



**Consortium for Research on
Educational Access,
Transitions and Equity**

**Access, Transitions and Equity in Education in Ghana:
Researching Practice, Problems and Policy**

**Kwame Akyeampong
Caine Rolleston
Joseph Gharthey Ampiah
Keith M Lewin**

**CREATE PATHWAYS TO ACCESS
Research Monograph No. 72**

January 2012



**University of Sussex
Centre for International Education**



**The Institute of Education,
University of London, UK**



Consortium for Research on
Educational Access, Transitions & Equity

Funded by DFID

The Consortium for Educational Access, Transitions and Equity (CREATE) is a Research Programme Consortium supported by the UK Department for International Development (DFID). Its purpose is to undertake research designed to improve access to basic education in developing countries. It seeks to achieve this through generating new knowledge and encouraging its application through effective communication and dissemination to national and international development agencies, national governments, education and development professionals, non-government organisations and other interested stakeholders.

Access to basic education lies at the heart of development. Lack of educational access, and securely acquired knowledge and skill, is both a part of the definition of poverty, and a means for its diminution. Sustained access to meaningful learning that has value is critical to long term improvements in productivity, the reduction of inter-generational cycles of poverty, demographic transition, preventive health care, the empowerment of women, and reductions in inequality.

The CREATE partners

CREATE is developing its research collaboratively with partners in Sub-Saharan Africa and South Asia. The lead partner of CREATE is the Centre for International Education at the University of Sussex. The partners are:

The Centre for International Education, University of Sussex: Professor Keith M Lewin (Director)
The Institute of Education and Development, BRAC University, Dhaka, Bangladesh: Dr Manzoor Ahmed
The National University of Educational Planning and Administration, Delhi, India: Professor R Govinda
The Education Policy Unit, University of the Witwatersrand, South Africa: Dr Shireen Motala
The Universities of Education at Winneba and Cape Coast, Ghana: Professor Jerome Djangmah,
Professor Joseph Ghartey Ampiah
The Institute of Education, University of London: Professor Angela W Little

Disclaimer

The research on which this paper is based was commissioned by the Consortium for Research on Educational Access, Transitions and Equity (CREATE <http://www.create-rpc.org>). CREATE is funded by the UK Department for International Development (DFID) for the benefit of developing countries and is coordinated from the Centre for International Education, University of Sussex. The views expressed are those of the author(s) and not necessarily those of DFID, the University of Sussex, or the CREATE Team. Authors are responsible for ensuring that any content cited is appropriately referenced and acknowledged, and that copyright laws are respected. CREATE papers are peer reviewed and approved according to academic conventions. Permission will be granted to reproduce research monographs on request to the Director of CREATE providing there is no commercial benefit. Responsibility for the content of the final publication remains with authors and the relevant Partner Institutions.

Copyright © CREATE 2012

ISBN: 0-901881-86-4

Address for correspondence:

CREATE,

Centre for International Education, Department of Education

School of Education & Social Work

Essex House, University of Sussex, Falmer BN1 9QQ

United Kingdom

Author email: m_rolleston@yahoo.com
a.akyeampong@sussex.ac.uk
jgampiah@yahoo.com
k.m.lewin@sussex.ac.uk

Website: <http://www.create-rpc.org>

Email: create@sussex.ac.uk

**Access, Transitions and Equity in Education in
Ghana:
Researching Practice, Problems and Policy**

**Kwame Akyeampong
Caine Rolleston
Joseph Gharthey Ampiah
Keith M Lewin**

**CREATE PATHWAYS TO ACCESS
Research Monograph No 72**

January 2012

Contents

Preface.....	vi
Summary.....	viii
1. Introduction.....	1
2. Policy Context.....	4
3. The Community and Schools Survey (ComSS): Research Design	7
3.1 Approach and Sample Design	7
3.1.1 Mfantesman district	7
3.1.2 Savelugu-Nanton district	8
3.1.3 Achievement Tests	8
3.2 Basic Statistics from ComSS	9
4. Access and Exclusion Zones.....	11
4.1 Zone 0: Pre-Schooling.....	11
4.2 Zone 1: Ever-Enrolment in Primary School.....	12
4.3 Zones 2 and 5: Dropping Out.....	15
4.4 Transition, progression and completion (including Zone 4).....	22
4.4.1 Zone 4: Primary Completion and Transition to JHS	23
4.4.2 JHS Completion.....	25
4.4.3: Post-basic Transition	26
4.5: Zones 3 and 6: Meaningful Learning	26
4.5.1 Attendance and Absence from School.....	26
4.5.2 Achievement.....	32
5. Cross-Cutting Issues of Access.....	38
5.1 Health and Nutrition.....	38
5.2 Age and enrolment: The national picture.....	40
5.3 Overage Enrolment	41
5.4 Private Schooling	45
5.5 Fosterage	47
5.6 Eliminating costs through Capitation Grants	49
6. Conclusions and Recommendations	53
References.....	57

List of Tables

Table 1: Shares of total participation in public schooling by expenditure quintile	2
Table 2: Summary Statistics on Ever Attendance (Zone 1): Savelugu-Nanton District.....	9
Table 3 Household Livelihood Activities (per household) North and South	10
Table 4: Primary Education Enrolment Indicators 2008/9	15
Table 5: Reasons given by teachers for boys dropping out of school (Mfantesman district)..	20
Table 6: Final critical events, reasons or decisions cited for dropping out of school.....	20
Table 7: Comparison of education and background indicators by drop-out status (ComSS)..	21
Table 8: Achievement in English by drop-out status.....	21
Table 9: Primary completion rates by age and region (2006).....	23
Table 10: Primary-secondary transition rates 1999-2008.....	23
Table 11: JHS Enrolment Indicators 2008/9.....	24
Table 12: JHS completion rates by age and region (2006).....	25
Table 13 Attendance Rates by District and Gender 2007-9	27
Table 14 Absence from School 2007/8.....	29
Table 1: Household and Child Level Characteristics in Household ComSS Data.....	29

Table 16: Absence from School 2007/8.....	30
Table 17: Achievement in English 2007/8.....	35
Table 18: Achievement in Maths 2007/8.....	36
Table 19: Progress 207/8-2008/9.....	37
Table 20: Overage enrolment 1999-2008.....	41
Table 21: Overage Status of Pupils in CREATE Districts (in Years).....	42
Table 22: Reasons Given by Caregivers for Late Enrolment of Children.....	43
Table 23: Teachers' perceptions of reasons for over-age enrolment (Savelugu-Nanton).....	43
Table 24: Overage Enrolment in CommSS.....	45
Table 25 Dropouts by cohort in Mfantseman District.....	50

List of Figures

Figure 1: The Determination of Educational Access Outcomes.....	3
Figure 2: Attendance at pre-school (all Ghana) 2003-2008.....	11
Figure 3: Enrolment ratios in primary education: Ghana 1999-2008.....	11
Figure 4: School Attendance Rates by Household Poverty Status (GLSS 5).....	11
Figure 5: Incidence of Poverty in Ghana (2005/6).....	14
Figure 6: Evolution of Primary Enrolments 1980-2008.....	22
Figure 7: Proportions of Pupils in Ghana Reaching Stages of Progress in Ghana.....	22
Figure 8: Distribution of English scores (pooled 2007/8 and 2008/9).....	33
Figure 9: Distribution of Maths Scores (pooled 2007/8 and 2008/9).....	33
Figure 10: Height for age and attendance at school in Ghana (2003-2008).....	38
Figure 11: Prevalence of stunting in Primary 1 in CREATE ComSS Sample.....	39
Figure 12: All public primary schools in Ghana age-grade – 2008/09.....	40
Figure 13: All public JSS in Ghana – 2008/09.....	41
Figure 14 Enrolment in Primary Grade 1 by Age (GLSS 5).....	42
Figure 15: Age at entry to P1.....	44
Figure 16: Incidence of Private School Enrolment (at age 6-12) by Household Economic Welfare.....	46
Figure 17: Enrolment by Grade and Gender.....	51

List of Boxes

Box 1: The CREATE Model: Zones of Exclusion.....	2
Box 2: Stories of never-enrolled children in Mfantseman district.....	17
Box 3: Typology of temporary and permanent forms of drop-out in Southern Ghana.....	19
Box 4: Why Do Low Income Households Use Private Schools?.....	47

Acknowledgements

This monograph draws upon the portfolio of research reports and working papers on Ghana developed by CREATE between 2006 and 2011. The work is based on extensive fieldwork and analysis of secondary data sources. The Ghana CREATE team at the Universities of Cape Coast and Winneba was led by Professor Jerome Djangmah and Professor Joseph Ghartey Ampiah and included the authors of this monograph and the following researchers:

Christopher Kwaah

Dr Christine Adu-Yeboah

Vincent Adzahlie-Mensah

Dr. Seidu Alhassan

Christiana Buxton

Dr. K Ekumah

Dr. Daniel Kweku Baah Inkoom

Dr. Abena Oduro

Dr. Ato Essuman

We gratefully acknowledge the support given to CREATE by DFID and by the Ghana Ministry of Education.

Preface

Educational access in Ghana remains far from universal, especially if an expanded definition is adopted that includes enrolment and progression at an appropriate age, regular attendance, and appropriate levels of achievement. Progress in delivering rights to education up to Grade 9 has been slower than anticipated since 2000. More than 10% of children remain out of primary school and fewer than 60% successfully complete lower secondary. The reasons are complex and this research reports a rich tapestry of insights from a large scale programme of research which is unique in tracking over 2,500 children over three years across two districts and 29 schools. This major exercise in longitudinal data collection was complemented by several in depth studies around particular themes designed to illuminate the impact of recent policy and to explore patterns of causality around different types of educational exclusion. The findings of the research make disconcerting reading. Disparities in access between the North and the South persist despite many years of political commitment to their reduction. Girls remain disadvantaged in parts of the North but much less so in the South. Costs, especially those related to food and transport, remain high enough to act as a disincentive to enrolment in poor households. Health indicators suggest that many Ghanaian children are under nourished and that childhood illness is a common cause of absenteeism. Fosterage remains common and this often but not always compromises access.

Most of those out of school in most parts of Ghana appear to be those who have enrolled but who have subsequently dropped out. The research illustrates how drop out is often a process not a single event, and that there are several characteristic patterns. Both school and community factors play a role in the process. And drop out is associated with low attendance and poor performance. In many case study schools average daily attendance is below 65%. More than a third of children are seriously overage by more than two years. The more they are over age the less likely they will complete the cycle successfully, especially if they are girls, and the more likely they will be from poor households.

Though many initiatives have been implemented under Free and Compulsory Basic Education (FCUBE) their impact has been limited. Thus capitation and decentralisation have had a transitory impact on participation, but it seems this will not be sufficient to universalise access. The research leads to the conclusions that concerted action is needed on several fronts. These include:

- Improved early childhood health and nutrition
- Lower direct and indirect costs of participation for the poorest
- Age appropriate enrolment and promotion practices
- Improved public school quality and managed growth of private schools
- Community mobilisation to support regular attendance and higher levels of achievement, and discourage drop out
- Effective and regular record keeping of children's achievement and progress and birth registration etc.
- More targeted interventions and subsidies directed towards the poorest districts and households

There are many other insights in the wealth of data that has been collected and the other research monographs in this series which use data from the Ghana programme present many more findings. These will repay close study. Especial thanks are due to Professor Joseph

Ghartey who coordinated the Ghana data collection programme with close support from Chris Kwaah, to Kwame Akyeampong who coordinated the Ghana research from Sussex, and to Caine Rolleston who provided technical assistance and field support to the research team and extensive editorial support for this monograph. Other team members made many contributions and are listed on the website.

Summary

CREATE's research on access to and exclusion from basic education in Ghana since 2007 included a longitudinal data collection exercise in two deprived districts in the Central and Northern regions of the country alongside a number of primary studies employing qualitative data and desk studies making use of existing national level statistics. The findings of these studies are synthesised in this report.

Exclusion from basic education takes a number of inter-related forms which are conceptualised in the CREATE model in terms of zones of exclusion. The first and perhaps most serious includes children who never enrol in school. The remaining zones describe exclusion from pre-schooling, premature drop-out, failure to complete primary and junior high school and 'silent exclusion', a situation in which children attend school but make little or no progress in their learning. The national picture in Ghana in recent years is one of steadily increasing enrolment, especially in the North. The current rate of progress puts Ghana among the countries in sub-Saharan Africa with the potential to reach Universal Primary Education, at least in the minimal sense of initial access. Less encouragingly, there has been little improvement in completion rates; and progression through basic education remains highly inequitable. Nonetheless, government initiatives including FCUBE and the Capitation Grant Scheme have achieved considerable success in reducing cost barriers to access and in improving gender equity to a position of near equity, according to some basic education indicators. However, there is evidence that better targeting of fee-free policies would significantly improve access for the very poor and marginalised population groups.

CREATE findings shed new light on the impact of recent policies including the CGT and decentralisation; on the lives of out-of-school children and drop-outs; on the growth in low-cost private school enrolments and the determination of private school choice; and on the determinants of exclusion. Emerging evidence suggests that issues of public school quality motivate even the relatively poor to select private schooling in some cases; and data show that in terms of achievement such schools may produce similar results to their counterparts in the public system, at considerably lower cost. However, the attraction to 'low-fee' private schools in rural areas has been achieved because providers operate pro-poor admission policies to sustain demand. Some school drop-outs also spoke of poor quality in public schools, but for most of the never-enrolled and those who dropped out, the costs of schooling and their work commitments continue to be a dominant access barrier.

Quantitative work showed that exclusion from basic schooling in the broad sense defined by CREATE is associated with health, poverty, livelihoods (especially farming), gender, location (especially remote and rural) and with parental education and support. Findings suggest that exclusion operates through complex, cross-cutting and mutually reinforcing mechanisms which conspire to limit the access chances of disadvantaged children in evolving ways over the education life-cycle. For example, two proxy indicators of disadvantage are fosterage, particularly in Northern Ghana, and over-age status. The latter is especially significant. Children with stunted growth and/or low BMI (Body Mass Index) are more likely to enrol late and to progress more slowly through the basic education grades. Late and delayed enrolment is also found to be strongly associated with poor attendance and with poor achievement. Even after controlling for health and attendance, over-age effects continue to exert a further negative influence on achievement. At the same time, the evidence shows that differences between schools and communities can either reinforce or compensate for

disadvantage due to individual and household characteristics, suggesting that the processes of exclusion operate contextually and that arresting them will require policies sensitive to the issues *in situ*. Overall, the findings of CREATE studies in Ghana suggest the need for policies and interventions that target poor and marginalised population groups experiencing particular access challenges. But, at the heart of the problem of access and successful progression to completion of basic education is the issue of costs, opportunity costs and quality education. A national campaign to get children into school should include sensitivity to appropriate age-grade enrolment. Ghana is unlikely to achieve high levels of sustained access and completion of basic education if appropriate age-grade enrolment is not at the centre of new policies or strategies to achieve EFA by 2015. CREATE analysis suggests that a one-size fits all approach to the problems of access in Ghana, such as the introduction of Capitation Grants, will at best, achieve temporary impact. Clearly missing in Ghanaian education policy is increased investment that targets the most vulnerable and marginalised population groups. For these groups, survival needs mean that choosing to go to school must produce tangible outcomes in terms of completion of basic education and acquisition of employable or trainable skills, or else demand will fall. In future, it is a new and smart kind of access policies accompanied by strong implementation strategies that will transform the educational landscape of Ghana into a high performing one. Anything less, is sure to repeat the history of high initial enrolment, low progression and achievement and persistent dropout.

Access, Transitions and Equity in Education in Ghana: Researching Practice, Problems and Policy

1. Introduction

Basic education lays the foundation for human development and is associated with well-established social and economic benefits; not least reduced family size and improved health and welfare. Ghana is one of few countries in sub-Saharan Africa where universal initial access to primary education *can* potentially be achieved by 2015, marking an impressive milestone in educational progress, substantially due to expansion of schooling provision and to reductions in costs to households. Growth in enrolments since the early 1990s has been strong, enabled by robust economic growth, increased government revenues, budgetary reallocation in favour of basic schooling, donor support and a raft of policies aimed more directly at increasing both supply and demand. In particular, the FCUBE (Free Compulsory Basic Education) programme and Capitation Grant Scheme (CGS) have been instrumental (see Akyeampong, 2009). Nonetheless, considerable challenges lie ahead, not least in reaching vulnerable and marginalised groups for whom investment in education has produced the least in terms of progression into higher education levels and acquisition of skills and capabilities for economic development. This is against a backdrop of increasing investment in education provision. Public spending on Education as a percentage of GDP in Ghana is about 9%, much higher than the sub-Sahara Africa (SSA) average of 4.3% (World Bank 2011). Thus, Ghana's proportionate spending on education is already comparatively high and room for further spending increases is likely to be tied to the extent of economic growth (see Rolleston 2010). Quality is an increasing concern and the evidence suggests that even poor households are becoming disillusioned with public education and opting increasingly for private sector alternatives as a result, despite relatively high costs in comparison with public schooling. Moreover, serious issues of inequity surround progression beyond basic education and the evidence indicates that there has been little improvement in the relative position of poor and marginalised groups in terms of higher levels of educational access.

CREATE explored the issues surrounding access to basic education in Ghana over a five year period, beginning in 2005, through a series of studies intended to address the complex nexus of factors which act to both include and exclude children from a full course of basic schooling. The CREATE Ghana Country Analytic Report (Akyeampong et al 2007) identified the key issues of educational access in Ghana, setting the research agenda for the project. This report summarises the findings of CREATE studies in relation to the project's analytic framework and draws out their implications for education policy. A full list of CREATE research products is included in the appendix.

'Meaningful access' to a full course of basic education, CREATE's conceptualisation of the overall access goal across its study countries, comprises not only timely school enrolment and appropriate progression, but meaningful learning. Such learning lays the foundation for the development of productive skills and decent livelihoods, for lifelong learning, civic participation and for national development and thereby embodies a notion of adequate or appropriate quality. Full participation in such learning is nonetheless substantially constrained in Ghana, as in many low income countries, by limitations on both supply and demand. Most obviously, demand is constrained by household resources, while supply is limited in terms of both quantity and quality by national and local finances. But resource

allocation and access to education are also inequitable and arguably inefficient. To illustrate, Table 1 shows the shares of total participation in public schooling by household expenditure quintile for 1991 and 2006, calculated by Coulombe and McKay (2007) using national data. It shows that households in the richest two quintiles shared least in primary school participation, primarily because of their typically lower numbers of children, and also that this share declined, indicating improving equity at primary level. By secondary level, however, the poorest two quintiles shared least, despite having larger numbers of children. At tertiary level, the richest quintile of households captured more than two thirds of total participation in Ghana, with much of the remainder being captured by the second richest quintile. Thus, primary education provision in Ghana may in this sense be considered relatively pro-poor while secondary and tertiary provision is decidedly pro-rich. This picture reinforces the claim that CREATE analysis make, that, basic education is failing the poor and marginalised in terms of access and progression through to successful completion.

Table 2: Shares of total participation in public schooling by expenditure quintile

Quintile	Primary		Secondary		Tertiary	
	1991/92	2005/06	1991/92	2005/06	1991/92	2005/06
Poorest quintile	21.3	24.1	15.7	12.1	0.0	1.8
2 nd quintile	23.1	24.7	18.6	17.2	5.3	7.8
3er quintile	21.7	22.9	22.8	23.7	0.0	9.4
4th quintile	19.4	17.6	21.4	23.3	21.1	14.1
Richest quintile	14.5	10.7	21.6	23.8	73.7	66.9

Source: Coulombe and McKay (2007) calculations using GLSS 3 and 5

CREATE’s research addressed patterns, trends and causes of access and inclusion with particular reference to transitions and to equity by reference to seven ‘exclusion zones’ as described below. Fuller considerations of the model and of its application to the Ghana context are available in Lewin (2007) and Akyeampong et al (2007).

