

# Improving Education Quality, Equity and Access:

A Report on Findings from the Young Lives School Survey  
(Round 1) in Ethiopia

Melanie Frost and Caine Rolleston





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## Summary

This report presents key findings from Young Lives school survey in Ethiopia conducted in 2009–10, contextualised by cross-sectional evidence from the Ethiopian Demographic and Health Survey. The findings suggest that educational exclusion operates through complex mechanisms which conspire to limit the access opportunities of disadvantaged children during the course of the education life-cycle. Exclusion is associated with family ill-health, poverty, livelihood and labour demands, gender-related constraints, geographical context, and lack of parental education and support. Notwithstanding recent improvements in educational access and teacher training, unequal opportunities will not be adequately addressed if these patterns of disadvantage remain unchanged. Large numbers of children, especially in rural areas, enter education late, are frequently absent from school, and drop out early. The most common reason given for boys' absenteeism and drop-out is their involvement in paid or unpaid domestic/agricultural work, whereas for girls the most common reason is the need to care for younger siblings. Some schools have adopted innovative policies to deal with such problems, including flexible hours to reduce seasonal absenteeism, and shift-schooling to enable children with family responsibilities to attend school more often. The report endorses the value of decision-making autonomy at school level, but also emphasises the need for improved standard-setting and resourcing from central government: while the majority of schools in the survey sample had written a school-improvement plan and had drawn up a budget, fewer than half reported having enough funding to implement their plan. The implementation of such plans will be an important test for the effectiveness of the government's General Education Quality Improvement Programme (GEQIP).

*This report was written as an unpublished summary document in late 2011. We publish it now in 2013 in the run-up to analysis of the second round of school survey data collected in Ethiopia in 2013.*

## The Authors

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# Acknowledgements

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## **About Young Lives**

Young Lives is an international study of childhood poverty tracking the lives of 12,000 children for 15 years in 4 developing countries: Ethiopia, India (in the state of Andhra Pradesh), Peru and Vietnam. A pro-poor sample is drawn from 20 sites in each country and includes two age cohorts (2,000 children who were born in 2001–02, and 1,000 children born in 1994–95 in each country).

Three rounds of the household and child surveys have been completed to date, in 2002, 2006–07 and 2009, alongside a longitudinal qualitative survey conducted in 2007, 2008 and 2010/11. Further rounds of the household survey are due in 2013 and 2016, and the fourth round of qualitative research in 2014. School-level data were collected in 2009–10 at the schools attended by a sub-sample of the Young Lives index children.

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The views expressed are those of the author(s). They are not necessarily those of, or endorsed by, Young Lives, the University of Oxford, DFID or other funders.



# 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. Exclusion from basic education takes a number of inter-related forms. The first and perhaps most serious is never being enrolled in school. Further forms of exclusion include lack of access to pre-schooling, premature drop-out, failure to complete primary and secondary school and 'silent exclusion' in the form of inadequate learning and progress. Drivers of exclusion are found on both the demand and supply sides in respect of basic education.

Since 1994, Ethiopia has experienced something of a revolution in terms of educational access. Between 1994/95 and 2008/09, Ethiopian primary-school enrolments increased five-fold (ODI 2011: 7). Achievements at the secondary-school level have been comparatively modest, but nevertheless reveal an improving trend, with a 3.2 percentage-point increase in the net enrolment rate between 2005/06 and 2009/10 (Ministry of Education 2010: 43). Yet there are concerns that '[d]espite (or possibly because of) the extraordinary progress achieved in increasing enrolment, education quality has suffered substantially and remains the most significant challenge for the Ethiopian education system' (ODI 2011: 7). At the same time, others have warned against using the results of successive National Learning Assessment reports to make inferences about deteriorations in quality or pupil progress, pointing to the fact that stagnating or falling test scores might also be a corollary of an expanded education system which is more inclusive of students from disadvantaged social groups (Dom 2010: 11).

