left school. It is essential that we realise ourselves that the objective of schooling is the application of knowledge gained in the community. Therefore there is a need to ensure that when children leave school they can apply the knowledge to their daily lives. One such practical effort is to recognise that GL for instruction is not simply the second best. It is essential for the learning of the I.2 as much as the I.2 is essential for the learning of the I.1. ‘Language alternation’ should be recognised in the primary school because the results of this study suggest that it is a useful resource in the hands of both teachers and pupils for carrying out their daily classroom routine.

I also recommend that until adequate provisions in terms of teaching and learning materials are available in schools and colleges the full change should be in Year 5. Year 4 should be a transition year, where exceptionally good schools might completely change over while the average and below average schools could change in Year 5. Here the important question is that we must face the hard facts about our primary schools even if it is rather embarrassing.
The acute shortage of textbooks in the Ghanaian language for all subjects and at all grades should be redressed. Efforts should also be made to change the imbalance in the Ghanaian language teacher-student ratio in teacher-training institutions as the practice of one teacher handling all aspects of Ghanaian language in the teacher training colleges is unsatisfactory for effective training in the Ghanaian language. The traditional analysis of language teaching into components such as grammar, reading, writing, and literature are the same for both English and Ghanaian languages therefore efforts should be made to bring about parity in the allocation of resource for the both languages in the teacher-training colleges. Efforts should also be made to give proper Ghanaian language teacher training to trainees by re-organising the course content of the 13 teacher training colleges which currently train teachers for service in lower primary schools. These changes would emphasise the use of mother tongue and ‘language alternation’ methods.

When funds become available, the Ministry of Education should consider, as a matter of urgency the reintroduction of specialist courses for GLs as was done in the 70’s and 80’s at Ajumako. Alternatively, specific Ghanaian language courses for teachers should be introduced in each of the 13 colleges, which train teachers for the lower primary school, and a percentage of the trainees should specialise in specific GLs.

7.9 Further Research

The many limitations of this study leave several areas for further research. First of all, I considered the spoken data of teachers in the primary school because of the limitation of time for the studies, though I recognised that access to pupils’ spoken data as well as other information could help analysis and understanding. I also had to use simple audio tape-recording methods to obtain data because of technical and financial reasons. These had varying degrees of success because of poor sound quality. Future studies could make use of video recordings without necessarily making the classroom unnatural and affecting teachers’ and pupils’ performance. I also had a limited sample population and the sample population for future studies...
should be large enough to cover all regions. It is also my hope that future studies will cover all school terms and classes.

A thorough study could also be made of the proficiency of both teachers and pupils for all classes in both English and Ghanaian languages. There could also be a study of the suitability of textbooks in relation to the learners proficiency in English, and teachers' competence in using them. I also hope that language use in teacher training colleges could be investigated in order to show which areas of curriculum might be restructured so as to provide effective guidance for primary school development.
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