Box 1: The CREATE Model: Zones of Exclusion

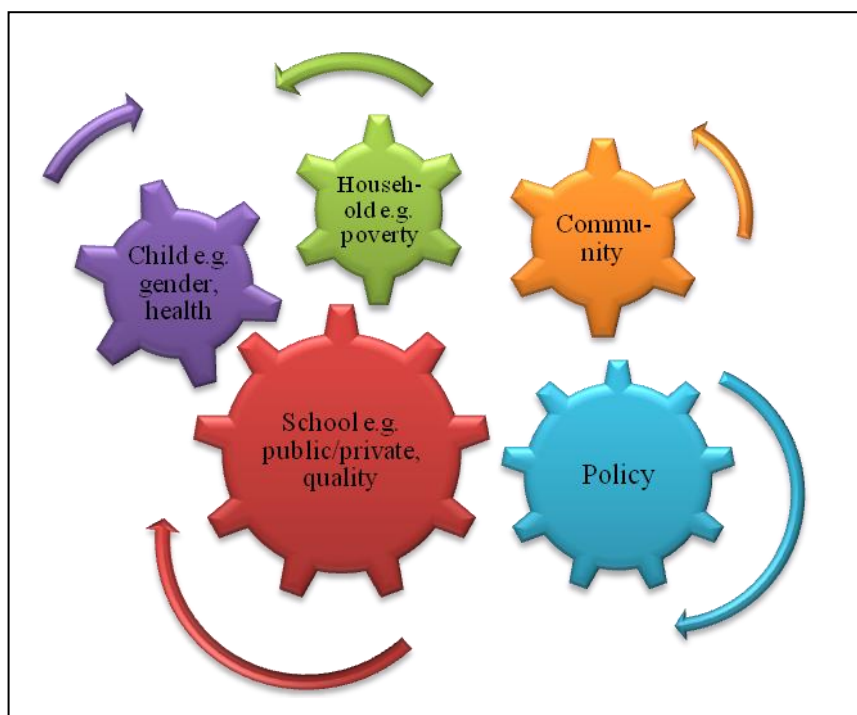
- Zone 0 Children excluded from pre-schooling
- Zone 1 Children never enrolled in school
- Zone 2 Children who have dropped out before the end of primary schooling
- Zone 3 Those in primary school but who are at risk of dropping out
- Zone 4 Those who complete primary education but fail to enter secondary
- Zone 5 Those who enter but fail to complete lower secondary school
- Zone 6 Those in lower secondary school but who are at risk of dropping out

The mechanisms of educational exclusion operate at and interact across several levels or units of analysis important for CREATE analyses; as illustrated in Figure 1 below. Individual children’s own characteristics are associated with lower levels of access through mechanisms such as gender discrimination, while household factors such as parental education and income are key determinants of preferences for education and thereby of educational demand. Considerable influences are exerted too by schools themselves, including through dimensions of quality and inclusiveness. Equally, educational access differs widely by community, according to the nature of supply and to dominant livelihoods and cultural traditions.

CREATE’s body of research included a longitudinal survey of schools and households in two deprived districts in Ghana – the Community and Schools Survey (ComSS) alongside

dedicated qualitative studies of the experiences of drop-outs and never-enrollers and a number of other studies addressing policy developments, schooling experience, health and nutrition, costs and finance, national trends in exclusion and equity and the character and development of private schooling. The principal sources of national-level data employed include the Ghana Living Standards Surveys (GLSS), the national Education Management Information System (EMIS) the Core Welfare Indicators Questionnaire (CWIQ) and the Demographic and Health Surveys (DHS).

Figure 1: The Determination of Educational Access Outcomes



2. Policy Context

Historically, levels of access to education in Ghana have been high relative to other states in West Africa. Considerable progress was made as a result of early post-independence policies; although enrolment growth stalled in the 1970s as a result of economic decline, recovering again in the late 1980s. Detailed discussion in historical context of the development of educational access in Ghana and of the policies that shaped it is provided in Little (2011) and Akyeampong (2010). Important improvements in initial access to basic education took place in Ghana during the 1990s, and by the end of the Millennium, only around one in ten children had never been to school. The large gap between the three Northern regions and the rest of the country in terms of initial access narrowed substantially over the same period, as did the gender gap, in line with a key policy objective. The proportion of children who had ever been to school improved, even after controlling for important changes in socio-economic and demographic indicators, suggesting an effect of successful expansion in supply of schooling. Equally, household economic welfare levels improved over the period, although notably less so for the poor.

However, increased educational access and declining absolute poverty in Ghana do not necessarily suggest an improving position in terms of equity and equality of opportunity. For the later and more costly stages of education, the advantages afforded to males, urban residents, those in favourable socio-economic groups and in favourable regions, but most particularly to those in households with higher economic welfare were very large in 2005/6. Moreover, despite policies to eliminate fees, the costs of education remain a serious barrier to access in Ghana among disadvantaged groups, even at the most basic level. Unlike initial enrolment rates, rates of drop-out and completion do not appear to have improved. Over-age enrolment may even have worsened in recent years (Akyeampong 2011).

Nonetheless, key policies of the 1990s and after may be credited with notable success. The Free Compulsory Universal Basic Education (FCUBE) policy was introduced in Ghana in 1996. The policy set out to make “schooling from Basic Stage 1 through 9 free and compulsory for all school-age children by the year 2005” (GoG 1996) and aimed at addressing long established deficiencies of quality. The policy was intended to abolish school fees more decisively than had been achieved in earlier reforms. It provided a comprehensive sectoral framework for reform in the basic education sector and required considerable decentralization, aimed at community involvement; alongside seeking to improve the co-ordination of donor support. Improving gender equity in participation was a central aim and was supported by the establishment of the Girls Education Unit (GEU) in 1997. In addition, FCUBE focused on the development of curricula, improvement of teacher deployment and training and the strengthening of school and educational management structures. The FCUBE policy and its impact are considered in detail in Akyeampong (2009).

In 2001, The Ghana Education Trust (GET) Fund was established to assist in the financing of education nationally, deriving its funds from additional hypothecated expenditure taxes in recognition of the need for increased investment. By 2005, when FCUBE’s initial ten year period was drawing to a close, it was apparent that, while there had been substantial improvements in participation in basic education, the implementation of policy had nonetheless fallen short in respect of providing for universal access (see Akyeampong et al 2007). GLSS 5 data collected in 2005/6 showed a school attendance rate of around 81 per cent overall in the 5-17 age group but these rates were much lower for the poor and in

Northern regions and reduced with age within the age-group of the basic cycle. As Akyeampong notes,

“One disappointment with FCUBE is that its input did not go far enough to offset the opportunity costs of schooling for the poorest households by abolishing all forms of fees and reducing significantly the indirect costs associated with attending school. The incidence of late entry, overage attendance and poor households' need for child labour also posed a further threat to the benefits FCUBE promised.”

(Akyeampong, 2009)

Equally, the implementation of FCUBE has done little to silence critics of the quality of education in Ghana. In 2003, the Core Welfare Indicators Questionnaire (CWIQ) survey had found that around 25 per cent of children who were not attending school did not do so because it was ‘too expensive’ (GSS 2005). In response to apparent difficulties in raising attendance among the poor, in spite of FCUBE, the Ghanaian government began a pilot in 2004/5, under a World Bank programmatic scheme, of a capitation grant initiative. The scheme granted additional funds to schools directly on a per pupil basis and was piloted initially in 40 schools and then in 53 deprived districts. In 2005/6 the grant amounted to around 3 US Dollars per pupil and was intended to offset the costs that continued to discourage universal enrolment. The scheme was initially financed using funds from international initiatives including the Highly Indebted Poor Countries (HIPC) fund and the Social Impact Mitigation (SIM) fund. Following the introduction of FCUBE, schooling costs had been primarily indirect and opportunity costs, but the GES found that schools were continuing to levy a wide range of fees some of which were unauthorised (GES 2005). Pilot exercises found the capitation grant to be an effective lever for improving enrolment and the Capitation Grant Scheme (CGS) was rolled out nationally in 2006 and has been associated with a recent surge in enrolment in administrative data (see Akyeampong, 2009). However, as Akyeampong (2011) argues, more careful analysis of the impact of the CGS suggests that it is sufficient to sustain high enrolments and completion of basic education, and that what is required are policies and strategies that also make schools capable of dealing with the wide range learning needs of pupils who re-enrol or enrol for the first time. And that, unless the CGS is discriminatory, in terms of it targeting the poor who are in most need of support to access basic education, it is unlikely to achieve sustainable demand from the poor.

It is quite clear from the evidence from CREATE studies in Ghana that, the factors contributing to educational exclusion are complex and overlapping, so that children suffering multiple disadvantages may be considered most at risk. The very low levels of access for fostered girls in rural Northern Ghana (see Rolleston 2011) illustrate the impact of such a constellation of excluding factors. More generally, CREATE studies have identified strong linkages between community livelihoods, low parental literacy, poor health and nutrition, over-age enrolment, poverty, rural habitation and exclusion indicators including poor attendance and achievement. While ‘catch-all’ policy initiatives such as FCUBE and the CGS have achieved notable success, it may be argued that future interventions will need to attend more specifically to the complexity of exclusion, through effective targeting, if they are to improve the access chances of the most marginalised. Quantitative expansion has occurred under policies such as FCUBE and CGS should be seen as temporary – if quality of public education to sustain demand does not come at the heel of such expansion, and quickly, much of the gains will be eroded. Improved quality and efficient delivery of basic education is critical if Ghana is to achieve universal lower-secondary education, which must be seen as a precursor to rapid quantitative expansion of secondary education. Any attempt to bypass the

need to achieve universal completion of lower-secondary and instead invest heavily in senior secondary is bound to create the kind of inequalities in access which ultimately disadvantage the poor (see Coulombe & McKay 2007).

3. The Community and Schools Survey (ComSS): Research Design

CREATE's primary data-collection exercise in Ghana, the ComSS study, tracked 2544 pupils between 2007 and 2010, collecting data from 29 schools and 1386 households. The methodology was designed to explore issues surrounding meaningful access to basic education for children by means of a longitudinal study of pupils, their schools and homes. Pupils in the grades Primary 1, 4, 6 and in JHS 1 were identified as key because of the focus on transitions and trajectories and formed the sample of pupils within the selected schools. In addition to the child and class level survey instruments, questionnaires were conducted with household caregivers of pupils from the selected grades to understand their background and household conditions. Interviews were conducted with school drop-outs and never-enrollers identified in the communities. The baseline study of the schools and communities also involved questionnaires conducted with school principals and teachers. A full consideration of the ComSS design is available in Akyeampong et al., (2007).

3.1 Approach and Sample Design

Ghana can be divided into three main geographical (ecological) zones: northern (savannah), middle-belt (forest) and southern (coastal). Typically the coastal region is most advantaged and the savannah the least. Two districts were purposively selected to represent relatively poor areas in the northern and southern belts using criteria including a dominance of rural and peri-urban settlements, a low Gross Enrolment Ratio (GER) within the region and a pattern of occupational activities that have potential to impact upon educational access. The districts selected on this basis were Savelugu-Nanton (Northern Region) and Mfantseman (Central Region). School statistics for the district and school mapping reports were used to aid the selection of individual schools and their communities in consultation with circuit supervisors from the District Education Offices. Households with children enrolled in Grades P1, P4, P6 and JSS1 within the selected schools were included in the survey sample. Not all households could be visited, however, so that the school-based pupil sample is larger (2544 pupils) than the household-based sample (1473 pupils). The selected schools fell within 6 education circuits (the administrative level below the district). The circuits typically represent towns or parts of towns and their satellite villages in urban areas; and villages or groups of villages in rural areas and are thus able to be interpreted loosely as wider communities beyond the school-communities defined by the households which contain children attending a particular school. The design thus permits the examination of individual child, household, school and community factors as they impact on educational access.

3.1.1 Mfantseman district

Mfantseman District is located in the Central Region of Ghana. It has a total population of 152,264 constituting about 7% of the total population of the region (GSS, 2005). There are 168 settlements in the district with only 2.4% of its population living in urban areas, so that the district is primarily rural (GSS, 2005). Of the 12 administrative districts in the Central region, Mfantseman has been identified as one of the poorest with about 60% of its total population considered to be living below the poverty line (MDA, 2006; GSS, 2000). The major economic activities are farming and fishing; with the occupational distribution showing that 51% of households are involved in fishing, 30% in farming and 19% in commerce (GSS, 2005). Farming activities are rain-fed; and owing to a perennial erratic rainfall pattern and to rudimentary farming practices, many farmers can only produce at a subsistence level. School attendance is relatively low. Gross enrolment at primary and Junior high school levels stand

at 70.1% and 67.6% respectively (GSS, 2000). Only 37.9% of adults are considered literate and around 33% of the adult population has never enrolled in school; the figure being 20% for those between the ages 6 and 14 years. Compared to the other districts in the region, Mfantseman has the greatest proportion of children of school-going age who have never enrolled (GSS, 2005). The district nonetheless contains a number of low-cost private schools. In rural areas, there is typically a single school (either public or run by faith-based organisations) or occasionally none at all. Communities are predominantly Christian and engage in monogamous marriages. Semi-urban areas have more basic schools – both public and private schools and some faith-based schools. Nonetheless, livelihoods are largely similar to those in rural areas. Outside of the fishing season, some of the fishermen migrate with their children to other fishing communities elsewhere in Ghana, so that temporary migration, including of children, is relatively common in the district.

3.1.2 Savelugu-Nanton district

Savelugu-Nanton is an administrative district within the Northern region of Ghana located close to the regional capital, Tamale. The population was 91,415 according to the 2000 census and population growth is above the Ghana average (3% compared to 2.6% in 2005). Dagbani is the most widely spoken language, although schooling is mainly in English or English and Arabic. Islam is the dominant religion. Agriculture engages 97 per cent of the labour force, mainly in the form of rain-fed subsistence crop farming, including the cultivation of maize, rice and yam. Incomes are low, especially among women and less than 50 per cent of the population has access to clean water. Of 149 communities, only 17 are connected to the national grid for electricity and other facilities are limited. For example, only four doctors were working in the district in 2005. There is migration of both children and adults to Tamale, and to southern parts of Ghana, especially Kumasi and Accra, including for menial work as porters, known as *kayaye*. In 2005, 40 percent of children were found to have stunted growth (District Directorate of Health Services 2006) and the district had the highest rate of under-5 mortality in Ghana at 239 deaths per 1000 live births, according to the DHS. Historically, enrolment in school among the Dagomba has been particularly low, although in recent years it has increased dramatically. Around one fifth of household heads could read in 2004 (UNICEF 2010) with a slightly lower proportion being able to write. Less than ten per cent had ever attended primary school. Unlike in southern Ghana, where gender gaps are typically relatively small, gender disparities are a particular issue in Savelugu-Nanton:

“There exists a gender parity gap. The situation emanates from poor retention of the girl child in school especially at the JSS level. The possible reason for this situation could be that at the JSS level, the girl child begins performing the multiple domestic roles... It appears impossible to prevent the girl child from performing the roles. Thus, the action being pursued is to support the girl child perform domestic roles without compromising with her education.” (Savelugu-Nanton District Assembly, 2010)

3.1.3 Achievement Tests

Pupils in primary grades 4 and 6 and in Junior High School (JHS) grade 1 were tested in English language and mathematics to examine their achievement in relation to the norms of the curriculum in language and mathematics. The same test was administered to all the three grades on two occasions, with an interval of approximately one year. The test items were developed by the Centre for Research on Improving Quality of Primary Education in Ghana

(CRIQPEG) based on topics in the English language and mathematics curriculum in Ghana for Grade 4.

3.2 Basic Statistics from ComSS

Table 2 reports summary statistics for both case-study districts included in the ComSS. For Mfanteman, the average (mean) household size was found to be around 5.6 individuals of whom an average of 2.6 were children aged 6-17; that is just over 1.4 boys and 1.1 girls. In total an average of 2.4 children per household had ever attended school, constituting 92 per cent, leaving around 0.2 children or 8 per cent as not having ever attended in this age group. Households contained on average just over 1.3 boys and 1.1 girls and ever attendance rates are found to be around 92 per cent for both genders. In Savelugu-Nanton, household size is clearly much larger, being on average 9.5 members. Households contained 3.8 children of school age but among these 3.05 had never attended school, on average. This gives an ever-attendance rate of only 20 per cent, which is dramatically lower than in the Southern case. Moreover, when compared to figures showing a high level of gender parity in the South, the Northern data show that 17 per cent of girls and 35 per cent of boys had ever enrolled, indicating wide gender disparity.

Table 3 reports the data on household livelihood activities for both districts, showing the percentage of households which derived income from each source. Farming activities (including fishing) dominated in both sites, with three fifths of households in the South deriving income from this source and four fifths in the North. A substantial minority of households also received income from petty businesses (especially trading). Casual labour in agriculture was a significant source of income in the South, somewhat less so in the North. Other sources of income were received by only a smaller minority of households, although sources of income are clearly considerably more diversified in the South than in the North. In the South, income from wage-labour, while relatively unusual was much more common than in the North. The same is true of unearned income. Accordingly, the northern site may be considered considerably more dependent on agriculture, while in the south livelihoods depend on a range of activities.

Table 3: Summary Statistics on Ever Attendance (Zone 1): Savelugu-Nanton District

Variables (per household)	Savelugu-Nanton (North)		Mfanteman (South)	
	Cases	Mean	Cases	Mean
Household Size	709	9.50	663	5.55
Children aged 6-17	709	3.80	663	2.60
Children ever enrolled	709	0.75	663	2.40
Children never enrolled	709	3.05	663	0.20
Boys	709	2.17	663	1.45
Boys never enrolled	709	1.34	663	1.34
Boys ever enrolled	709	0.47	663	0.10
Girls	709	1.70	663	1.15
Girls never enrolled	709	1.62	663	1.06
Girls ever enrolled	709	0.28	663	0.87

Source: ComSS Data

Table 4: Household Livelihood Activities (per household) North and South

	North (Savelugu-Nanton)		South (Mfanteman)	
	Cases	%	Cases	%
Own Farm activities	707	83.9	667	63.3
Casual Labour in Agriculture	707	11.3	667	28.0
Casual Labour (Non-Agric)	707	7.1	667	9.9
Wage Employment (Agric)	707	1.7	667	6.6
Wage Empl. (Non-Agric)	707	6.6	667	11.5
Petty Business	707	39.3	667	43.0
Major Business	707	7.1	667	18.6
Collection / Foraging	707	5.9	667	12.0
Charity / Alms	707	1.6	666	9.8
Safety Net / Poverty Schemes	707	2.4	667	4.8
Interest	707	0.7	667	2.4
Public transfers	707	0.8	667	3.0
Remittances	707	2.6	667	8.8

Source: CommSS Data

4. Access and Exclusion Zones

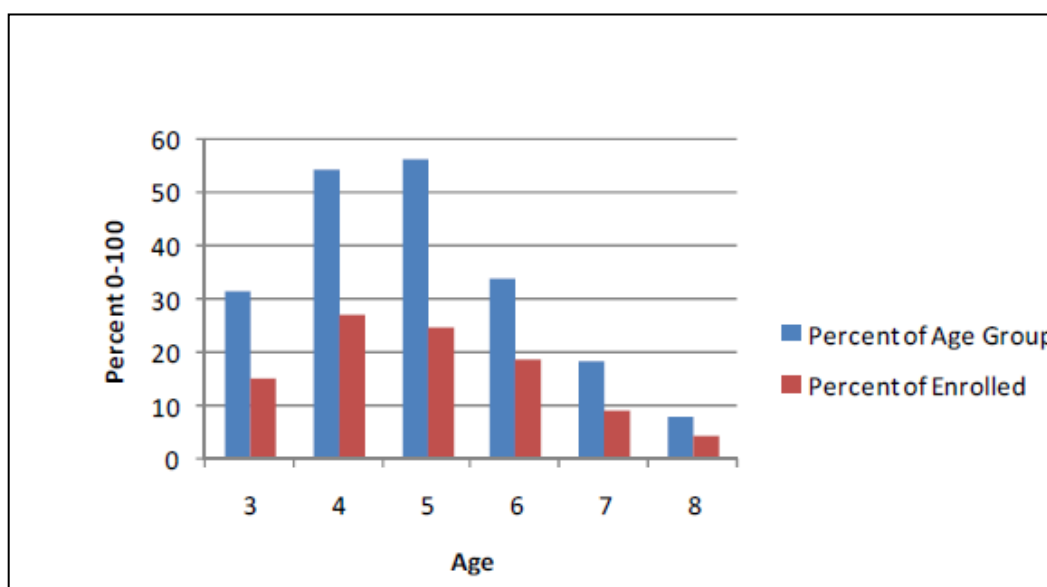
The following sections summarize the findings of CREATE research in relation to the ‘zones of exclusion’ comprising the project’s conceptual model of access.

4.1 Zone 0: Pre-Schooling

According to the most recent available national data, relatively high proportions of children are attending some form of pre-schooling in Ghana, following recent increases in enrolment since pre-schooling was included in the conception of basic education in 2007. Figure 2 below shows that more than half of four and five year olds had attended some form of pre-schooling in 2008. Attendance at pre-school for some children overlaps with the official starting age at primary school (6 years); in these cases probably being associated with late enrolment at primary level, considered further in the discussion of over-age enrolment. In the ComSS household sample, 93.1% of children aged 6-14 in Mfanteman district and 84.7% in Savelugu-Nanton were reported to have attended some form of pre-schooling. In both districts, children attended pre-school on average for just over two years.

Early childhood care and education is often found to exert positive effects on later-life outcomes, including subsequent educational attainment. Consequently, pre-schooling indicators were included in analyses of attainment outcomes which are reported in the sections that follow. Having attended pre-school was found to be positively associated with attainment in maths and English and negatively associated with a child’s over-age status – that is the number of years by which a child is older than the expected age for the grade in which he or she is enrolled. However, these effects appear to be accounted for to a large extent by differences between communities, including of course the availability of pre-schooling, but also other forms of advantage at community level. This evidence supports the attempts by the government of Ghana to make pre-school education more accessible. Quite clearly, access to pre-school is an important pre-cursor to sustained access and improved achievement in basic education.