## **Box 1:** *The core components of the General Education Quality Improvement Programme*

### **Component 1: Curriculum, Textbooks, Assessment and Inspection**

*Sub-component 1.1: Curriculum Reform and Implementation*

*Sub-component 1.2: Teaching and Learning Materials*

*Sub-component 1.3: Assessment, Examinations and Inspection*

### **Component 2: Teacher Development Programme (TDP), including the English- language Quality Improvement Programme (ELQIP)**

*Sub-component 2.1: Pre-Service Teacher Education Quality Improvement*

*Sub-component 2.2: In-Service Teacher Education Quality Improvement*

### **Component 3: School Improvement Programme (SIP)**

*Sub-component 3.1: School Improvement Programme*

*Sub-component 3.2: School Grants*

### **Component 4: Management and Administration Programme (MAP), including the Education Management Information System (EMIS)**

*Sub-component 4.1: Capacity Development for Education-Sector Planning and Management*

*Sub-component 4.2: Capacity Development for School Planning and Management*

*Sub-component 4.3: Education Management Information Systems (EMIS)*

### **Component 5: Programme Coordination and Monitoring and Evaluation**

*Sub-component 5.1: Programme Co-ordination*

*Sub-component 5.2: Monitoring and Evaluation*

The Ethiopian government is responding to these challenges under the current Education-Sector Development Plan (ESDP IV), which strongly emphasises the need to improve student achievement through higher-quality teaching and learning processes. In particular, the General Education Quality Improvement Programme (GEQIP) highlights the need for curricular, teacher-development and school improvements, as well as management and co-ordination elements. Equity and access are also strategic concerns, and priority is given in GEQIP to reducing drop-out rates and to improving completion and progression to secondary schooling. Box 1 outlines the key components of GEQIP.

Responding to these priorities, this report presents key findings from Young Lives research in Ethiopia, specifically the school component of the Young Lives survey, which was conducted in 2009–10 and funded by DFID Ethiopia. We also use some cross-sectional evidence from the Demographic and Health Survey (DHS) to contextualise the evidence from Young Lives. Our 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 during the course of the education life cycle. Exclusion is associated with ill health, poverty, livelihood labour demands, gender-related constraints and context (especially remote and rural locations), as well as with lack of parental education and support. Key points raised in this report include the following:

- Educational access remains a problem for the most disadvantaged.
- Teacher characteristics are predictive of children's classroom experience and of the pedagogical strategies that teachers adopt.
- Household and individual factors – those beyond the school gates – remain crucial with respect to both educational opportunity and outcomes.
- The evidence demonstrates links between late entrance to school, slow grade progression and early exit.
- The most common reason given for absenteeism and drop-out by boys relates to their involvement in unpaid domestic/agricultural work, whereas for girls the most common reason is a need to look after siblings.

## 2. Young Lives research

Young Lives began collecting household and community data in 2002 at 20 selected sentinel sites in Ethiopia (see Figure 1). The study follows 3,000 index children in two cohorts, aged 8 to 9 and 15 to 16 at the time of the school survey in 2009–10. The broad analytic aim of the study is to improve understanding of the causes and consequences of childhood poverty.