Figure 2: Attendance at pre-school (all Ghana) 2003-2008



Source: UNICEF (2010) analysis using DHS data

4.2 Zone 1: Ever-Enrolment in Primary School

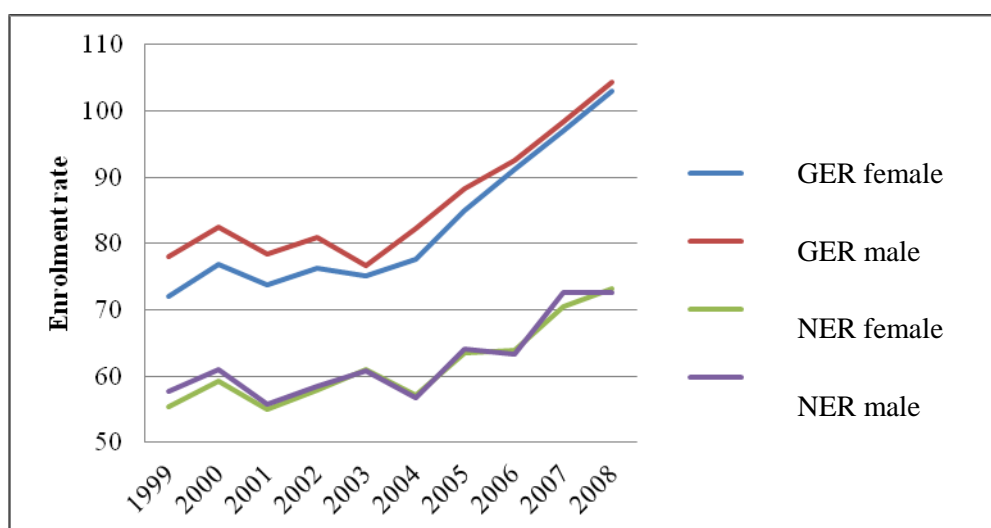
National level

Never attending primary school is perhaps the most unambiguous form of educational exclusion. According to GLSS data, children's ever-attendance at school across Ghana increased by 10 percentage points from 77% to 87% between 1991 and 1999 in the 5 to 17 age group, remaining at a similar level in 2006. Administrative data from the EMIS show a net enrolment rate (NER) at primary level of 88.5% for 2008/9. Substantial regional disparities are apparent, with much lower rates of ever-attendance being observed in the three Northern regions (Northern, Upper East and Upper West). Exclusion from ever attending school over the period since 1991 in GLSS data ranged from as high as two thirds of children in the Upper East region in 1991/2 to only 3% of children in the Central region by 2005/6, but fell in the Northern regions to between 33 and 42% by 2005/6. In the other regions the figure ranged from 3 to 15%.

It is important to view these estimates of proportions of children attending school in the light of estimates of population size and of population growth. Population growth in the 5-17 age-group has been comparatively rapid, with the absolute size of the group having grown by more than 50% since 1991. Consequently, static proportions of children gaining access to schooling represent large increases in absolute numbers. Figure 3 illustrates recent trends in primary enrolment ratios using EMIS, which show static enrolment ratios between 1999 and 2005 (consistent with GLSS) followed by sizeable growth thereafter, coincident with the introduction in 2005 of the CGS.

School ever-attendance in 2005/6 (GLSS 5) was found to be highest in the 7-14 age range, with lower rates at younger ages due to late enrolment and at higher ages due to lack of progression beyond JHS and to drop-out, as shown in Figure 4. The patterns are shown by poverty status and indicate that the 'extremely poor' have notably lower attendance at school than other groups, especially at younger ages (see Akyeampong, 2009). Figure 5 shows the distribution of household poverty in Ghana in 2005/6, illustrating the strong overlap between poverty and region, with northern regions showing much higher poverty rates.

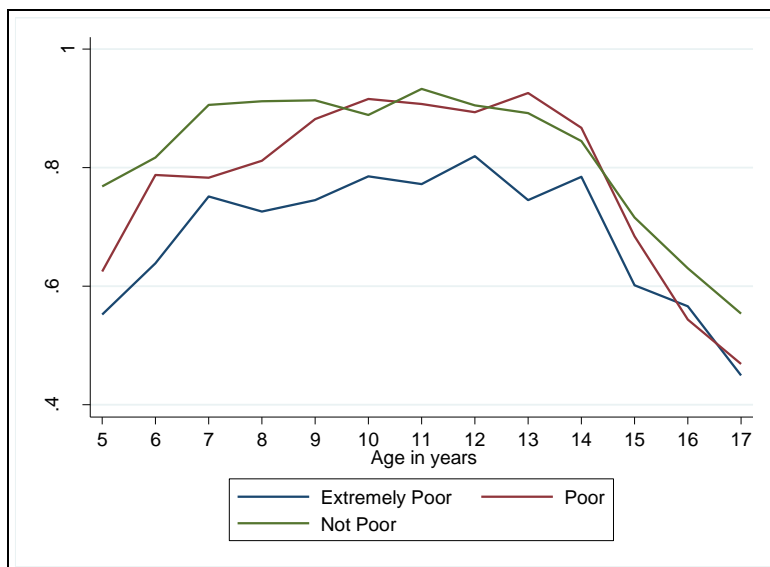
Figure 3: Enrolment ratios in primary education: Ghana 1999-2008



Source: UNESCO Institute for Statistics (national data)

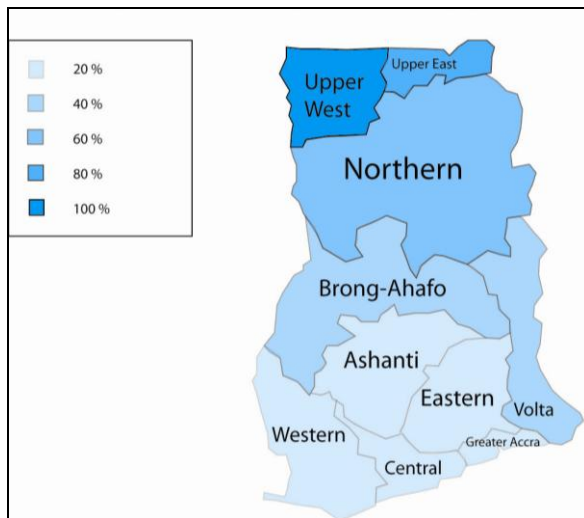
Results of modelling the determinants of ever attending school show a declining gender effect at the national level, with boys being more likely to have ever attended school in the 1990s but an almost negligible effect by 2006 (full modelling results for school attendance and progression outcomes are available in Rolleston 2009). Gender effects remained important in the North, however. The relationship of a child to the household head was found in modelling exercises with national data to exert an important negative effect on ever-enrolment. These effects were particularly large for servants and fostered children who were considerably less likely to have ever enrolled, controlling for other characteristics. The relationships between fosterage and educational access in Northern Ghana are considered in detail in Rolleston (2011). The education and/or occupational class of a child’s parents were also found to exert significant effects, consistent with the wider literature. Household welfare (consumption) levels were also positively associated with a child ever having attended school, with children in higher welfare households being more likely to have attended. Regional effects were found to be significant and sizeable. The most positive regional effect overall was for the Brong Ahafo region whose children were up to 17% more likely, other things being equal, to have ever enrolled than in the region with the lowest ever-attendance (Upper East). There appears to have been a general and substantial decrease in the size of regional effects over time, however, owing substantially to increased provision in the North. There is also a significant effect on ever-attendance of urban as opposed to rural location at the national level. Modelling exercises find a general positive effect associated with later time periods since 1991, reflecting policy interventions to increase supply and possibly increased preferences for education linked to increasing levels of adult education among other factors.

Figure 4: School Attendance Rates by Household Poverty Status (GLSS 5)



Source: Computed from GLSS 5

Figure 5: Incidence of Poverty in Ghana (2005/6)



Source: Computed from GLSS 5

Case Study Districts

Owing to the school-based sampling-frame, CREATE survey data do not provide information about ever-enrolment at district or community level. Evidence of ever-enrolment patterns is available, however, from administrative sources (EMIS). Table 4 shows the enrolment indicators from which inferences about ever-enrolment may be made. Patterns in the two districts are somewhat different. The NAR (net admission rate) indicates the proportion of children of the correct age who were enrolled in primary grade 1. In Savelugu-Nanton, around three quarters of children of age were admitted at primary compared to just over two-thirds in Mfantseman. A gender gap of eight percentage points is observed in the north while there is parity in the south. The GAR (gross admission rate) at primary denotes the quotient of all children enrolled in the first grade and the of-age (6-11) population. This is notably higher in the south, perhaps because a greater proportion of children were enrolled over-age in the first grade.

The primary NER indicates the proportion of children of age who were enrolled at primary level. This shows more than ninety percent enrolment in the south, and less than eighty percent in the north; again with a sizeable gender disparity in the north only. The difference between NER and NAR patterns between north and south is largely due to the very dramatic recent increases in enrolment in the north. Indeed, the primary NAR is found to have increase threefold since 2004 from a quarter to three quarters in Savelugu-Nanton. The NER of course takes account of pupils who had enrolled up to six or so years before 2009. The primary GER is also higher in the south than in the north but the NER/GER difference is similar, indicating no large difference in the prevalence of over-age enrolment across the primary education phase between north and south.

Despite a high proportion of pupils being admitted late to primary school in the south, more than nine in ten pupils of primary school going age were found to be in school so that it may be inferred that late-enrolment is the main cause of children being overage (rather than drop-out and re-enrolment). It may be inferred that in the south, at least nine out of ten children ever attend primary school. For the north, the figure for primary school appears to be around eight in ten.

Table 5: Primary Education Enrolment Indicators 2008/9

District	Indicator	Girls	Boys	Total
Mfanteman	GER	0.968	0.984	0.952
	NER	0.925	0.929	0.921
	GAR	0.995	1.001	0.989
	NAR	0.690	0.690	0.690
Savelugu-Nanton	GER	0.832	0.921	0.738
	NER	0.781	0.857	0.699
	GAR	0.885	0.965	0.805
	NAR	0.743	0.818	0.668

Source: EMIS data 2008/9

Ampiah and Adu-Yeboah (2009) conducted interviews with never enrolled children in both CREATE districts. Their findings suggest that, among their sample, poverty was a primary reason for never-enrolment. The reasons children gave were often connected to economic activities (farming and fishing), and their implications for child work and affordability of schooling. In poor households, pressing economic and basic human needs seemed to compel parents to opt for child labour rather than education, while the indirect costs of schooling play an important part in this outcome. In more literate communities, most of the male parents/guardians in the study were found to have received basic education and to attach importance to education. Nevertheless, data showed that some children in such families had also never been enrolled in school, often as a result of family status and events including single parenthood, remarriage and/or large family size. One of the family background characteristics found to be important in the North was the prevalence of fosterage, considered further in section 5.4 and in Rolleston (2011). Examples of the stories of never-enrolled children from Mfanteman district are summarised in Box 2.

4.3 Zones 2 and 5: Dropping Out

CREATE exclusion zone 2 comprises primary school drop-outs and zone 5 JHS drop-outs. Between 1991 and 2006 the proportion of children aged 5-17 who were currently attending school rose from 71 to 81% with rates being substantially lower in the Northern regions, according to GLSS data. As a percentage of all children in the age range, drop-out affected between 1 and 10% of the age group according to region, with no clear trend over the time period. The national figure remained constant over the period at around 6%. Although current attendance figures are lower for the Northern regions, because ever-attendance is lower in these regions they represent similar proportions of those who had ever been to school, so that in the North retention is not dissimilar from the national picture.

The Ghana Core Welfare Indicators Questionnaire (CWIQ) (2003) included questions on attendance at school and on reasons for non-attendance. Among drop-outs nationally, the most common reasons for not attending were that school was considered “useless” (27%) or “too costly” (25%). Modelling exercises using GLSS data (see Rolleston 2009) show that current attendance (retention) was associated with similar factors to ever-attendance to a considerable extent, including age and gender; but that children’s work was found to be more strongly linked to retention/drop-out than to ever-attendance, as was household size and composition – particularly the number of young children in the household. However, household welfare and occupational status were found to be more important in determining ever-attendance than retention and regional, urban/rural and time effects were much smaller

for retention. This suggests that the most obvious drivers of exclusion – poverty and the availability of schooling affect initial enrolment most strongly, while retention depends more on child characteristics and the household's needs for child labour including in relation to care for younger children. The implications for policy on improving access are profound – it may be necessary to introduce policies that can have direct or indirect impact on reducing economic survival needs of poor households, and link this to improved access to quality education that provides skills that can progressively lift the poor out of poverty over time.

Qualitative work in Mfanteman district conducted by Ananga (see Ananga 2011) identified a number of forms of temporary and permanent drop-out on the basis of interview data, shedding light on the complexity of the push and pull factors resulting in incomplete schooling and their contexts. These are summarised in Box 3. Ananga's work gathered biographical data through interviews with children and their carers; and provides an in-depth analysis of critical events which play a role both in dropping-out and in returning to school.

Box 2: Stories of never-enrolled children in Mfanteman district

The story of Kobina Armah, 14 years old

Kobina Armah (14) never enrolled in school because according to him, his parents said he was not interested in schooling, which is why they did not send him. Again, he thinks that at first, school fees were high, but fishing was lucrative so everybody was more interested in fishing than in schooling. His mother had three children from a previous marriage before she married his father with whom she has 3 more children. Only his two youngest siblings (ages 9 and 12) are in school in KG and primary 2 respectively. Kobina always goes fishing, except on days when the sea is rough. His story is similar to that of many of the boys of his age. He sleeps with the older fishermen at the beach (in a hut) so that when they are going fishing at midnight, they would take him along. According to him, his share of the fish is always given to his mother who smokes and sells them. Sometimes, when fishing is not lucrative in his town he migrates to other towns and settles there for a month or more. In this case, he sells the fish himself and sends some of the money to his mother. Kobina knows that without education, there would be no job for him in future, and that an uneducated man is not respected. He cited an example of an uneducated elderly man who comes to the beach often to beg for fish, food or money, and described the impolite way he is treated as undeserving for his age. According to him, if the man had been educated this wouldn't have happened to him. Some of Kobina's relatives who are educated have contacted him and the school about going to school, and because fishing is no more lucrative, he claimed that he would like to be in school. He showed a positive opinion about schooling and learning. However, he indicated that his mother did not have money to send him to school. As such, although he expresses the desire to go to school, he also gives a hopeless picture of his mother's poverty and

The story of Donkor, 9 years old

Donkor (9) has never been to school. She lives with her foster mother whose 6 children have all left/completed school, though it is not known what level of education they attained. She does not know whether her foster mother has ever been to school. She said her foster mother decided that she should not go to school. She does not go because she does the cooking in the house and also assists her mother in smoking fish to sell. As to why her other siblings go to school, she said they are older so they no longer assist their mother in cooking. Donkor spends the day doing chores such as sweeping, fetching water, cooking and smoking fish. Asked who she spends most of her time with, she said her foster mother. She does not earn any money from the commercial activity she engages in with her mother. She cannot imagine what happens in school. However, she remembers seeing a pupil caned severely at a school. She knows that if she doesn't go to school, she will not be able to speak English. But apart from this, she does not know the effect that lack of education will have on her. When asked whether she would like to go to school, she said no, and explained that her mother would not allow her to, and that she would punish her if she left her alone to cook and smoke the fish. According to her, her grandmother has spoken to her about going to school and has promised to send her when she reaches around 12 years. Apart from that, no one else in her household or the school has ever had contact with a school about her enrolment. With regard to her opinion about schooling, she said she thinks she would be happy if she went to school, and yet she did not like what she heard about school, and does not think she would feel safe at school.

In addition to issues of poverty, children's work and the costs of schooling, Ananga emphasises the role played by schools themselves in the processes of excluding and including children. Teacher practice and behaviour, including absenteeism and apparent lack of support for children with irregular attendance, are found to be linked to drop-out. For example, children in the study explained:

“There was no teacher for our class, so teachers from other classes came to teach us; but there were times when we went to school and for three days, no teacher came to our class to teach – sometimes other teachers came to cane us for making a noise ... It is just a waste of time and it is better to stay at home and do something else.”

and

“When I went back to school, I didn’t understand most of the things being taught ... I am just in the class ... the teacher teaches over you as if you are not there ... When I couldn’t take it any longer, I stopped again.”

Ananga considers the importance of actions which may be taken by teachers and schools to improve retention, including better monitoring, fuller community participation and liaison, improved ‘child-friendliness’ and pedagogical reform. In relation to pedagogy, Ananga indicates that ‘multi-grade’ teaching methods and alternative modes of education provision which recognise the exigencies of local livelihoods; while fairly seldom employed in Ghana, have the potential to better recognise the wide range of children’s ages and educational experiences within grades as a result of late enrolment and periods of drop-out.

Other CREATE research outputs also addressed the causes of dropping-out, including work on bullying in schools (Dunne et al 2010), which is found to be correlated with poor attendance at school, a pre-cursor of drop-out; and work on teacher attitudes and behaviours. In their qualitative study of schools in the Winneba municipality, Alhasan and Adzahlie-Mensah (2010) found that teachers may be considered to play an important role – potentially in reducing drop-out, but often in failing to do so. They cite teacher absenteeism, lateness, misuse of instructional time, use of corporal punishment, poor record-keeping and failure to support pupils at risk as contributors to drop-out; and refer to the implicit assumption of within grade pupil homogeneity in the monograde curriculum and organisational structure. They also consider inadequacies of head teacher supervision and make a number of recommendations in relation to ways in which schools might more fully discharge a responsibility to retain and support pupils susceptible to dropping-out. Overall, the evidence suggests that teachers may be part of the problem and potentially part of the solution to meaningful access, and yet policies in the past have not targeted teachers as agents of change in educational access.

CREATE interviews with teachers as part of the ComSS baseline study in the two case-study districts included questions on reasons for dropping out. The most common reasons cited for drop-out among boys in Mfanteman district are summarised in Table 5. Teachers perceived poverty and child labour to be key, along with lack of parental care and poor academic performance. When asked about girls’ drop-out, pregnancy was also cited as a key reason. Teachers did not typically respond, however, that school-based factors such as poor teacher attendance and use of corporal punishment may also play a role in drop out (see Alhasan and Adzahlie- Mensah, 2010). In a qualitative study of drop-out in Savelugu-Nanton district, Ampiah and Adu-Yeboah (2009) examined the final ‘critical events’ leading to drop-out. These are summarised in Table 6. In this study, the need for child labour and the impact of poverty (on affordability of schooling) emerged overwhelmingly as important precursors to drop-out. These are clearly inter-related. In the case of girls, parental mortality and fosterage were found to be important; linked to the traditional domestic roles played by girls in the district.

Box 3: Typology of temporary and permanent forms of drop-out in Southern Ghana

<p style="text-align: center;">Temporary: Sporadic Dropout</p> <p>For children who have stopped attending school owing to temporary economic needs, dropout is a temporary withdrawal from school in the short term. This can be called ‘sporadic dropout’. In reality, this type of dropout is marked by intermittent nonattendance. Such temporary dropout cases can include those <i>at risk</i> of dropping out permanently and those <i>silently excluded</i> and learning little. Low- levels of attendance, where 25% of more of learning time is lost is a kind of drop out even if the child remains registered and nominally enrolled. If linked to temporary economic needs children will return to school when these ease.</p>	<p style="text-align: center;">Temporary: Event Dropout</p> <p>‘Event dropout’ is a response to one or more critical events in children’s lives either at school, at home or both. This type of dropout lasts for about a year. Events outside school that can lead to dropout include migration of a child’s family or the death of one or both parents, or other household shocks including sickness and unemployment. Events in school can include conflict between a child and teachers which can result in temporary dropout. For example children who refused to conform to corporal punishment in some case study schools were given a stern warning not to return to class until the terms of the punishment had been met. Often dropout is the result of a combination of two or more factors which trigger decisions to stop attending for a period.</p>
<p style="text-align: center;">Permanent: ‘Unsettled Dropout’</p> <p>‘Unsettled dropouts’ are generally older children who do not attend school and are unlikely to return to complete the cycle. The doubts these children have about going back to school are sufficient to discourage them. Often they have feelings of embarrassment at being too old for a given grade and of having to attend class with younger children. They may also have doubts about what benefits they would gain from going back to school especially if they think their chances of graduating are very low</p>	<p style="text-align: center;">Temporary: Long-term Dropout</p> <p>Some temporary dropout involves prolonged periods out of school for some children. As a result they acquire ‘overage’ status if they do return to school. Some children who have been out of school for periods lasting between 2 and 4 academic years, are as a result older than 12, the nominal maximum for primary schooling. These “overage cohorts” have difficulties in completing primary schooling and may be excluded by school registration policies. This kind of falling out of a cohort group can be called ‘long-term dropout’. Despite being over age many of those interviewed hoped to return to school and in that sense were not permanent drop outs.</p>
<p style="text-align: center;">Permanent: Settled Dropout</p> <p>A fifth group of dropouts exist where children are settled in an occupation or livelihood. These children are working directly or learning a trade. Their decision not to go back to school is a reflection of their perception of the value of more education. Children for whom ‘dropout’ is permanent are frequently overage when they drop out of primary school.</p>	

Source: Ananga (2010)

Table 6: Reasons given by teachers for boys dropping out of school (Mfanteman district)

	Reason 1	Reason 2	Reason 3
Abonko	Truancy due to lack of parental control	Poverty/child labour	Poor academic performance
Akobima	Migration	Poverty	Poor academic performance
Holiness	Poverty/child labour	Truancy	Poor academic performance
Kormantse	Poverty/child labour	Lack of parental care	Teacher too hard on them
BMK Nurudeen	Lack of parental control	Lack of interest in school – work for money	Distance covered to school
Narkwa	Poverty/child labour	Lack of parental care	Transfer
Saltpond	Poverty/child labour	Transfer	Poor academic performance
Smerbu	Lack of school fees	Lack of table and chair	Lack of books/others

Source: CommSS data

CommSS data provide information on whether a child dropped-out of school at any point during the survey period (2007-2010). Table 7 shows the mean values of relevant education and background indicators for drop-outs and non-drop-outs alongside the results of a t-test for the difference between mean values. The results show that on average, pupils who later dropped-out had performed less well in English and maths and had attended less frequently and lived in poorer households and in households with lower levels of caregiver literacy. These findings appear to be largely consistent with teachers' and parents' perceptions. Drop-outs were also more overage for their grade. Differences were not significant, however, in relation to hours spent working or distance travelled to school.

Table 8 compares boys and girls separately by drop-out status on their English test results and overage status; for those pupils for whom an English test result for 2007/8 was available only. Boys who later dropped out were almost one year more over-age than those who did not. Girls who dropped out were around three quarters of a year more over-age. Both boys and girls who dropped out scored around ten percentage points lower on the 2007/8 English test.

Table 7: Final critical events, reasons or decisions cited for dropping out of school

No.	Critical final event/reason for dropping out	Boys (N=63)		Girls (N=26)		Total (N=89)	
		No.	%	No.	%	No.	%
1	Child labour	21	33.3	7	26.9	28	31.5
2	Poverty	18	28.6	2	7.7	20	22.5
3	Parents' lack of interest in formal education	5	7.9	2	7.7	7	7.9
4	Death	5	7.9	3	11.5	8	9.0
5	Fosterage	1	1.6	5	19.2	6	6.7
6	Poor performance	4	6.3	2	7.7	6	6.7
7	Blame on teachers	4	6.3	0	0.0	4	4.5
8	Sickness	2	3.2	1	3.8	3	3.4
9	Pregnancy	–	–	2	7.7	2	2.2
10	Miscellaneous	1	1.6	2	7.7	3	3.4
11	None	2	3.2	0	0.0	2	2.2

Source: Ampiah and Adu-Yeboah (2009)

Table 8: Comparison of education and background indicators by drop-out status (ComSS)

	Non Drop-Outs	Drop-Outs	T-test sig at 5%
English Test Score 2007/8 (%)	45.5	35.1	Yes
Maths Test Score 2007/8 (%)	47.0	41.0	Yes
Attendance 2007/8 (%)	83.0	73.4	Yes
Household Portable Asset Score ¹	-0.26	0.09	Yes
Distance to School (km)	1.55	1.57	No
Hours Spent Working	1.89	2.25	No
Caregiver Literacy Score	8.82	6.67	Yes
Years Overage for Grade	4.03	5.14	Yes

Source: Computed from ComSS data

Table 9: Achievement in English by drop-out status

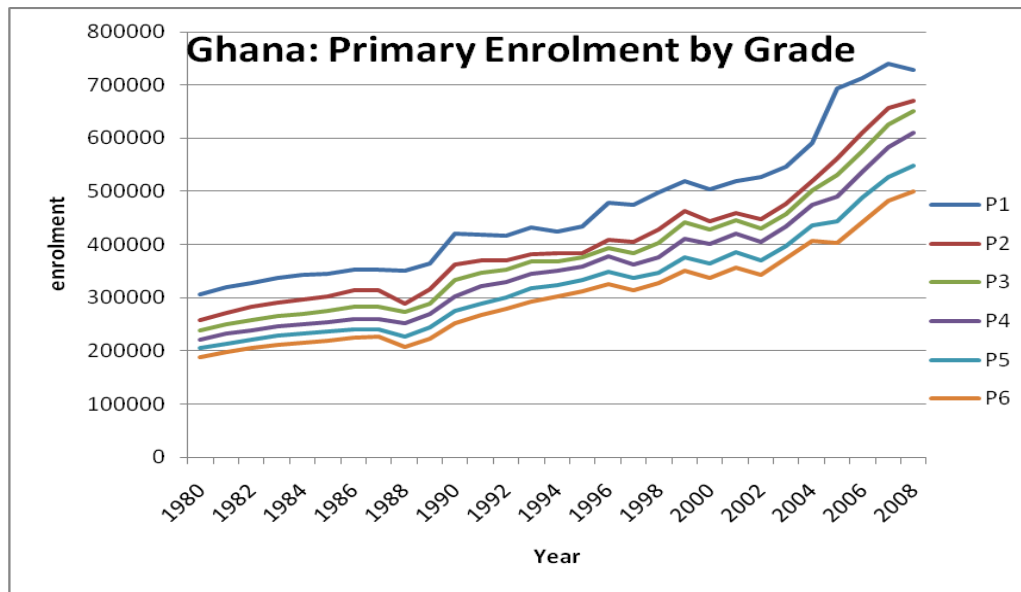
Variable	Observations	Mean	Std. Dev.
<i>Boys Continuing</i>			
English test	596	46.5302	24.96244
Years overage	1197	3.835422	2.018431
<i>Boys Dropped-out</i>			
English test	70	35.87143	22.07164
Years overage	146	4.636986	2.283011
<i>Girls Continuing</i>			
English test	431	44.16937	24.68954
Years overage	827	3.603386	1.853571
<i>Girls Dropped-out</i>			
English test	38	33.63158	24.24249
Years overage	99	4.363636	2.331919

Source: Computed from ComSS data

One striking feature of the evolution of primary enrolments in Ghana is the persistent pattern of grade transition (and by-grade drop-out) rates observed in using EMIS data. Although enrolments have increased significantly, this has not been accompanied by improved rates of transition through the grades, consistent with the static rates of drop-out found in GLSS data. As Figure 6 shows, dropout between grades 1 and 2 may have slightly increased, while between other grades it has changed little. In effect, the basic primary grade progression structure has not altered very much since the 1980s. Absolute numbers of pupils have clearly increased dramatically, so that, it may be expected that a greater number of more disadvantaged pupils was attending in 2008 than in 1980, likely a part of the explanation for apparently rising drop-out in grade 1.

¹ Calculated using principal components analysis using indicators for portable assets e.g. television, refrigerator.

Figure 6: Evolution of Primary Enrolments 1980-2008



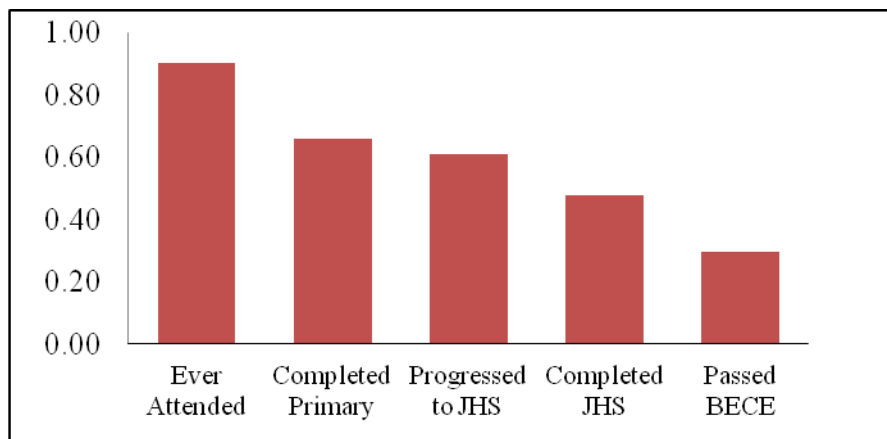
Source: EMIS data

4.4 Transition, progression and completion (including Zone 4)

While increases in ever enrolment and attendance at school have been steady and have favoured disadvantaged regions in Ghana since 1991, access to higher levels of education, within the basic cycle remains limited and strongly favours advantaged groups.

Figure 7 shows a cross-sectional view of progression in 2005, indicating that while 90% of children gained initial entry to school, only around two-thirds completed the primary stage. Of these, most appear to progress to JHS, but only around a half of all children in total complete it. Considerably fewer are entered for and pass the end of basic education examination, the BECE, which may be considered an indicator of realised basic education skills. According to a view of access to basic education which incorporates a notion of completion to examination standard, as many as two-thirds of Ghanaian children may be considered excluded.

Figure 7: Proportions of Pupils in Ghana Reaching Stages of Progress in Ghana



Sources: EMIS (2006) and GLSS 5 (2005/6)

4.4.1 Zone 4: Primary Completion and Transition to JHS

Overall, at the national level, completion rates for the primary phase of education did not improve between 1991 and 2006. According to GLSS data, in 2006, 73% of 17 year olds had completed primary school, compared with 74% in 1991. Table 9 shows the percentages of children aged 13 and 17 who had attended school that had completed primary school in 2006. If it is assumed that the vast majority of children who will complete primary school will do so by age 17, then the data suggest that between one tenth and two fifths of children who had ever attended school in Ghana never completed their primary education, varying notably by region with considerable disadvantage in the North. At age 13, figures are markedly lower, indicating a high prevalence of over-age enrolment in all regions.

Table 10: Primary completion rates by age and region (2006)

	Age 13	Age 17
	<i>Primary Completion</i>	
Western	0.26	0.80
Central	0.30	0.75
Greater Accra	0.46	0.84
Eastern	0.28	0.79
Volta	0.33	0.87
Ashanti	0.35	0.87
Brong Ahafo	0.26	0.66
Northern	0.10	0.31
Upper West	0.10	0.43
Upper East	0.15	0.46
Total	0.28	0.73

Source: Computed from GLSS 5

CREATE exclusion zone 4 comprises pupils who complete primary education but do not progress to JHS. As shown in Figure 7, this zone affects relatively few children in Ghana as a whole. Table 10 reports in detail the transition to JHS rates for primary completers from 1999 to 2008 using UIS data taken from EMIS. Figures show no particular trend of change, but transition to JHS is found to be high, at 92.7% in 2007. It may be inferred that completing primary school is an important milestone in a child's education career in Ghana, which, if reached, leads to transition to lower-secondary school in the vast majority of cases. It is important to remember that basic education in Ghana comprises primary and JHS, with no selection examination between the two. This could explain the high transition from primary to JHS.

Table 11: Primary-secondary transition rates 1999-2008

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Transition from primary to lower secondary (%)	92.6	82.1	90.0	86.8	92.7	...

Source: UNESCO Institute for Statistics (UIS)

Table 11 shows the enrolment indicators taken from EMIS and from which inferences about ever-enrolment at JHS level may be made for the two CREATE districts for 2008/9. Patterns in the two districts are somewhat different. The JHS NAR indicates the proportion of children of the 'correct' age who were enrolled in grade 7 (or JHS 1). The following differences are notable:

- Around two-thirds of pupils of-age were admitted into grade 7 in the south compared to less than one fifth in the north.
- Across the JHS phase (using NERs), around two-thirds of pupils of-age were enrolled in the south and around a quarter in the north.
- In the south, it appears that a significant number of pupils at JHS level were admitted and enrolled overage, as the NER/GER and NAR/GAR differentials amount to more than twenty-five percentage points. In the case of the NER/GER difference shows that 29% of pupils were overage at JHS level. In the north, however, the NER/GER and NAR/GAR differentials are very large, at around fifty percentage points. The NER/GER difference shows that almost 62% of pupils were overage at JHS. The data do not allow a precise estimate of the proportions of children who ever attend JHS.
- Based on national primary completion and transition rates, a figure of 65% may be considered a reasonable estimate of the proportion of children who had ever attended JHS in 2007. The figure for Mfanteman in 2007 is at least 70% based on the NER. The figure is less clearly discernible in Savelugu-Nanton, owing to the very high prevalence of over-age enrolment.

Table 12: JHS Enrolment Indicators 2008/9

District	Indicator	Total	Boys	Girls
Mfanteman	GER	0.984	0.977	0.918
	NER	0.698	0.700	0.696
	GAR	0.957	0.976	0.937
	NAR	0.676	0.669	0.684
Savelugu-Nanton	GER	0.726	0.807	0.614
	NER	0.278	0.292	0.258
	GAR	0.772	0.857	0.661
	NAR	0.188	0.204	0.167

Source: EMIS data 2008/9

In a modelling exercise using the sample of young adults aged 19-35 from GLSS 5 (2005/6) data to examine the determinants of levels of educational progression (see Rolleston 2009); males were found to be more likely to have reached all levels of educational attainment than females other things being equal. This difference increases at higher levels of access so that for this age-group, males were found to be considerably more likely to have progressed beyond lower secondary school. Relationship to the household head was found to affect educational attainment significantly. Children of the household head were most likely to have made educational progress and servants least likely. Greater proportions of children under the age of 7 in a household were found to reduce the probability of a household member reaching post-primary education. The same was true in relation to the number of household members aged over 59 years of age. Much more important was the occupational or socio-economic status of the household head. Household members in a household with a head in formal public or private sector employment were much more likely to have progressed beyond junior secondary than in households headed by a food farmer and were more likely to have completed primary and to have completed JSS and, other things being equal.

Smaller but notable advantages were also found among households headed by informal private sector employees, export farmers, those in non-farm self-employment and those who were not working. These effects may be considered in part separable from the effects of income and consumption, since these indicators were included separately in the modelling exercise. An improvement in household welfare (consumption) was found to increase the

likelihood that a household member had progressed educationally, particularly to the end of lower secondary school or beyond, being associated with a notably greater probability of accessing post-lower secondary education. Urban residence was also found to positively affect the probability of progression to the end of lower secondary school and beyond. Regional effects were found in some cases to be extremely large. Those in the Ashanti region, for example were found to be considerably more likely than those in the North to have accessed or completed primary school. A similar pattern is observed for lower secondary schooling. Other regions with strong positive effects included the Western, Central, Brong Ahafo and Greater Accra regions. It is notable that with regard to educational access beyond junior secondary schooling, regional effects are smaller. This may suggest that at these levels of schooling, the effect of regional level supply is balanced by very large effects of affordability and socio-economic factors, since welfare effects increase substantially at higher levels of access.

When the modelling exercise was repeated for individual survey rounds (from GLSS 3 in 1991/2), results showed decreasing regional effects over time, perhaps due to improvements in schooling provision, especially in the less advantaged northern regions. Consequently, school availability issues appear to be giving way to affordability issues as the drivers of exclusion.

4.4.2 JHS Completion

With regard to lower secondary school completion, rates remained static over the period 1991-2006 according to GLSS data, with around half having completed by age 20 in both 1991 and 2006. The figure for 2008/9 according to EMIS is consistent with this pattern of no change, at 47.8%. Table 12 shows JHS completion rates at ages 15 and 20 for all Ghana in 2005/6. By age 20, between a quarter (in the North) and seven tenths (in Accra) had completed, while at age 15 the figure was 15% or less, except in Accra. JHS completion was very low in the North and all regions show a high prevalence of over-age completion.

Table 13: JHS completion rates by age and region (2006)

			Age 15	Age 20
Western			0.08	0.57
Central			0.09	0.58
Greater Accra			0.29	0.70
Eastern			0.04	0.50
Volta			0.15	0.56
Ashanti			0.12	0.66
Brong Ahafo			0.06	0.53
Northern			0.02	0.27
Upper West			0.04	0.23
Upper East			0.01	0.24
Total			0.11	0.53

Source: Computed from GLSS 5

Modelling results using GLSS data suggest that completing JHS, when compared to having completed primary education as the highest completed level, is associated with male gender, higher household welfare (consumption), higher parental education and residence in southern regions in GLSS 5. However, the gender effect has declined notably since GLSS 3.

4.4.3: Post-basic Transition

The end of basic education marks a key transition in education in Ghana, since it is post-basic education which is associated with substantial and increasing economic returns to schooling and with selection into more lucrative occupations, especially wage-employment in both the public and private sectors. The transition, however, benefits a privileged few. Modelling results (see Rolleston 2009) which examine the characteristics of JHS completers in the 25-35 age-group who do not progress with those who had completed a level of post-basic education show that the effect of male gender is large, but also declining over time, while urban location, household welfare and parents' education and occupations have dramatic effects. Regional effects (net of other factors) are found to be in decline so that, by GLSS 5, those in northern regions are not found to be disadvantaged by location alone, perhaps due to increasing physical access owing to supply expansion. But nonetheless, the concentration of poverty in the north and of low adult education and food-farming as an occupation are major causes of low progression beyond the basic phase in those regions.

4.5: Zones 3 and 6: Meaningful Learning

Children who meet the challenge of initial enrolment and who continue in school without dropping out may nonetheless suffer various forms of 'silent exclusion' resulting in poor achievement and progress. CREATE zone 3 comprises pupils suffering silent exclusion at primary level and zone 6 comprises those at JHS level. While poor attainment may be considered a consequence of silent exclusion, poor attendance may be a consequence but is at the same time a cause, since poor attendance is likely to contribute to poor engagement with schooling. Both attendance and achievement may be examined in the CREATE case-study districts using ComSS data. Silent exclusion is likely to be associated with the characteristics of (i) pupils (ii) their households and communities and (iii) the education provision they have access to. An important factor which may lead to and result from poor attendance and performance and to incomplete schooling is grade repetition. However this was found to be relatively rare in Ghana and is not found to have a significant effect on outcomes. However, modelling exercises included a measure of over-age enrolment, which in a small proportion of cases is linked to repetition. This indicator is strongly linked to achievement as considered below.

4.5.1 Attendance and Absence from School

Attendance data for the period of two academic years – 2007/8 and 2008/9 were available for a maximum of 2418 pupils who were observed throughout the study. Table 13 reports the annual average attendance rates for these pupils by gender and district over the period. It shows that attendance rates are very similar for boys and for girls and in the northern and southern sites. Average attendance overall was found to be approximately 82 per cent, equating to slightly less than one day of absence per week or almost twenty percent of learning time. When the data are examined at school level, wider variation is apparent. Rates are found to vary from approximately 92 per cent at an urban JHS in the South and an urban Roman Catholic JHS in the North to 69 per cent at a remote rural JHS in the North. The difference equates to more than one day a week of schooling.

Table 14: Attendance Rates by District and Gender 2007-9

District		Female	Male	Total
Mfantseman	Mean	82.3	80.7	81.4
	S.D.	15.2	14.9	15.1
	N	449	551	1000
Savelugu-Nanton	Mean	83.3	81.8	82.4
	S.D.	14.0	13.8	13.8
	N	509	909	1418
Total	Mean	82.9	81.4	82.0
	S.D.	14.5	14.2	14.4
	N	958	1460	2418

Source: ComSS data

To examine the factors associated with attendance at or absence from school, a number of regression models were fitted. Table 14 shows the results of three models to estimate the correlates of absence from school in 2007/8 – an ordinary least squares model, which takes no account of circuit and school-level factors, a circuit fixed effects (CFE) and a school fixed effects model (SFE). The last two models compare attendance within sample circuits and schools respectively to control for unobserved community and school factors. The dependent variable was transformed to produce a variable with a normal distribution by taking the natural logarithm of the proportion of school days on which a pupil was absent. Results are reported for 2007/8 owing to the larger sample size for that year, but are similar for 2008/9. The co-efficients on explanatory variables may be interpreted in terms of percentage effects on the proportion of absence of a one unit change in the independent variable concerned. The models use data collected at schools only, owing to the smaller size of the household sample, so do not account for the full range of determining factors relating to absence at household level.