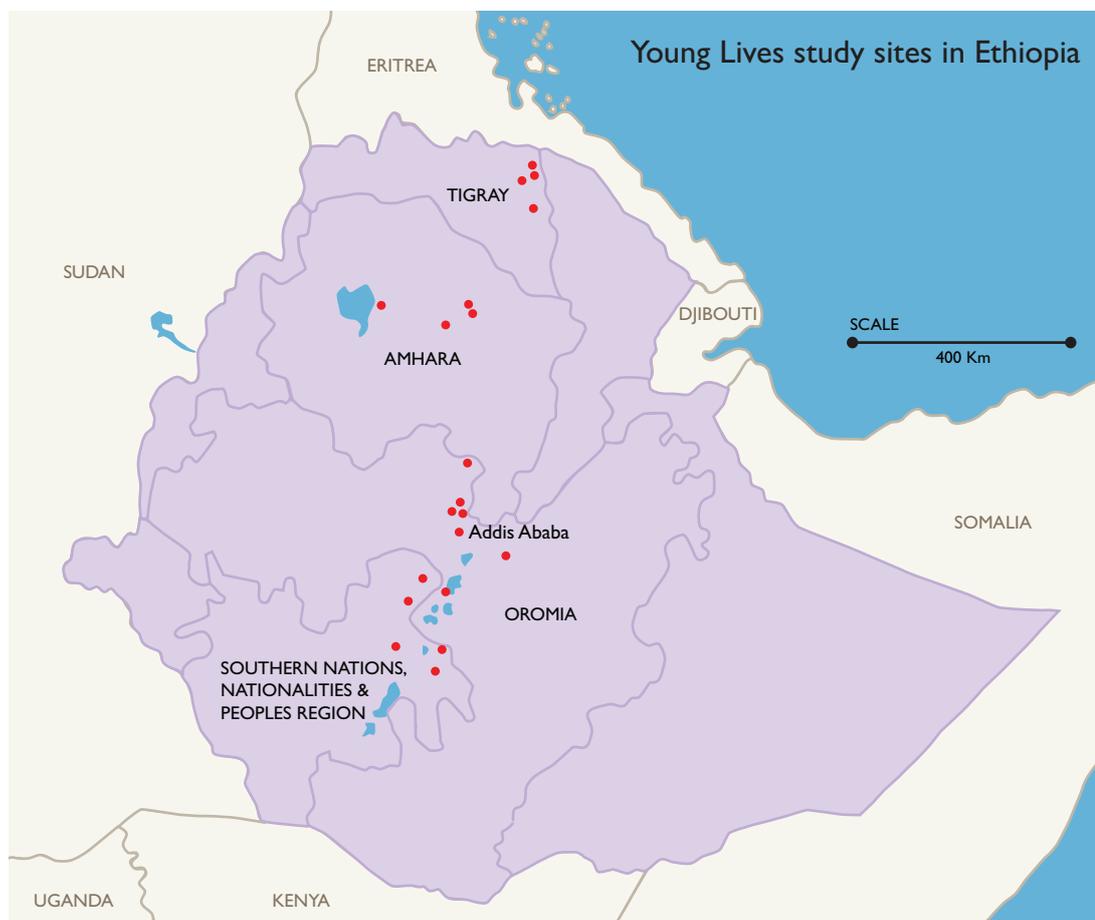
In response to a need to gather comprehensive data about the index children's educational experience, which is considered to be a key cause and consequence of childhood and adult poverty, an additional school-based survey was developed and administered at a sample of the schools attended by Young Lives index children in 2010.<sup>1</sup> A second round of data collection is expected (subject to funding) in 2013. Subsequent data-collection rounds are

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<sup>1</sup> This report was written as an unpublished summary document in late 2011. We publish it now in 2013 in the run-up to analysis of the second round of school survey data collected in 2013.

likely to focus on the collection of outcomes data, especially educational achievement; these findings, when linked to the baseline data collected in the first round of the school component and reported in this briefing, will give an informative picture of the roles of individual, household and school factors in relation to learning outcomes during the course of the education life cycle.

**Figure 1.** *Map of Young Lives study sites in Ethiopia*



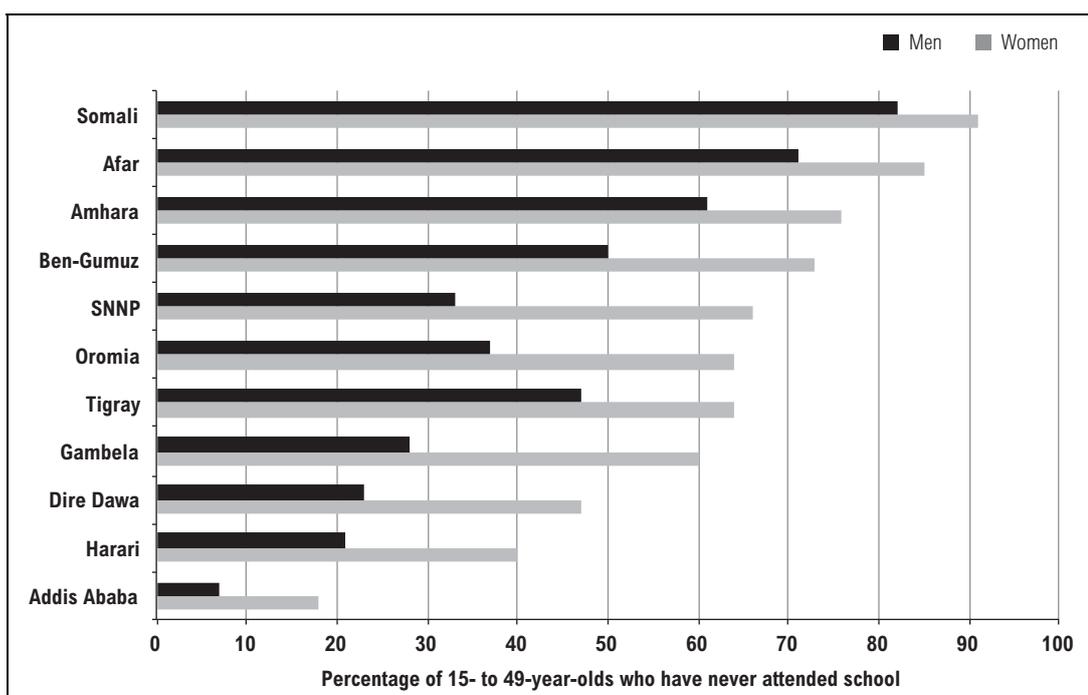
Young Lives had previously collected three rounds of household data in 2002, 2006 and 2009, with a fourth round scheduled for 2013. This rich panel dataset contains important information on child development, parental and household characteristics, and multi-dimensional poverty indicators. The linked panel and school component provides a unique dataset in the Ethiopian context.

### 3. Design and history of the school survey

The school component of the Young Lives study in Ethiopia was designed to follow Young Lives children into their schools and to examine their educational experience. The survey was designed to complement the main Young Lives survey, which follows children in their households over time, by gathering detailed information on schooling, which is of central

importance to children’s development across the age range of the Young Lives children. These children live in five regions of Ethiopia: Addis Ababa, Amhara, Oromia, SNNP and Tigray; and they live in both urban and rural areas. Figure 2 shows adult schooling levels by region for all regions, using DHS data. This provides contextual background for the Young Lives data, which are collected from five regions only. Unsurprisingly, those living in the capital city are most likely to have ever attended school. Tigray and SNNP lie in the middle of the distribution, while relatively few men or women in Amhara have ever attended school. Indeed, more than three quarters of women in Amhara had received no education at all.

**Figure 2.** *Education by region*



Source: DHS 2005

The school survey sampled children in both the Younger and the Older Cohorts of the Young Lives study. In rural areas, all government schools attended by a Young Lives index child were included. In urban areas, a two-stage sampling strategy was employed which randomly selected 40 per cent each of the Younger and Older Cohorts, identified their schools and surveyed all Young Lives index children attending these schools. This gave a school survey sample of 1,120 children from the Younger Cohort (aged 8 to 9 years) and 770 from the Older Cohort (aged 15 to 16 years) in a total of 120 government schools. One third of the sample of children attended schools in urban areas, and two thirds attended schools in rural areas. In addition, data were collected on 420 siblings of the Older Cohort children.

Owing to the sentinel-site panel design, Young Lives data are most suited to examining the determinants of individual children’s educational trajectories over time; and, in the case of the school survey, their educational trajectories. The school-survey dataset does not cover a representative sample of schools, but it is well suited to analysing patterns of change over time in these cohorts and to exploring causal effects, particularly when the baseline data are linked to both the household datasets and to the second, prospective, round of data collection which is to focus on achievement outcomes.