In the OLS model which pools pupils across all schools and circuits (column 1), the following are worth noting:

- Male gender is associated with higher absence levels, greater age is associated with lower absence levels and the number of years by which a pupil is overage is positively associated with absence from school.
- The interaction effect between age and overage status is also positive, indicating that being overage is associated with greater absence levels for older pupils. All associations are significant at the 1 or 5 percent levels.
- Columns 2 and 3 adjust for the (fixed) effects of schools and circuits. In these models, the associations with gender, age and overage status are not altered substantially. Overall, male gender is associated with a 12 to 15 percent increase in absence², a year of age with a 15-17 percent decrease in absence and a year of being overage with a 7-12 percent increase. The mean level of absence is around 18 percent so that these effects appear to be relatively small; for example a 10 percent increase in absence equates to just less than 2 percentage points. However, taking into account the interaction effect between age and overage status, larger differences may be

² The ComSS sample selected children in school who are more often boys. Owing to positive selection effects with regard to ever-enrolment for boys, the sample of girls may be more advantaged since more disadvantaged girls do not attend school.

observed. For example, consider a pupil aged 12 who is 3 years overage. The effect of being 3 years overage is a 21-36 percent increase in absence (depending on specification) but the interaction effect, using the lowest value for this co-efficient is an additional $12*3*0.005 = 18\%$. In combination with the overage effect, the result is an absence rate for the overage pupil which is at least 39 per cent higher than that of a pupil in the correct age for his or her grade at age 12.

Concerning the reported circuit effects in column 2, Circuit F, a rural area in the South with the highest predicted absence rates is used as the reference circuit. Most other circuits have a negative association with absence equivalent to lowering it by 20-40 percent when compared to Circuit F, while the association in Circuit A (a town in the South and the most advantaged site), is larger, reducing it compared to the reference circuit by 60 percent. When 'school effects' were estimated (not reported) using the school with the highest predicted absence as the reference category (a rural JHS in the North); out of 28 schools, 25 had significant negative effects on absence equivalent to decreasing absence by 50 percent or more. The two largest effects were for a Methodist primary in the South and a private primary school in the North.

In order to better model the causal determination of absence from school, models were fitted to include data collected at household level for a sub-sample of the tracked children (60% of the total). The available indicators in the data are summarised below in Table 15. It was hypothesised that household education levels and economic status may affect a pupil's attendance and absence through a variety of channels, including through decisions relating to work versus schooling, the affordability of schooling and household preferences for education. Available variables were grouped into indicators of household education and the household economy and additional indicators of the child's status which may be relevant for school attendance. Modelling results are reported in Table 16.

Table 15: Absence from School 2007/8

VARIABLES	OLS	Circuit Fixed Effects	School Fixed Effects
Sex (male)	0.152 (3.78)***	0.123 (3.10)***	0.140 (3.69)***
Age	-0.158 (-12.77)***	-0.155 (-12.55)***	-0.169 (-12.62)***
Years overage	0.077 (2.14)**	0.079 (2.19)**	0.124 (3.47)***
Age-overage interaction	0.009 (3.73)***	0.009 (3.68)***	0.007 (3.07)***
Circuit A (South urban)		-0.617 (-8.16)***	
Circuit B (South rural)		-0.227 (-2.68)***	
Circuit: C (North peri-urban)		-0.337 (-4.82)***	
Circuit: D (North peri-urban)		-0.328 (-4.32)***	
Circuit: E (North rural)		-0.381 (-3.62)***	
Constant	-0.955 (-6.33)***	-0.638 (-4.05)***	-0.888 (-5.69)***
Observations	2285	2285	2285
R-squared	0.13	0.15	0.12
Number of schools/circuits		5	29

t-statistics in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 16: Household and Child Level Characteristics in Household ComSS Data

Child Characteristics	Household Economy	Household Education
Biological or fostered child	Distance to school	Caregiver's literacy level
Number of years of pre-schooling	Distance to source of water	Source of light available for homework
Age at entry to school	Engaged in farming	
Receiving private tuition at home	Engaged in casual labour	
Growth stunting	Engaged in wage employment	
	Running a business	
	Engaged in collection/foraging	
	In receipt of charity/safety net	
	In receipt of remittances	
	Household assets	

Table 17: Absence from School 2007/8

VARIABLES	OLS Household Education	CFE Household Education	SFE Household Education	OLS Household Economy	CFE Household Economy	SFE Household Economy	OLS Both	(8)	(9)
Sex (Male)	0.107 (1.97)**	0.098 (1.80)*	0.149 (2.88)***	0.111 (2.02)**	0.108 (1.97)**	0.151 (2.89)***	0.101 (1.86)*	0.098 (1.81)*	0.144 (2.76)***
Age	-0.103 (-5.80)***	-0.103 (-5.77)***	-0.145 (-7.34)***	-0.112 (-6.39)***	-0.115 (-6.52)***	-0.143 (-7.29)***	-0.099 (-5.54)***	-0.101 (-5.61)***	-0.141 (-7.00)***
Years overage	0.033 (0.64)	0.028 (0.53)	0.091 (1.78)*	0.097 (1.88)*	0.081 (1.54)	0.128 (2.48)**	0.040 (0.78)	0.031 (0.59)	0.096 (1.85)*
Age-overage (Int.)	0.007 (1.86)*	0.007 (1.96)**	0.006 (1.74)*	0.005 (1.32)	0.006 (1.56)	0.004 (1.30)	0.006 (1.73)*	0.007 (1.88)*	0.006 (1.59)
Distance (school)	0.025 (1.83)*	0.024 (1.77)*	0.027 (1.97)**	0.031 (2.31)**	0.031 (2.28)**	0.030 (2.19)**	0.026 (1.91)*	0.026 (1.89)*	0.026 (1.89)*
Distance (water)				0.062 (2.87)***	0.048 (2.09)**	0.059 (2.57)**	0.063 (2.90)***	0.051 (2.22)**	0.054 (2.34)**
Farming				0.173 (2.69)***	0.133 (1.83)*	0.065 (0.88)	0.183 (2.86)***	0.123 (1.70)*	0.055 (0.75)
Household assets				-0.042 (-2.33)**	-0.040 (-2.12)**	-0.044 (-2.47)**	-0.021 (-1.11)	-0.021 (-1.01)	-0.020 (-0.99)
Age at entry	0.057 (3.86)***	0.063 (4.13)***	0.049 (3.20)***				0.056 (3.77)***	0.058 (3.79)***	0.048 (3.14)***
Private tuition	-0.145 (-4.03)***	-0.131 (-3.46)***	-0.029 (-0.73)				-0.125 (-3.38)***	-0.120 (-3.15)***	-0.020 (-0.51)
Light source	-0.163 (-2.77)***	-0.154 (-2.63)***	-0.214 (-3.77)***				-0.129 (-2.07)**	-0.127 (-2.02)**	-0.184 (-3.00)***
Constant	-1.577 (-6.27)***	-1.440 (-5.48)***	-1.266 (-4.73)***	-1.681 (-7.43)***	-1.403 (-5.71)***	-1.298 (-5.32)***	-1.989 (-7.27)***	-1.727 (-5.97)***	-1.502 (-5.26)***
Observations	1129	1129	1129	1144	1144	1144	1128	1128	1128
R-squared	0.13	0.14	0.14	0.13	0.14	0.13	0.15	0.16	0.15
Number of schools			29			29			29

t-statistics in parentheses

*** p<0.01, ** p<0.05, * p<0.1

The following emerge as important findings:

- No significant effects on absence were found in relation to child fosterage or pre-school education.
- Children who entered school later were found to have higher absence rates, with rates rising by 5-7 percent per additional year of late entry. Late entry is not the only reason for a pupil being over-age (others include repetition and periods of absence), so that with the inclusion of this variable, overage and age-overage interaction effects were reduced but remained significant. The relatively small separate effect of late-entry is nonetheless fairly constant across the models and years.
- The gender, age and age/grade effects were found to be fairly robust to model specification and also to year of data employed (results are shown for 2007/8). In the case of (male) gender, the effect is very robust, increasing absence by 14-15 percent in all models regardless of the set of controls included. This indicates that the effect of gender appears to be very much an individual level effect. There are, however, sample-selection issues as, especially in the North, a higher proportion of boys attend school so that the group of boys may be considered potentially more disadvantaged than the girls, with the most disadvantaged girls being more likely to have never-enrolled.
- The effect of an additional year of age is to reduce absence by 8-15 percent with household controls included and with school fixed effects, significant at the 1 percent level. An additional year of overage status increases absence by 6-13 percent and the size of the interaction effect is similar to that in the models without household controls, being reduced only slightly. Taking the overage and interaction effects together in the presence of all controls, the individual level effect may be summarised as an increase in absence of 7-10 percent per year overage plus an additional 2.5-7.5 percent per year depending on age in the age-range 6-15.

The receipt of private tuition outside the home is associated with a reduction in absence rates in the OLS and CFE models, but not in the SFE models, indicating that the receipt of private tuition is possibly clustered at school level. This was confirmed by examining the data. While in most schools few children or none received such tuition, in a few most received it, and these were typically school with slightly lower absence rates.

- Anthropometric data were available for a sub-sample of children. When the modelling was applied to this sub-sample (results not shown), being stunted or severely stunted compared to not stunted, was found to increase absence from school by around 17 per cent in the SFE model. Stunting is known to affect cognitive development and learning capacity. It may consequently also reduce the net benefits of school attendance.
- No significant effects on absence were found in relation to the household caregiver's literacy levels. Those pupils who lived in a home with a 'light source for homework' had lower absence levels in all models, especially in the SFE models, so that differences between pupils within school on this variable had notable effects on attendance. In the presence of controls for household economy and education factors, having a light source for homework was associated with an 18-19 percent decrease in

absence rates. However, since no specific control is included to capture connection to mains electricity, this variable may reflect the more general economic and educational benefits of access to an electricity supply and other correlated unobserved indicators of household advantage.

- Those who lived further from the school attended and further from a water supply had higher absence rates, with similar values for coefficients in all models for both years. These effects were found to be small but significant, at 2-3 percent greater absence per additional kilometre to school and 5-6 percent per additional kilometre to water.
- Pupils in households with more assets had lower absence rates in the household economy models, but asset ownership effects were not significant when household education indicators were included, indicating a likely correlation between household assets and education levels. Living in a household engaged in farming was found to be associated with significantly higher absence rates in the first two models, but not when including school effects. Farming households are, however, unsurprisingly clustered at school level and also to some extent at circuit levels, making the effects of farming livelihoods difficult to disentangle from other community factors. The introduction of household economy and/or education indicators typically reduces the size of circuit effects, suggesting that these factors are somewhat clustered at circuit level more generally. In the presence of the full set of controls, only Circuit A (an urban southern site) when compared to Circuit F (with the highest absence rates) is associated with significantly lower absence in 2007/8 (circuit effects not shown), although four circuits had significant effects in terms of lower absence in 2008/9.
- When school effects were estimated in the presence of the full set of controls (not shown), 13 schools (or school-communities) had apparent effects on absence which were significant at the 5 percent level in both years when compared to the school with the highest absence rates. These were typically equivalent to decreasing absence by more than 50 percent relative to the reference school. The effects were largest and most consistent in a urban Methodist Primary in the South, an urban Roman Catholic in the North and an urban English-Arabic school in the North. However, confounding issues of pupil sorting by school (school choice) cannot be ruled out, especially in more urban areas where there is a choice of school. Indeed, the schools with the largest apparent effects in reducing absence were in more advantaged urban areas with a choice of school.

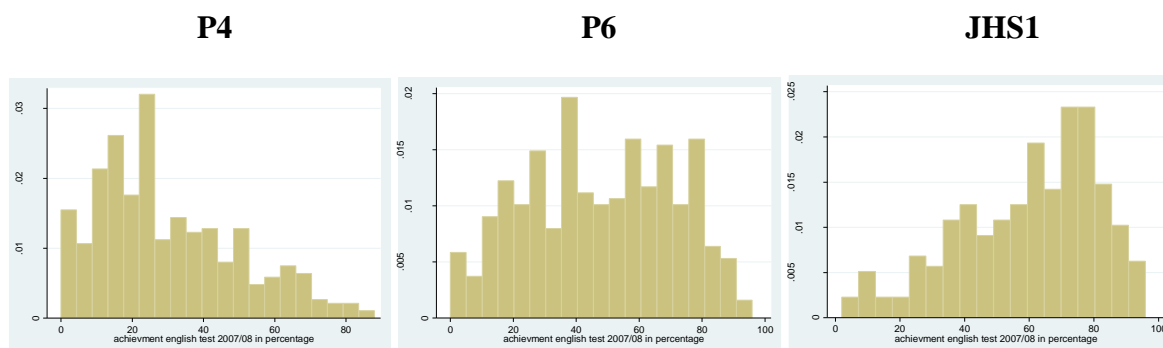
4.5.2 Achievement

Achievement in English

The distributions of test scores on the CREATE English achievement test across the three grades in which the test was administered are shown in Figure 8. The distribution exhibits a strong negative skew in P4 and a positive skew in JSS1. Results are approximately normally distributed in P6. Apparently, relatively few pupils had mastered the P4 grade curriculum in P4 but most had in JSS1. The data are not longitudinal, however, so that the groups reflect different cohorts. Nonetheless, in general it may be suggested that the pattern in P6 indicates what might have been expected in P4 if the test had been matched to average pupil learning rather than to normative curriculum expectations. Thus the test specification and the

curriculum (to the extent that the two were accurately matched) over-estimates learning in the years up to P4 in English.

Figure 8: Distribution of English scores (pooled 2007/8 and 2008/9)



Source: ComSS data

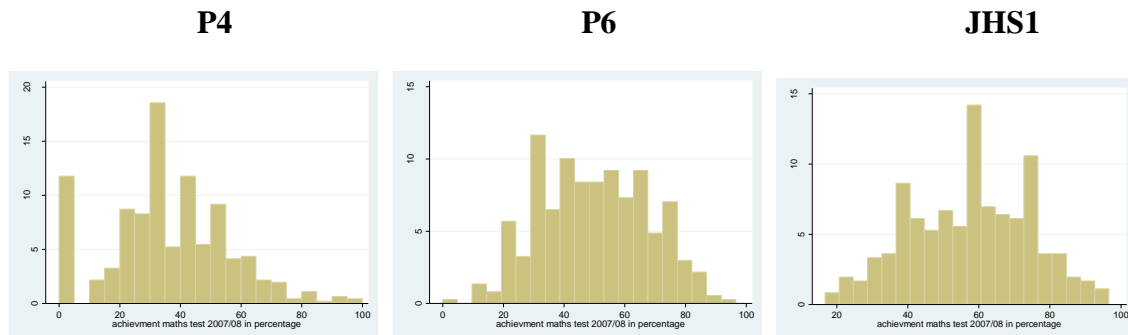
Table 17 reports the results of exercises to model achievement in English for 2007/8. Strong effects of age and overage status are found, while no consistent effect of gender emerged. As might be expected, an additional year of age is positively associated with attainment, to the tune of 8-10 percentage points. Being overage by an additional year is found to have a comparable negative effect, however. This is unsurprising perhaps, since one additional year of over-age status often represents a reduction in educational experience relative to of-age pupils of the same chronological age. Attendance is clearly an important determinant of achievement in school and the variable for absence from school shows a fairly consistent negative effect except in the school fixed effects models, which indicates that absenteeism is concentrated at school level and may be rather a school or school-community related issue.

A similar pattern is found in relation to farming in that while farming as a household occupation is associated with lower attainment in the OLS model using household economy variables, the effect disappears when school effects are included. The apparent negative associations between other sources of income and attainment – safety net payments and incomes from petty trading are less clustered by community but are not significant when school effects and controls for both household economy and education are included. Receipt of remittances by the household is associated with higher attainment in all models and may be an indicator of the availability of additional resources for meeting educational costs, since supporting relatives' educations is a common reason for sending remittances in Ghana. Attendance at preschool is associated with higher attainment only in the OLS models, most likely because the availability of pre-schooling is dependent on the community and tends to be linked with community advantage. A similar finding applies to the receipt of private tuition. The literacy level of the primary caregiver has important effects when school effects are included so that attainment is being compared between children attending the same school. This seems to suggest that the effect is an important household level influence. When circuit and school effects were examined (not shown), these were found to be significant and sizeable in a number of cases. Positive effects on attainment in English were found for urban circuits and particularly for schools in the south, especially one low-cost private school and two urban public schools. Clearly, the possibility of pupil-sorting is an issue at school level, but circuits effects are likely less susceptible to this form of bias.

Achievement in Maths

In maths, the pattern of attainment scores (shown in Figure 9) by grade was less distinct than in English, while the distribution remained left-skewed in Primary 4, where a significant number of pupils scored zero. By P6, the distribution is close to normal, again apparently indicating that the P4 curriculum may be better matched to actual achievement two grades later.

Figure 9: Distribution of Maths Scores (pooled 2007/8 and 2008/9)



Source: ComSS data

Table 18 reports the results of exercises to model achievement in maths. Similar results are found to those for English in relation to the absence of a gender effect and to the consistent effects of age and over-age enrolment. The effect of absence from school and of caregiver literacy are possibly weaker than for English, while the effect of private tuition is possibly stronger. There is considerable consistency between the results for the two subjects, however, given the relatively small sample size.

Achievement Progress

Since testing was conducted twice with around one year in between, it is possible to examine the patterns of progress made by pupils in English and maths over time using ComSS data. Regression models were used to examine the effects of the first test score, gender, age, over-age status and absence from school. Results are reported in Table 19. Higher initial test scores are found to be negatively associated with progress. Absence from school was also found to be negatively associated with progress, in both subjects, controlling for school effects. Male gender is associated with higher progress in maths and younger age with progress in English, with controls for school effects. When examining individual school effects (not shown) urban schools in the south were typically associated with better progress, along with one urban English-Arabic school in the North. JHS schools were associated with more progress than primary schools. While the findings are not conclusive, there was evidence that pupils who spent more time in school made more progress, and those in schools in advantaged areas were also found to make more progress.

Table 18: Achievement in English 2007/8

VARIABLES	OLS Household Education	CFE Household Education	SFE Household Education	OLS Household Economy	CFE Household Economy	SFE Household Economy	OLS Both	CFE Both	SFE Both
Sex (Male)	1.623 (0.81)	3.004 (1.57)	2.733 (1.42)	2.171 (1.17)	3.366 (1.87)*	3.424 (1.89)*	1.974 (1.03)	3.086 (1.64)	2.697 (1.47)
Age	8.938 (11.66)***	9.649 (13.04)***	10.199 (8.76)***	8.714 (12.25)***	9.123 (12.96)***	9.205 (8.52)***	8.784 (11.85)***	9.286 (12.45)***	9.145 (7.95)***
Years overage	-9.317 (-10.74)***	-10.718 (-12.44)***	-10.914 (-9.02)***	-9.032 (-11.25)***	-10.097 (-12.26)***	-10.191 (-8.70)***	-8.998 (-10.54)***	-9.971 (-11.26)***	-9.932 (-8.11)***
Absence (log)	-2.015 (-1.85)*	-2.040 (-1.97)**	-1.238 (-1.11)	-2.285 (-2.29)**	-2.244 (-2.30)**	-1.459 (-1.39)	-1.817 (-1.72)*	-2.015 (-1.94)*	-1.366 (-1.28)
Farming				-11.552 (-5.76)***	-3.771 (-1.65)*	-0.776 (-0.31)	-10.869 (-5.21)***	-3.975 (-1.64)	-0.731 (-0.29)
Safety net				-18.052 (-3.50)***	-12.526 (-2.41)**	-10.118 (-1.67)*	-20.390 (-3.83)***	-14.899 (-2.77)***	-9.719 (-1.61)
Remittances				9.919 (2.26)**	7.483 (1.76)*	12.975 (2.93)***	9.781 (2.22)**	7.829 (1.83)*	12.892 (2.91)***
Years preschool	2.017 (2.62)***	0.472 (0.61)	0.707 (0.86)				1.610 (2.13)**	0.797 (1.04)	0.774 (0.97)
Private tuition	3.436 (2.72)***	1.505 (1.23)	0.666 (0.48)				2.857 (2.34)**	1.676 (1.37)	1.201 (0.90)
PCG Literacy	0.085 (1.40)	0.126 (2.02)**	0.134 (2.15)**				0.091 (1.47)	0.152 (2.27)**	0.163 (2.50)**
Constant	-63.148 (-6.53)***	-68.518 (-7.17)***	-64.760 (-5.20)***	-43.622 (-5.24)***	-58.660 (-6.78)***	-52.893 (-4.66)***	-49.019 (-5.02)***	-59.120 (-5.92)***	-51.610 (-4.23)***
Observations	471	471	471	514	514	514	470	470	505
R-squared	0.29	0.39	0.21	0.35	0.41	0.23	0.38	0.43	0.25
No. of schools/circuits		5	28		5	28		5	28

t-statistics in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 19: Achievement in Maths 2007/8

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
VARIABLES	OLS Household Education	CFE Household Education	SFE Household Education	OLS Household Economy	CFE Household Economy	SFE Household Economy	OLS Both	CFE Both	SFE Both
Sex (Male)	-1.377 (-0.83)	0.015 (0.01)	0.010 (0.01)	-0.509 (-0.34)	0.539 (0.37)	0.886 (0.61)	-0.952 (-0.60)	0.009 (0.01)	0.728 (0.50)
Age	7.554 (12.05)***	7.829 (13.16)***	8.211 (8.73)***	7.643 (13.10)***	7.901 (13.87)***	8.391 (9.61)***	7.461 (12.16)***	7.802 (12.73)***	7.883 (8.50)***
Years overage	-7.355 (-10.15)***	-8.050 (-11.45)***	-8.458 (-8.70)***	-7.246 (-10.84)***	-7.900 (-11.74)***	-8.632 (-9.18)***	-7.332 (-10.21)***	-7.949 (-10.83)***	-8.169 (-8.33)***
Absence (log)	-1.341 (-1.52)	-1.343 (-1.63)	-0.404 (-0.46)	-1.464 (-1.81)*	-1.328 (-1.70)*	-0.535 (-0.65)	-1.206 (-1.40)	-1.292 (-1.55)	-0.451 (-0.54)
Farming				-9.707 (-5.82)***	-2.412 (-1.30)	-0.029 (-0.01)	-10.518 (-6.02)***	-3.648 (-1.84)*	-0.222 (-0.11)
Safety net Payments				-11.182 (-2.71)***	-6.704 (-1.63)	-3.766 (-0.81)	-11.368 (-2.63)***	-7.114 (-1.65)*	-3.341 (-0.72)
Remittances				7.182 (1.93)*	5.220 (1.46)	8.512 (2.35)**	6.700 (1.79)*	5.183 (1.44)	7.741 (2.14)**
Private tuition	3.303 (3.33)***	1.872 (1.95)*	2.238 (2.03)**				3.018 (3.07)***	2.047 (2.10)**	2.476 (2.36)**
PCG Literacy	0.063 (1.23)	0.059 (1.16)	0.059 (1.16)				0.088 (1.71)*	0.104 (1.89)*	0.099 (1.88)*
Constant	-47.173 (-5.94)***	-47.917 (-6.20)***	-41.832 (-4.14)***	-31.673 (-4.77)***	-45.792 (-6.76)***	-43.104 (-4.71)***	-35.274 (-4.39)***	-43.444 (-5.35)***	-37.969 (-3.87)***
Observations	500	500	500	544	544	544	499	499	536
R-squared	0.29	0.41	0.20	0.35	0.42	0.21	0.38	0.43	0.23
No. of circuits/schools		5	29		5	29		5	29

t-statistics in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 20: Progress 207/8-2008/9

VARIABLES	(1) English OLS	(2) English Circuit FE	(3) English School FE	(4) Maths OLS	(5) Maths Circuit FE	(6) Maths School FE
Sex (Male)	1.050 (0.56)	1.764 (0.93)	0.790 (0.43)	2.118 (1.15)	3.717 (2.06)**	4.156 (2.47)**
Age	0.471 (0.53)	0.838 (0.91)	-3.303 (-2.90)***	-0.623 (-0.76)	0.340 (0.42)	-1.219 (-1.20)
Years Overage	-1.388 (-1.35)	-1.805 (-1.66)*	1.967 (1.59)	0.739 (0.79)	-0.602 (-0.63)	0.429 (0.39)
Absence from school (log)	-2.779 (-2.50)**	-2.732 (-2.35)**	-2.843 (-2.41)**	-1.495 (-1.36)	-1.598 (-1.43)	-2.565 (-2.36)**
English test score 2007/08 in percentage	-0.528 (-11.14)***	-0.601 (-11.40)***	-0.555 (-10.60)***			
Maths test score 2007/08 in percentage				-0.612 (-11.60)***	-0.784 (-13.62)***	-0.663 (-12.18)***
Constant	25.386 (2.91)***	31.284 (1.42)	67.367 (5.93)***	40.212 (5.07)***	56.878 (2.69)***	48.830 (4.77)***
Observations	467	467	467	495	495	495
R-squared	0.26	0.28	0.29	0.28	0.34	0.28
Number of schools/circuits		5	19		5	20

t-statistics in parentheses

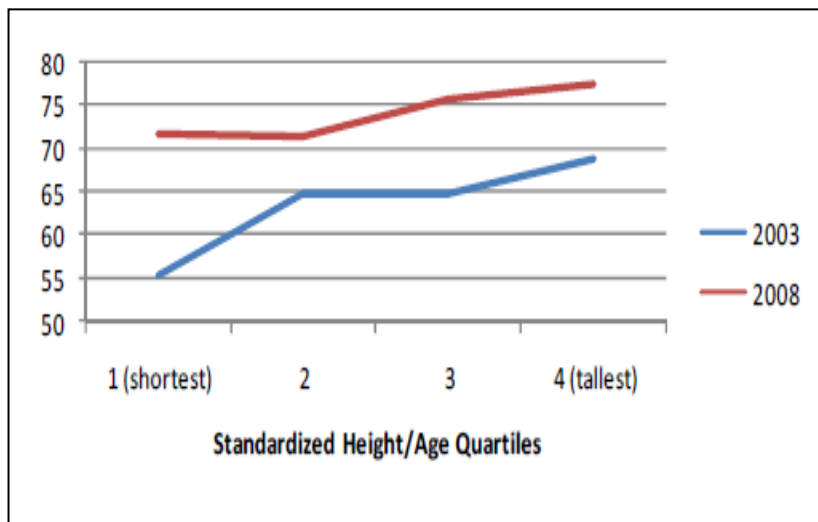
*** p<0.01, ** p<0.05, * p<0.1

5. Cross-Cutting Issues of Access

5.1 Health and Nutrition

National data do not generally permit accurate and detailed analysis of schooling access levels according to specific health and disability conditions. Better information is available in relation to more general indicators of development linked to nutrition, specifically height, weight and body-mass index data. UNICEF's analysis of height-for-age (stunting) measures at the national level in relation to school attendance, shown below in Figure 10, illustrates an improving trend over time between 2003 and 2008, which may be due to general enrolment growth and/or general health and nutritional improvement. The graph shows attendance of school age children according to the height-for-age status of the youngest child in the household since this is the best available data in DHS. It is nonetheless a rough proxy. It shows that, especially in 2003, lower height-for-age status was linked with lower levels of school attendance, with some indication that by 2008 the disadvantaged had reduced somewhat.

Figure 10: Height for age and attendance at school in Ghana (2003-2008)



Source: UNICEF(2010) analysis of DHS data

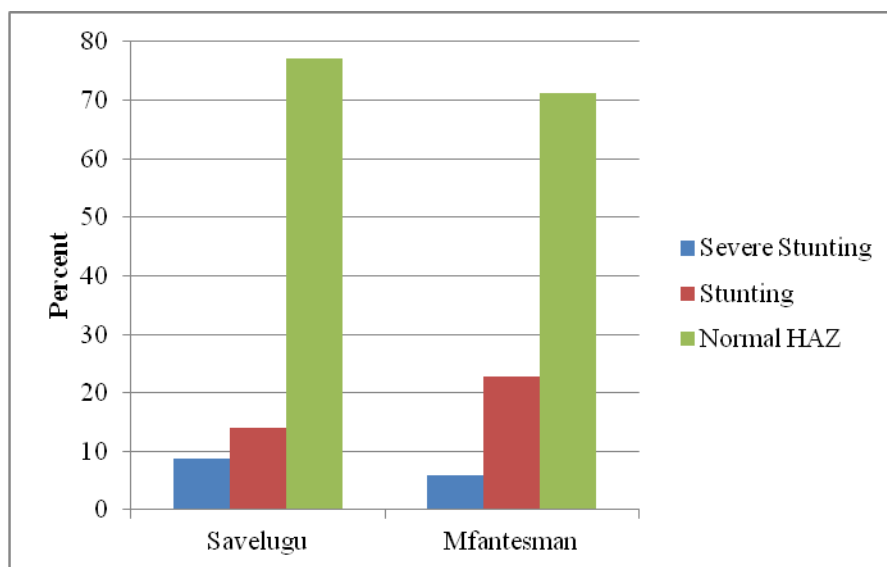
Height-for-age, an indicator of growth stunting, is one important effect of nutrition and malnutrition and it is increasingly recognized across disciplines that, especially the first two years of childhood nutrition has long-lasting effects on children's brain development and cognitive function (Gale et al. 2003, Wilson et al. 1986). Poor nutrition can have a severely adverse effect on a child's success in school, directly affecting long-term cognitive development.

Buxton (2011) examined the relationships between school children's nutritional status (nourished, malnourished, overweight or obese) and schooling in the two CREATE case-study sites. To assess children's nutritional status, anthropometric indices of height-for-age or stunting (HAZ), weight-for-age or underweight status (WAZ), and BMI-for-age (BMIZ) were expressed as z-scores, computed from data collected by measuring children at school. These scores compared a child's measurements with measurements of a similar child of the

same age in a reference healthy population and assessed how much and in which direction the child deviated from expected the growth standards.

Findings suggest that school boys in both regions were more likely to be stunted than girls, indicating deficits in nutrition in early life. Girls were more likely to be overweight or obese than boys. Comparisons of BMIs between the two genders showed higher prevalence of thinness-for-age in boys than girls. Low BMI, or severe thinness was found more prevalent in primary school children than those in junior high school. Low height and low weight for age cases were found to be more prevalent among older student populations than younger. Severe stunting was found to be significantly higher among rural children than urban children for all years and in both districts. Of the 16 schools studied in the Mfantseman district, a high prevalence of severe stunting was found in 4 schools; with a mean stunting prevalence of 17.5% over three years. The district mean prevalence was 14.1%. In Savelugu-Nanton district severe stunting was found to be very prevalent in 5 of the 13 schools studied, with a mean stunting rate of 27.24%. The district prevalence was 15.4%. There is significantly higher prevalence of severe thinness and thinness for age among children in Savelugu-Nanton, when compared with Mfantseman. Figure 11 shows the prevalence of stunting in both districts for children in Primary 1 only, indicating that while severe stunting was more common in the northern district, stunting in general was slightly more common in the South at entry to primary school.

Figure 11: Prevalence of stunting in Primary 1 in CREATE ComSS Sample



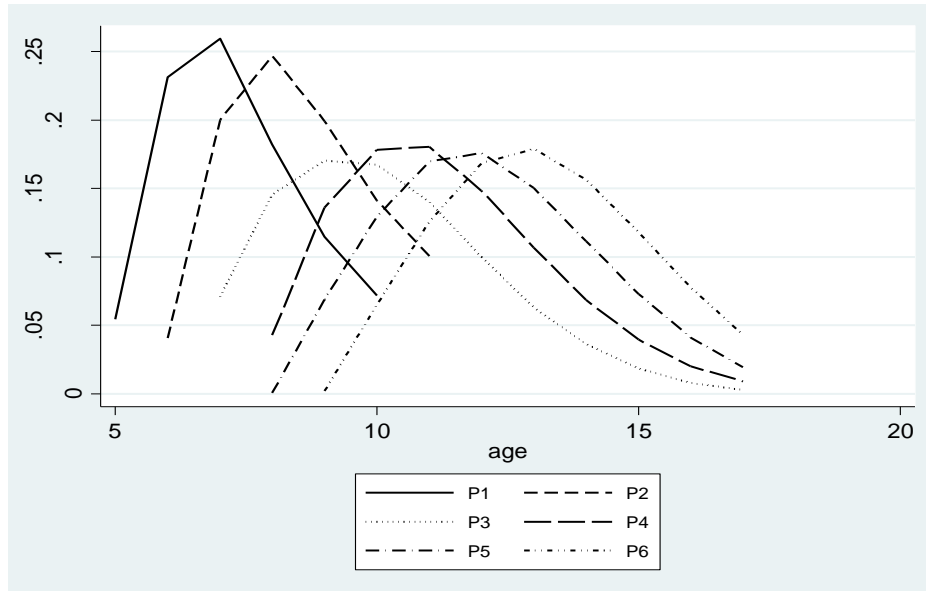
Source: Buxton (2011)

Children who are affected by physical growth retardation appear to be more likely to find themselves in zones 1, 2 and 3 of the CREATE zones of exclusion model, where they either never enroll in school, drop out before completing primary education or are in school but are attending and attaining poorly, putting them at higher risk of dropping-out. One key reason for this appears to be the link between nutrition and over-age enrolment, given the correlations found between stunting, and BMI and the age of enrolling into primary school (see 5.2 below). These results in turn suggest that early childhood malnutrition (decrease in growth in stature and weight) is a potential cause of delayed enrolment in both districts, with consequences for later access and exclusion outcomes.

5.2 Age and enrolment: The national picture

The primary school age-grade distribution in Ghana is exceptionally wide especially from grade 3 (see figure 12). Regional profiles of age in grade at primary level closely mirror the national profile. It is important to stress that severe age in grade slippage has consequences that will prevent achievement of MDG and EFA goals.

Figure 12: All public primary schools in Ghana age-grade – 2008/09

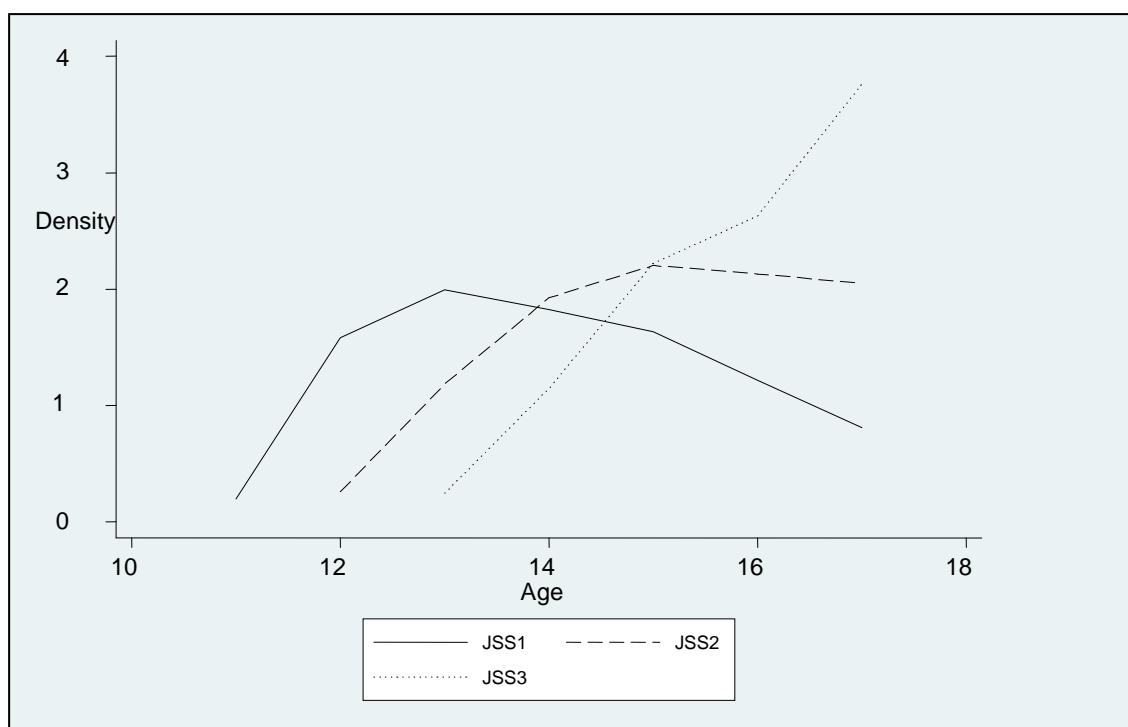


Source: EMIS data

As a result of late entry into primary school, most of the population of 12-14 year olds expected to be in junior secondary are still in primary school. This is also reflected in the wide age-grade distribution of junior secondary pupils (see Figure 13). The 2008/09 school census data show that nationally about 60% of primary 6 pupils are between the ages of 12 to 14 – the official age group for junior secondary. Only about a third of this age group who complete primary school enrol in junior secondary, and for girls, only about a fifth enrolls. This suggests that the chances of entering secondary are closely linked to the age at which children complete primary education. According to evidence from yearly EMIS data, there has been a steady rise in gross admission rates in JSS1. However, the net admission rate has been persistently low. To improve transition from primary 6 to JSS1, primary completion at the correct age must improve.

The risk of not continuing to junior secondary after completing primary is significantly higher for primary pupils in the 15 to 17 age group (see Akyeampong et al., 2007). From the 2008/09 EMIS data, nationally, about a quarter (24 percent) of primary 6 pupils and 85 percent of JSS3 pupils are between the ages of 15 to 17 years – the age group for senior secondary.

Figure 13: All public JSS in Ghana – 2008/09



Source: EMIS data

5.3 Overage Enrolment

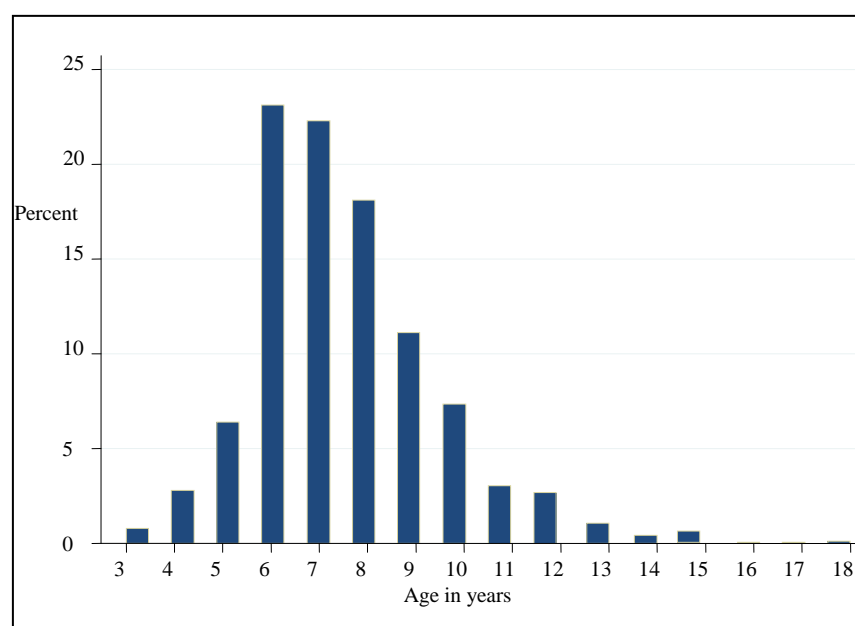
The overall prevalence of overage enrolment nationally varies according to the data source and definition, but in UIS data gathered from EMIS and shown in Table 20, there is some indication of an increasing trend in recent years in Ghana. Figure 14 shows the distribution of pupils' ages in Primary 1 using GLSS 5 data (2006). While 6 is the nominal starting age, it is clear that a sizeable proportion of pupils begin at ages 7-10.

Table 21: Overage enrolment 1999-2008

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Over-age enrolment ratio.	16.0	17.0	17.8	19.0	13.1	20.9	20.8	26.9	24.6	29.4

Source: UNESCO Institute for Statistics (UIS)

Figure 14: Enrolment in Primary Grade 1 by Age (GLSS 5)



Source: Computed from GLSS 5

A similar pattern to that found nationally is observed in the CREATE case-study sites. Table 21 shows the mean number of years by which boys and girls were overage in the Northern and Southern sites in 2007/8. In the South, both boys and girls were around 3.8 years overage on average. In the North the figure was very similar, but slightly lower for girls and higher for boys. This may be associated with boys’ responsibilities in farm work in the district, but it is important to note that the sample of girls is more selective than in the southern site owing to differences in ever-enrolment between boys and girls in the North.

Table 22: Overage Status of Pupils in CREATE Districts (in Years)

District	Male	Female	Total
Mfantseman %	3.8	3.8	3.8
N	543	458	1001
Savelugu-Nanton %	4.0	3.6	3.8
N	800	468	1268
Total	3.9	3.7	3.8
N	1343	926	2269

Source: ComSS Data

Over-age enrolment begins with late initial enrolment but is frequently exacerbated by grade repetition, and periods of dropping out and returning to school. The ComSS household survey included a question to caregivers on the reasons why children who were enrolled initially at an age later than six had been delayed in enrolling. The results are summarised in Table 22. Lack of money was cited in more than two fifths of cases, and domestic help and the distance to school in almost a third of cases. CREATE also asked teachers in schools included in the ComSS study to explain what they considered to be the main reasons for over-age enrolment. Teachers’ perceptions in relation to girls’ over-age enrolment in Savelugu-Nanton district are summarised in Table 23. Teachers cited transfer from alternative education programmes, repetition, late entry, the advent of fee-free education prompting parents to enrol children

who had previously been out of school due to lack of money for fees, child labour and poverty among the reasons for pupils being over-age.

Table 23: Reasons Given by Caregivers for Late Enrolment of Children

Variable	Obs	% Caregivers citing reason
Helping at home	1105	29.5
Lack of money	1219	42.3
Distance to school	1222	31.5
Illness	1102	11.1
Other	1198	25.0

Source: ComSS Data

Table 24: Teachers' perceptions of reasons for over-age enrolment (Savelugu-Nanton)

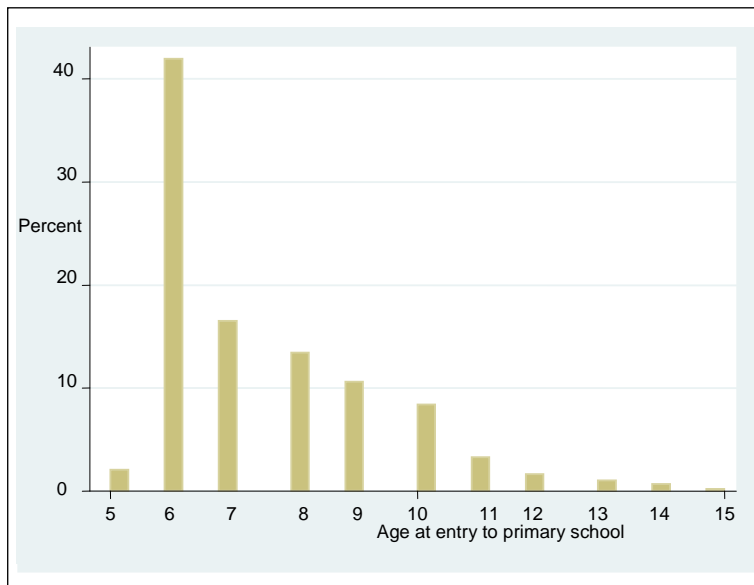
Reason 1	Reason 2	Reason 3
Free education -capitation grant	Admission of School for Life graduates ³	Poverty
Admission of School for Life graduates	Late enrolment into school	Child labour
Repetition and poor performance	Late enrolment into school	Inadequate knowledge of their ages
Repetition	Drop out and re-enrolment	Poor performance
Late enrolment into school	Admission of School for Life graduates	Child labour
Single parenthood	Repetition for poor performance	Lack of parental care
Disregard for the importance of girl child education initially	-	-

Source: Ampiah and Kwaah, (2010b)

Overage enrolment is clearly very prevalent in both the northern and southern data. It is useful to consider to what extent in these samples, overage enrolment was due to late entry to the first grade. Figure 15 below shows the distribution of pupils' ages at entry to P1 using the ComSS household data. While six was the most common age to enter, very many pupils are older, especially in the age range 7-10, in common with national data. The mean age at entry was 7.5 (1.5 years late) with relatively little variation by sex and by district. However, variation on the mean number of years by which pupils entered school late by educational circuit was found to be extensive, with means ranging from 0.2 to 2.8 years, although some sample sizes were fairly small. In the data collected at school, the number of years by which children were overage for their grade ranged by circuit and gender from 3.1 to 5.4 years, with an overall mean of 4.1 years (4.4 for the household data subset). While the figures are not directly comparable, the data appear to indicate that at least half of the number of years by which pupils are overage cannot be accounted for by late entry. Since repetition is relatively uncommon, it may be suggested that 'age-grade slippage' due to temporary drop-out and subsequent re-enrolment is a key reason for over-age enrolment, especially for older pupils.

³ School for Life is an NGO supported basic education programme

Figure 15: Age at entry to P1



Source: ComSS Data

The analysis of ComSS data reported above shows that being overage is associated with notable educational disadvantage in relation to attendance and achievement. Examination of the factors associated with late initial enrolment found that male gender⁴, low body mass index, growth stunting and lower levels of literacy of the household caregiver are significantly associated with later entry. Table 24 reports the results of circuit and school fixed effects models to explore the factors associated with overage status overall. Taking account of current age and age at initial enrolment in the CFE model, female gender is associated with being more overage, so that while boys in the sample are disadvantaged by their overage status initially, girls appear to be more disadvantaged later on. This may be linked to differences in the opportunity costs of enrolling boys and girls owing to their different patterns of work as well as perhaps to household preferences for enrolling boys and girls.

Increasing overage status is associated with some of the same factors as initial late enrolment, even when a control is included in the CFE model to account for age at entry; especially growth stunting and body-mass index (BMI), so that the health/nutrition effects appears to continue to exert an influence beyond initial enrolment. There is a small negative association with caregiver literacy in the SFE model and a consistent positive association with the distance from a child's household to a water source. Further, there are substantial associations between education circuits and overage status (not shown) so that there appear to be important community or contextual effects associated with livelihood and school/community factors, likely connected with fishing and farming occupations. This is illuminated in the categorisation of forms of temporary drop-out considered earlier. Taking into account the age at entry, over-age enrolment (subsequent delay) is particularly high in a remote northern farming community while a peri-urban circuit where petty trading is pursued alongside farming in the North is associated with both late initial enrolment and a high number of additional overage years. These patterns illustrate the complexity of the factors

⁴ The ComSS sample contains more boys than girls due to gender bias in school enrolment so that gender effects are conditional on initial enrolment

contributing to over-age enrolment. However, it may be inferred that health/nutrition at the individual level and work/livelihood factors at the community-level are especially important.

Table 25: Overage Enrolment in CommSS

VARIABLES	Circuit Fixed Effects	School Fixed Effects
Age	0.333 (20.67)***	0.362 (20.98)***
Age at Entry	0.276 (10.45)***	- -
Sex (Male)	-0.194 (-2.04)**	-0.160 (-1.60)
Stunting z-score (2007)	-0.302 (-11.58)***	-0.261 (-9.31)***
BMI for age z-score	-0.229 (-9.04)***	-0.251 (-9.41)***
PCG Literacy	-0.004 (-1.22)	-0.008 (-2.10)**
Distance to water	0.165 (4.11)***	0.167 (3.89)***
Farming	-0.310 (-2.50)**	-0.175 (-1.33)
Constant	-3.129 (-10.75)***	-1.486 (-4.99)***
Observations	722	729
Number of schools/circuits	6	29
R-squared	0.62	0.58

t-statistics in parentheses

*** p<0.01, ** p<0.05, * p<0.1

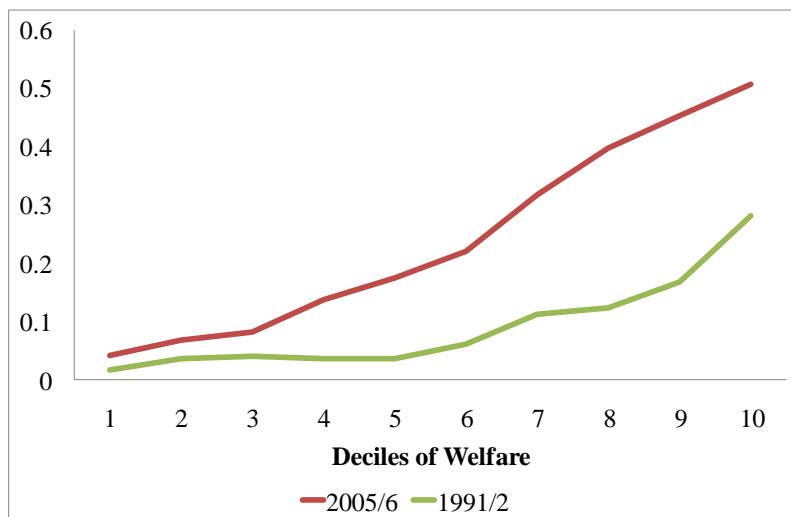
5.4 Private Schooling

In Ghana, large proportionate increases in enrolment in private schools appear to have played a role in improving overall access to basic education, while the expansion of this sector raises issues of comparative quality, affordability and equity. In particular, the expansion of low-few private schools draws attention to issues of relative affordability and school choice behaviour. Private schooling is selected even by the poorest groups, although rates of private school attendance increase dramatically with household consumption. Among other factors associated with private school choice are mother's education and other key indicators of the demand for education including religion and ethnicity alongside important supply-side effects of the availability of choice. Proportionate expenditure on private schooling in real terms has increased markedly since 1991, especially among higher consumption groups. Figure 16 shows the incidence of private school enrolment in Ghana by household economic welfare in 1991/2 and in 2005/6 using data from GLSS 3 and 5⁵. Welfare is shown in deciles and is defined in terms of the money-metric value of household consumption per equivalent adult, corrected for relative prices. The pattern in 1991/2 is of the incidence of private school enrolment being consistently and almost negligibly low below the mean level (decile 5). It then begins to rise fairly sharply by decile, with the steepest rise occurring in the highest welfare decile. Around 28 percent of children in this decile were attending private schools.

⁵ No data on private schooling was collected in GLSS 4.

The pattern in 2005/6 is somewhat different. The incidence rises across all deciles at a steeper rate and is markedly higher overall than in 1991/2, reaching around fifty percent in the highest welfare decile.

Figure 16: Incidence of Private School Enrolment (at age 6-12) by Household Economic Welfare



Source: Computed from GLSS 3 and 5

CREATE research in Mfanteman District (see Akaguri 2010) found that households with children in low-fee private schools incurred significantly higher costs per child than those who had children in a fee-free public school. These costs were also a significantly higher proportion of household income for poorer families. Akaguri found that although the costs were much higher overall, low fee private schools were adopting targeting strategies to induce demand from households. In one low-fee private school fees were reduced for every additional child enrolled from a particular household. A fourth child enrolled paid no fees. Two low-fee private schools were willing to enrol children between the ages of three and five for free into their pre-schools; providing a stock of children ready to enter the fee-paying stream in subsequent years. Households which made prompt payments sometimes received a fee discount of 10 to 15%. Such practices ensured that the low-fee private schools were able to recruit from relatively poor households. Interview findings in Akaguri (2010) suggest that a common view among households was that public schools were insensitive to their concerns about poor performance, and that generally supervision of children's work was poor in these schools, indicating that part of the demand for private schooling stems from perceptions of the failings of the public system. Consistent with this analysis, caregivers with children in low-fee private schools often reported that these schools operated with a clearer vision of improving pupil learning and achievement. In particular, they referred to the speaking and writing proficiency of children in private schools in the English language, as an indicator of quality and achievement. Box 4 summarises the issues addressed by Akaguri (2010).

Box 4: Why Do Low Income Households Use Private Schools?

CREATE research in Mfanteman District (Southern Ghana) found that households with children in low-fee private schools incurred significantly higher costs per child than those who had children in a fee free public school. These costs were also a significantly higher proportion of household income for poorer families. So why are some of the poorest households opting for the low-fee private schools?

We found that although the costs were much higher, low fee private schools were adopting strategies that induced demand from households. In one low-fee private school fees were reduced for every additional child enrolled. A fourth child enrolled paid no fees. Two low-fee private schools were willing to enrol children between the ages of three and five for free in their pre-schools. What this did was to ensure that they had a stock of children ready to enter the fee-paying stream. Households who made prompt payments sometimes received a fee discount of 10 to 15%. Such practices ensured that the low-fee private schools were able to recruit from poor households. On the other hand, the fee-free public schools made no such effort to induce demand. The general view among households was that public schools were insensitive to their concerns about poor performance, and that generally supervision of children's work was poor.

Households with children in the low-fee private schools felt the schools operated with a clearer vision of improving pupil learning and achievement. In particular, they referred to the speaking and writing proficiency of children in private schools in the English language, as an indication of their quality and success. For them, the low-fee private schools stood for something they were prepared to buy into – the evidence of success was tangible, whereas for the fee-free public schools they felt there was less commitment to this goal.

Source: Akaguri (2010)

5.5 Fosterage

Cultural factors play an important role in influencing access to education while these vary considerably between ethnic groups in Ghana. In the context of Savelugu-Nanton, Dagomba practices of child fostering are of notable significance. Fosterage is an important cultural institution which serves to strengthen kinship solidarity among a range of other functions including meeting needs for child labour. Its effects on education are ambiguous but a study by Rolleston (2011) finds these effects to be more often negative than positive. The effects of fosterage on schooling depend somewhat on the circumstances of the sending and receiving homes, the reason for fostering children between them and the extent to which the two homes cooperate to provide for access to education. Nonetheless, fostered children do typically experience lower levels of access to meaningful education. This is partly because they tend to live in areas and attend schools where meaningful access is lower, but the individual 'Cinderella effect' of fosterage is found to be palpable, especially for girls, so that being fostered, even to a more economically advantaged households does not typically

benefit the foster child educationally and on balance is associated with a worsening of their educational access. Fostered children on average enrol in school less often, drop out more often and achieve less in school, especially when compared to biological children in the same home rather than to children in homes which host no foster children (see Rolleston 2011).

The increased availability and importance of public schooling has, arguably, emphasised some of the negative effects of fosterage, perhaps most significantly because of a potential conflict between the ‘reciprocal’ nature of the fosterage relationship and the requirements of schooling, especially the costs. In interviews conducted in Savelugu-Nanton, caregivers of fostered children made it clear that meeting educational costs was frequently a struggle. Many explained that they faced difficult choices:

“We face a lot of problems. Sometimes we sell the little food we have to buy the children’s school needs and when we are faced with starvation we sell the few sheep and goats that we rear and that’s how we continue to exist” (Interview with caregiver).

Moreover, where a family is unable to send all children to school, it may be foster children who are excluded. Education professionals tended to cast the implications of fosterage for education in a negative light:

“Sometimes a child comes to school but they are slipping and the school asks why are you coming in late and the child says “oh I am not staying with my parents I am staying with my auntie or this and that and early in the morning before I come to school I have to do this, do this, do this or have to work late at night that’s why I am always sleeping in school. So the school will know that the child is not actually with the parents but they don’t have records for that” (Interview with education professional).

Caregivers, however, more often emphasised the benefits of fostering, including in terms of education:

“there are advantages for fostering these children for us and for the children. We get the opportunity to send them to school so they can learn. Sometimes with their biological parents they are not able to go to school” (Interview with caregiver).

Both sets of interviewees, nonetheless, agreed that some foster parents treat foster children unequally when compared to biological children. However, some foster parents cited a lack of support from biological parents as a major barrier in respect of providing for a foster child’s education. One education professional explained the approach taken in his own case:

“When...she [his sister] came to take the child I told her, ‘no, I want the girl to go to school. You don’t live here, you live somewhere and if I give the girl to you she will become a liability’. But we are looking at the children as assets so that she will come and work for you, so if you want financial help, come to me and I will help you but this girl I want her to go to school and I want to keep her there.”

This example illustrates the point that to some extent at least, the disadvantage suffered by fostered children may be alleviated through co-operation between foster and biological parents. Interview findings suggest that while some cases of fosterage are educationally beneficial to the fostered child, in many, kinship obligations are the main reason for the foster arrangement and these may result in a considerable burden on already poor families in respect of additional educational expenses.

Referring to the CREATE conceptual model of ‘zones of exclusion’, data analysis in Rolleston (2011) provides some specific evidence in relation to fostered children in the context of northern Ghana and Savelugu-Nanton. Concerning ‘zone 0’ – exclusion from access to pre-schooling; analysis showed that in the Savelugu-Nanton sample, fostered children received on average one third of a year less pre-schooling, which remained when taking account of their backgrounds. While the reasons for this and its effects were not addressed specifically, the relationships between early childhood education and later educational progress established in the literature provide reason to expect that this early disadvantage may contribute to later inequities between fostered and non-fostered children, including in terms of their exclusion outcomes. Fostered children in the Northern Region generally were also found to be excluded in ‘zone 1’ (never enrolling in primary school) more often, being 19% less likely to ever enrol and even less likely to enrol when compared to biological children living in the same household (where there was intra-household variation).

Fostered children in the region were found to have drop-out rates at basic school level twice as high as the non-fostered in the 6-18 age-group (exclusion zones 2, 4 and 5) and indications from national-level analysis are that fostered children typically progress considerably less often to primary and junior high school completion. In Savelugu-Nanton district, ComSS data indicate that drop-out among fostered girls is particularly high and that fostered children appear to make the transition to junior high school less frequently. With regard to ‘silent exclusion’ (zones 3 and 6) in the forms of poor attendance and achievement which reduce ‘meaningful access’ to education, analysis of ComSS data did not find a difference between fostered and non-fostered children’s attendance, but did find that fostered children attained less, particularly in English, including when taking account of their backgrounds and the schools they attended.

5.6 Eliminating costs through Capitation Grants

As part of fieldwork activities in Ghana, CREATE collected student attendance data from 2005, when CGS was introduced. Using a small sample of schools, the aim was to investigate whether there has been a positive stabilisation of attendance throughout the school cycle that might be due to the CGS. CREATE tracked pupil attendance in grades 1, 4, 6, & JHS1 in selected schools in two districts for three years. In the Mfantseman district, out of the total of 1069 pupils tracked about 17% had dropped out by 2009/2010, with the highest dropout occurring in primary 1 and 4 - 19% and 18.8% respectively (see Table 25 below). Overall dropout in Savelugu-Nanton was not much different to that of Mfantseman - about 16% out of 1470 tracked pupils (see Table 26). The primary 6 cohort registered the highest dropout rate (about 31%) and the JHS1 cohort dropout rate was about half that of the Mfantseman JHS1 cohort. It is important to notice that after about two years of capitation i.e. 2007/08, schools in our sample were still registering relatively high dropout (highest in 2007/08 for Mfantseman district and highest in 2008/09 in Savelugu-Nanton). Three years attendance data revealed no consistent downward trend in dropout.

Table 26: Dropouts by cohort in Mfantseman District

Cohort Grade	Starting Enrolment	Dropouts				
	2006/07	2007/08	2008/09	2009/10	Total	%
Primary 1 cohort	331	15	14	34	63	19.0
Primary 4 cohort	292	29	7	19	55	18.8
Primary 6 cohort	221	8	5	18	31	14.0
JHS1 cohort	225	27	1	0	28	12.4
Total	1069	79	27	71	177	16.6

Source: Ampiah et al., (2011)

Table 27: Dropouts by cohort in Savelugu-Nanton District

Cohort Grade	Starting Enrolment	Dropouts				
	2006/07	2007/08	2008/09	2009/10	Total	%
Primary 1 cohort	474	13	31	16	60	12.7
Primary 4 cohort	368	10	34	11	55	14.9
Primary 6 cohort	335	26	54	23	103	30.7
JHS1 cohort	293	8	12	0	20	6.8
Total	1470	57	131	50	238	16.2

Source: Ampiah et al., (2011)

Data on attendance by grade for all the participating schools by gender starting in 2005/06 was plotted and the patterns are revealed in figure 17. First of all, it shows that enrolments have not stabilised and there is a consistent pattern of dropout and drop-in right as pupils' progress from the year capitation was introduced. There is a slight downward trend in enrolment for girls in Savelugu-Nanton whereas for boys there is more stability – for boys primary 1 enrolment kept up and primary 2 it actually increased. For girls in Mfantseman, there was a drop in enrolment for the cohort in the first three grades - in other words, enrolment after four years was much lower than at the start. The enrolment trend for boys in Mfantseman was generally better than for girls. These erratic enrolment trends since the introduction of capitation are suggestive of the inability of school system to retain pupils, but more importantly, they suggest that capitation is not delivering improved internal efficiency through effective use of the grants to improve quality. The enrolment patterns by grade and gender also show that boys have fared slightly better than girls in terms of consistent enrolment. The patterns are consistent with the dropout figures captured in Tables 25 and 26. They suggest that besides capitation there will have to be other measures that will stimulate and sustain demand in a targeted way. These findings are also consistent with the World Bank's assessment of the capitation grant policy:

“By 2008 ... growth in enrolment and in gender parity levelled out and by this time, dropout and even some learning outcomes had started to decline as the first post-Capitation Grant generations started to reach 3rd and then 4th grade. This was the result of the large influx of poor students whose parents started to feel negative economic consequences, and overage students, who have had some difficulty staying in school. There has been some slowdown in initial admissions and inflation has also

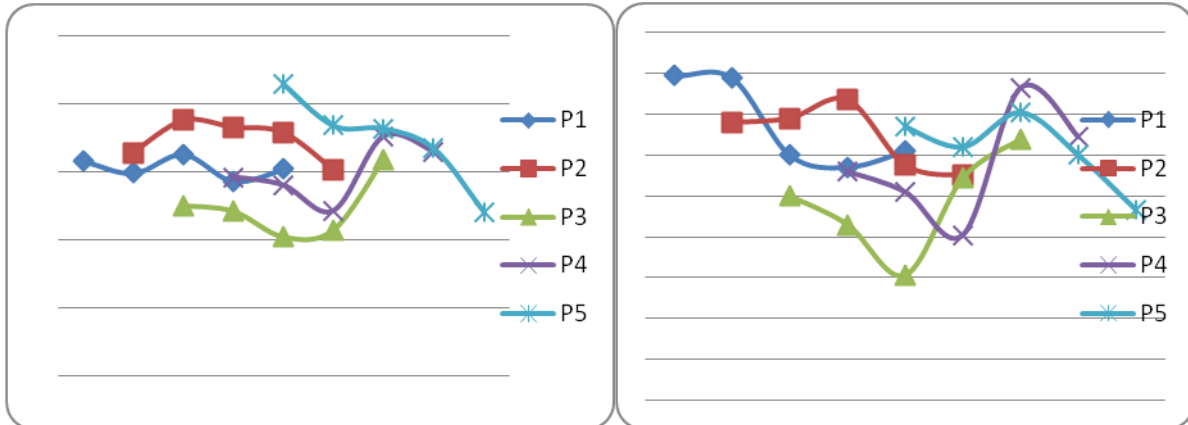
started to erode the value of the Capitation Grant. In 2008, the Government increased the Capitation Grant to 4.5Ghc.”

(World Bank 2011, p 118)

Figure 17: Enrolment by Grade and Gender

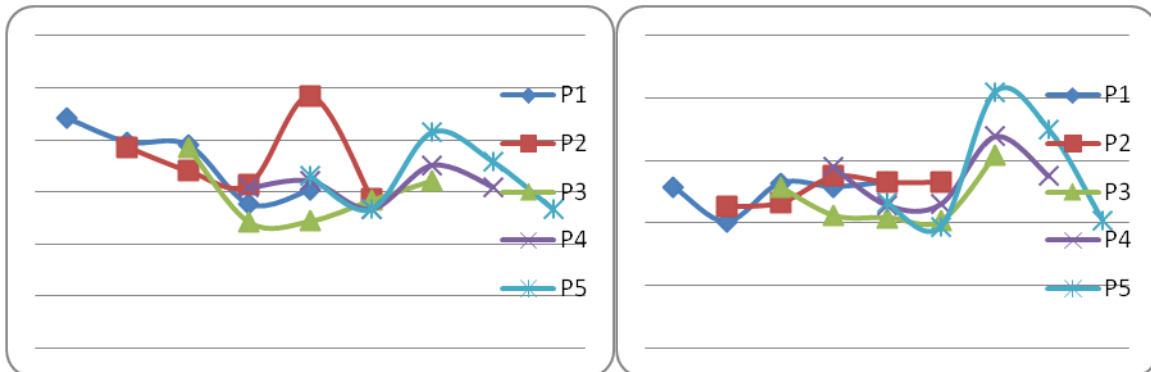
Boys-Mfantseman

Girls-Mfantseman



Girls – Savelugu-Nanton

Boys-Savelugu-Nanton



Source: ComSS data

As other evaluation studies of the Capitation Grant indicate, increasing the amount is not necessarily the solution – it is whether schools get the funds in good time, and all of it, so that they can fulfil the goals set in their school improvement plans. Also, schools need to be much more aware of the backgrounds of children who are returning to school after dropping out, and those who have never enrolled as these two groups have different learning needs and aspirations. As Ananga (2011) notes, it would be irresponsible, impossible and a waste of resources to pursue any intervention aimed at facilitating the rehabilitation of dropouts into the education system without first reaching an understanding of how their daily experiences in and out of school shape their aspirations in terms of education, work and economic well-being” (p 8).

What CG achieved was to attract back into school a large pool of dropouts. Added to those who have never attended school, the challenges teachers face in teaching this mixed group is compounded. Research also suggests that poor school environment (e.g. lack of toilet facilities) and classroom conditions affect girls learning and participation in education than boys (Glick & Sahn 2000). Also, the erratic picture of enrolment in the CREATE ComSS

study sample may be the effect of over-age attendance interacting with seasonal economic activity, which then leads to dropout.

Sabates et al (2010) investigated the interaction between over age status and school attendance using attendance data from the Mfantiman ComSS sample. The study tested whether there is a differential association on school performance over time for children who are over age but attend school as compared to children who are not over age but also attend school. The results showed that a relationship exists between over age status and school attendance, whereby children in their correct age-in-grade attend school more regularly than over age children. Coupled with Ananga's (2011) finding that irregular attendance is a precursor to eventual or permanent dropout, over-age enrolment requires urgent policy response if the initial positive impact of the CGS is to be sustained to produce high attendance and completion rates.

6. Conclusions and Recommendations

Initial access to basic education in Ghana has expanded considerably in recent years, and yet up to 10% of children remain excluded nationally. For them, the costs associated with schooling, poverty, livelihoods in farming, location in the North and in rural areas and fosterage are among some of the key factors which inhibit access. While enrolment rates have continued to expand since the introduction of the CGS, the most marginalised groups require more targeted interventions if they are to enrol massively and complete basic education. This group includes those for whom school remains difficult to access physically due to distance or disability, those for whom indirect costs such as food, materials and transportation are prohibitive, and those whose labour remains essential for family livelihoods. Thus, targeting has to take into account context specific characteristics and include strong school-community involvement

The evidence from CREATE analysis suggests that less progress has been made in relation to rates of drop-out and completion in the basic education phase and progression to JHS remains much lower in the North. Tackling dropout remains paramount if high completion rates are to be achieved. What is clear is that, dropout is influenced by both school and community level factors. Overall, the evidence is that, drop-out is associated with poor attendance and performance, caregiver illiteracy, income and schooling costs, household composition and children's work. At the school level, it depends on complex patterns of temporary periodic absence as well as permanent cessation of schooling. Progression depends particularly strongly on household livelihoods and welfare beyond the basic phase, although the vast majority of those who reach primary completion do progress to JHS except in the North.

Another important finding is the association of drop-out with a child being more over-age. Indeed, late enrolment and overage progression are very prevalent in Ghana and are also associated with silent exclusion in the forms of poor attendance and achievement. One important explanation of over-age enrolment is growth stunting due to poor nutrition, emphasising the importance of early intervention where health and nutrition are concerned. Absence from school is high among disadvantaged groups and the relatively poor. But large differences between schools and communities are also important and perhaps indicative that variation in preferences for education and in local level policies and practices may be important vectors where meaningful access is concerned. This finding also supports the recommendation that context sensitivity is an important concern in future policy formulation. Overall, the findings of CREATE studies in Ghana suggest the need for policies and interventions that target poor and marginalised population groups experiencing particular access challenges. But, at the heart of the problem of access and successful progression to completion of basic education is the issue of costs, opportunity costs and quality education. A national campaign to get children into school should include sensitivity to appropriate age-grade enrolment. Ghana is unlikely to achieve high levels of sustained access and completion of basic education if appropriate age-grade enrolment is not at the heart of new policies or strategies to achieve EFA by 2015. CREATE analysis suggests that a one-size fit all approach to the problems of access in Ghana, such as the introduction of Capitation Grants, will at best, achieve temporary impact. Clearly missing in Ghanaian education policy is increased investment that targets the most vulnerable and marginalised population groups. For these groups, other survival needs means that choosing to go to school must produce tangible outcomes in terms of completion of basic education and acquisition of employable or trainable skills, or else demand will fall. In future, it is a new and smart kind of access policies accompanied by strong implementation strategies that will transform the educational

landscape of Ghana into a high performing one. Anything less, is sure to repeat the history of high initial enrolment, low progression and achievement and persistent dropout.

In summary, key achievements in Ghana include: (1) large increases in spending on basic education; (2) expansion in supply and demand for schooling in recent years which means that many more children attend basic school; (3) efforts to reduce costs through fee-free education policies appears to have played an important role in increasing enrolment. These achievements notwithstanding, there remain challenges which should direct the attention on the next set of access policies to ensure that all Ghanaian children have a good chance of accessing and completing basic education.

Challenges and potential solutions

- Poor nutrition and health remain prevalent – it is important that the Ghanaian education establishment liaises with local health authorities to ensure all children have health records that indicate their health status. This record should be linked to educational data at district level. The introduction of school feeding programmes should target particularly rural areas ensuring that the meals have good nutritional value and served right from pre-school level.
- Indirect costs remain a barrier – many poor households still rate costs as a factor in explaining why children do not attend or attend late. Social protection schemes including conditional cash transfer, already in use in the country, should be extended to areas where demand for schooling is noted to be low, and attendance is particularly poor.
- Overage enrolment and age-grade slippage very prevalent – this is perhaps one of the greatest challenges facing Ghana in terms of achieving high enrolment, achievement and completion of basic education. It will require medium to long term planning to eradicate this persistent problem. The way to address this might be through district education sensitisation campaigns and resources for teachers and head-teachers to embark on enrolment drives by going out into communities to identify non-attenders especially those ready for Grade 1 and encourage enrolment. If schools are to take up this additional responsibility they will need funding support
- Use of private schools appears to be motivated by poor quality in the public system. Arresting the decline in quality in public school system should therefore be a matter of national priority. Improving the management of schools and introducing standardised school level assessments in literacy and basic mathematics that pupils take in grades 1, 3 and 6 will help to identify children who are at risk of dropping out due to poor achievement. Poor attendance is common in some areas, especially among marginalised groups – Good attendance is an important determinant of achievement in school. Starting at conception, the avoidance of stunting through adequate mother and child nutrition may be considered a priority where stunting is prevalent. By age six, timely enrolment in school appears to be the most significant step towards good attendance in a child's school career. Maintaining timely progress remains very important thereafter. Keeping track of attendance and identifying children whose attendance drops below an acceptable level should be the responsibility of both school and the district. Regular attendance is crucial for pupils to make good progress and complete basic education. Currently, there is little incentive for schools to track children who are not attending or

doing so irregularly. This is an area where schools and their local communities can work together to ensure that during school hours no child should be found engaged in work.

- Poor achievement common among marginalised groups – If demand from poor and marginalised groups is to improve, then a high premium should be placed on improving the quality of public schools in these communities. Anything short of this will in the long run stifle any initiative to improve access (e.g. through capitation).
- Inequality is persistent in relation to progression and transition. A key indicator of progress in access is that inequality associated with progression and transition narrows. Again, this requires vigilance in identifying the causes of this especially at school level for action to address the causes.
- Completion rates have remained static. High enrolment which does not lead to high completion rates suggests gross inefficiencies in the school system, which may be linked to poor learning outcomes right from the early stages of basic education. Policy attention must shift towards improved school management efficiency. The situation where children arrive in later grades with poor reading and numeracy skills should be tackled through measures which aim to identify children who are falling behind for remedial action. This may require hiring for example, senior high school completers, as teaching assistants to help children who are struggling with school work, especially in literacy and numeracy areas.

Other measures for local level policy consideration might include the following:

- A focus on children between the age of 8-14 years (50% should be girls)
- Communities with complementary schools providing their own teachers or facilitators
- Facilitators should be residents from the community who volunteer to do the work and are literate in the language of the community
- Use of mother tongue as both literacy language and medium of instruction
- Sensitisation of communities about the status of access and their role in helping to improve access and quality
- Sizeable effects on absence appear to be associated with circuits, communities and schools. These are associated with livelihood activities which are clustered by village or other geographic unit. There is an association between farming and casual labour and higher absence and between collection/foraging activities and lower absence at community level. Consideration should be given to flexible school calendar or hours adapted to communities where seasonal agriculture and/or fishing is a crucial livelihood activity – for example nine months starting from October; 3 hours every afternoon, generally 2 to 5 pm; and, 5 days a week- two off days are typically the market day and Friday or Sunday depending on major day of worship.
- Allowing children to maintain daily duties and to contribute to everyday activities in the communities
- Use of primary school classrooms in the afternoon or other suitable places for remedial schooling for children at risk of dropping out, or who have dropped out and are being prepared to re-enrol.
- As a percentage of unit cost per pupil Capitation Grant (CG) needs to represent a more significant proportion if it is to have sustained effect on persistence in schooling and the quality of provision.

- Remove or reduce CG to wealthier groups and channel the savings into improving access and quality education in low-income areas, especially districts that are known to experience chronic poverty and deprivation.
- It is important that the parameters and indicators for measuring progress in educational access include improved participation and progression across the basic school cycle. This should be used as the real measure of progress. To this end, special attention should be given to transition from Primary 1 to 2. Investments into improving quality education in early primary schooling should be given priority. In public schools, the best teachers should teach in the early grades and should be incentivised to achieve improved learning and high transition from lower to upper primary.
- Promote sensitisation campaigns on the demerits of over-age enrolment especially in rural areas.
- Develop a database which links registration of births with expected year of school enrolment. This will require collaboration between district health and education authorities. At the beginning of each academic year, this data can be used to help identify who has enrolled, not enrolled, or moved out of the catchment area of the school. This could be piloted in areas which have a history of poor enrolments.
- Consider the introduction of conditional cash transfers linked to timely enrolment and progression in areas with high incidence of poverty, and where livelihoods are fragile.
- Focus enrolment drives on timely enrolment and progression, particularly in the first two years.
- Increase and target CG on classroom level inputs. Implement ring-fenced capitation that goes directly to classroom level inputs to improve quality.
- Finally, introduce a monitoring system that can effectively monitor school attendance for both pupils and teachers. A first step is to ensure that schools have enrolment and attendance records that can be held electronically at district level. Circuit supervisors on regular visits to schools should monitor and update these records (this can be easily done using a digital camera). Regular inspection of school attendance records will help to identify children at risk of dropping out, or who have dropped out, so that the necessary action at school level to reduce this risk.

CREATE studies have shown that there are a number of factors outside the domain and influence of the education system that impact on access for the poor. In the long term, investing in the development of deprived districts would lead to improvements in the welfare of inhabitants and have a positive knock-on positive effect on household attitudes and investments into basic education.

References

- Akaguri L., (2010) *Public and Private Schooling in Rural Ghana: Are the Poor Being Served?* CREATE Ghana Policy Brief 3, Centre for International Education, University of Sussex, Brighton.
- Akyeampong K Djangmah, J, Seidu A, Oduro, A & Hunt, F. (2007) *Access to Basic Education in Ghana: The Evidence and the Issues*, CREATE Country Analytic Review, University of Sussex, Brighton.
- Akyeampong, K., (2009) Revisiting Free Compulsory Universal Basic Education (FCUBE) in Ghana, *Comparative Education*, Vol. 45, no.2.
- Akyeampong, K., (2010a), *50 Years of Educational Progress and Challenge in Ghana*, CREATE Pathways to Access Research Monograph No. 33, Centre for International Education, University of Sussex, Brighton.
- Akyeampong K. (2010b) "Government policy and teacher education in Ghana" in Elliott, Fourali & Issler (Eds), *Education and Social Change – Connecting Local and Global Perspectives*, pps 162-174. Continuum.
- Alhasan, S and Adzahlie- Mensah, V., (2010), *Teachers and Access to Schooling in Ghana*, CREATE Pathways to Access Research Monograph No. 43, University of Winneba, Ghana.
- Ampiah, J. G., and Adu Yeboah, C., (2009) Mapping the incidence of school dropouts: a case study of communities in Northern Ghana, *Comparative Education*, Vol. 45, no.2.
- Ampiah, J., G., and Kwaa, C., (2010a) *CREATE Ghana ComSS Report Mfanteman District*, University of Cape Coast, Ghana.
- Ampiah, J., G., and Kwaa, C., (2010b) *CREATE Ghana ComSS Report Savelugu-Nanton District*, University of Cape Coast, Ghana.
- Ananga, E., (2010) *Typologies of Drop Out in Southern Ghana*, CREATE Ghana Policy Brief 1, Centre for International Education, University of Sussex, Brighton.
- Arkorful, K., (2010) *Complementary Education and Access to Primary Schooling in Northern Ghana*, CREATE Ghana Policy Brief 2, Centre for International Education, University of Sussex, Brighton.
- Boakye-Yiadom, L., (forthcoming) *Basic Education and Issues of Costs, Access and Equity – Evidence from Ghana (1991-2006)* CREATE Pathways to Access Research Monograph, Centre for International Education, University of Sussex, Brighton.
- Buxton, C., (2011) The Relationship between malnutrition and educational achievement among school children in Ghana, CREATE Pathways to Access Research Monograph No. 68, Brighton / Cape Coast: University of Sussex / University of Cape Coast.

- Coulombe, H. and McKay, A. (2007), Growth with Selective Poverty Reduction-Ghana in the 1990s. World Bank Working Paper 79(9).
- Dunne, M., Bosumtwi-Sam, C., Sabates, R., and Owusu, A., (2010), *Bullying and School Attendance: A Case Study of Senior High School Students in Ghana*, CREATE Pathways to Access Research Monograph No. 42, Centre for International Education, University of Sussex, Brighton.
- Gale, R. Catharine, F. J., O'callaghan, Keith, M. G., Law, C. M., & Martyn, C. N., (2003). *Critical Periods of Brain Growth and Cognitive Function of Children*. *Brain*, 127(2), 321-329.
- Ghana Statistical Service (GSS) (2000a) Ghana Living Standards Survey Report on the Fourth Round (GLSS 4) GSS, Accra, Ghana.
- Ghana Statistical Service (GSS) (2005) Ghana Population Data Analysis Report. GSS, Accra, Ghana.
- Glick P. and Sahn D.E. 2000. Schooling of Girls and Boys in a West African Country: the Effects of Parental Education, Income and Household Structure, *Economics of Education Review*, 19 (1), pp.63-87.
- Lewin, K. M., (2007) Improving Access, Equity and Transitions in Education: Creating a Research Agenda. CREATE Pathways to Access Research Monograph No. 1. Brighton: University of Sussex.
- Little, A., (2010), *Access to Basic Education in Ghana: Politics, Policies and Progress*, CREATE Pathways to Access Research Monograph No. 42, Institute of Education, London.
- Rolleston, C. And Oketch, M., (2008), Educational Expansion in Ghana: Economic Assumptions and Expectations, *International Journal of Educational Development*, Vol. 28, pp. 320-339.
- Rolleston, C., (2009a) *Consumption, Poverty, Educational Access and Attainment: An Analysis of Ghana in the 1990s*, CREATE Pathways to Access Research Monograph No. 22, Institute of Education, London.
- Rolleston, C., (2009b) The determination of exclusion: evidence from the Ghana Living Standards Surveys 1991–2006 *Comparative Education*, Vol. 45, no.2.
- Rolleston, C., (2010) *Fosterage and Educational Access Among the Dagomba of Savelugu-Nanton, Ghana*, CREATE Ghana Policy Brief 4, Centre for International Education, University of Sussex, Brighton.
- Savelugu-Nanton District Assembly (2010) Profile of Savelugu Nanton District accessed at: http://www.ghanadistricts.com/districts/?r=6&_=87&sa=2383
- UNICEF (2010) An Analysis of Out of School Children in Ghana: Demographic and Household Surveys (GDHS) 2003-2008. UNICEF, Accra.

Wilson, M., Darell, L. D., Hammer, P. D., Sanford, M., Dornbusch, P., R., Hintz, R., Gross, R. & Rosenfeld, R., (1986). *Growth and Intellectual Development. Paediatrics*, 78 (4): 646- 650.

World Bank 2011 —Education in Ghana: Improving Equity, Efficiency and Accountability of Education Service Delivery|| AFTED – Africa Region. Report No. 59755-GH. World Bank, Washington DC.

All CREATE monographs and other publications are available on the CREATE website: www.create-rpc.org

CREATE in Ghana is coordinated through the University of Cape Coast, Ghana. To contact the CREATE team in Ghana email Professor Joseph Ghartey Ampiah at gampiah@yahoo.com. To contact the CREATE team in the UK email create@sussex.ac.uk.



Consortium for Research on
Educational Access, Transitions & Equity
Funded by DFID

Report summary:

This monograph summarises CREATE's research on access to and exclusion from basic education in Ghana using longitudinal data collected from 2,500 students and 1,400 households in two deprived districts in the Central and Northern regions over three years. This data is complemented by empirical studies using qualitative data and the analysis of existing national data sets. The research sheds new light on access and late entry and over age progression, poor attendance, low achievement, the impact of capitation and decentralisation; the lives of out-of-school children and drop-outs; the growth in low-cost private school enrolments; and the significance of fostering, and poor health and nutrition. Smarter policies on access are needed that target those who remain excluded along with more effective implementation strategies.

Author notes:

Dr. Kwame Akyeampong is a Senior Policy Analyst at UNESCO. He is also a Reader in International Education at the University of Sussex. He has written extensively on education and development in sub-Saharan Africa and has consulted for DFID, JICA, the World Bank and ministries of education in Ghana and Rwanda.

Dr. Caine Rolleston is an Education Researcher at the University of Oxford, working on *Young Lives*. He was at the Institute of Education, London as part of the CREATE team. His PhD was on education and poverty reduction in Ghana and has written on financing, private schooling, skills, and the economic benefits of education.

Professor Joseph Ghartey Ampiah is Professor of Education at the University of Cape Coast, Ghana. He managed the fieldwork undertaken by CREATE in Ghana. His research interests include curriculum and methodological issues in primary and secondary education.

Professor Keith Lewin is the Director of the CREATE research partnership. He has extensive experience of school systems in sub-Saharan Africa, South and South-East Asia and China. His research interests include the economics of education, education finance, educational policy, planning for EFA, teacher education, science education policy and aid to education.

Address for Correspondence:

CREATE, Centre for International Education
Department of Education, School of Education & Social Work
Essex House, University of Sussex, Falmer, BN1 9QQ, UK.
Website: <http://www.create-rpc.org> / Email: create@sussex.ac.uk