In addition, an in-depth qualitative study was carried out in a sub-sample of 15 schools. These schools are in five Young Lives communities, one in each of the five regions. Three sites are in rural areas and two in urban areas. These communities are also part of the ongoing longitudinal qualitative component of Young Lives, with qualitative data having been collected in 2007–8 and 2011, providing a wealth of data on children, their parents and teachers, and their educational aspirations and experience. In each site the school-based qualitative study included the following elements.

- Focus groups with Young Lives children and their peers, exploring experiences of schooling, along with a small number of interviews with purposely selected individual children.
- Teacher interviews (for teachers of Young Lives children) exploring the challenges that they face in their work, alongside their perspectives on recent policy interventions to improve educational quality.
- School Director interviews exploring similar issues to those covered in the teacher interviews, plus issues of school management and administration.

## 4. Equity and access: improving completion and progression

### 4.1 Context

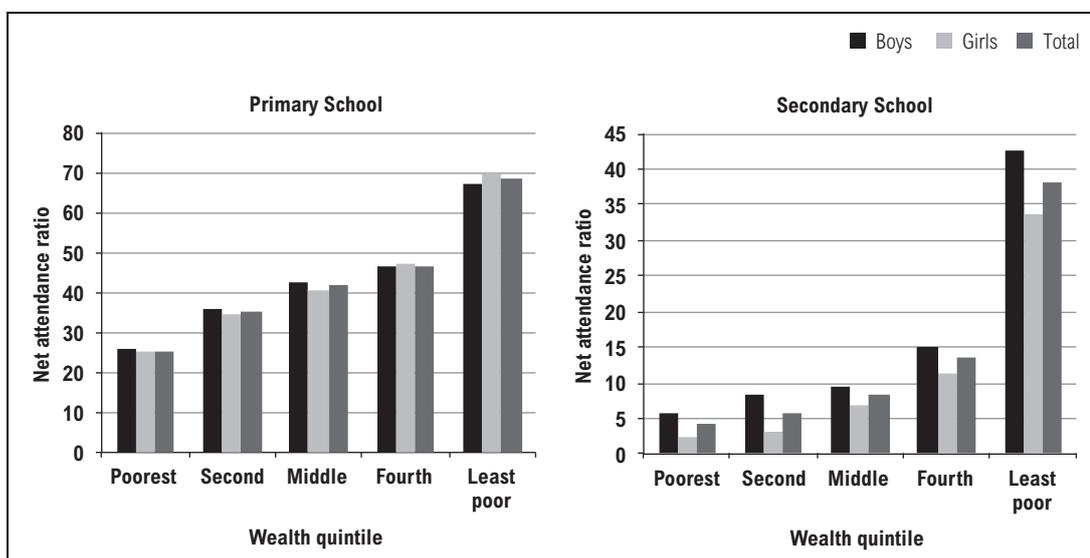
While Ethiopia has witnessed a surge in enrolment rates, the education sector still faces a number of equity challenges, which are addressed within the ESDP IV and GEQIP frameworks. These include ensuring that rural and dispersed communities have access to good-quality education, because currently the better-resourced schools tend to be located in urban areas and in non-emerging regions. There are further concerns about school participation by girls in rural areas, children from poor households, children from pastoralist areas and other vulnerable children (Ministry of Education 2008).

Figure 3 shows the variation in the net attendance ratio for primary school and secondary school by wealth quintile, using DHS data. These figures are very low overall, with only a quarter of children of primary-school age in the lowest wealth quintile attending primary school. Even in the highest wealth quintile, almost one third of children of primary-school age were not in primary school at the time of the survey. Only 15 per cent of children aged 13 to 18 years old were attending secondary school, although the net attendance ratio is much higher for those in the highest wealth quintile. Many children aged 13 to 18 enrol in school so late that they never attend secondary school.

In terms of access, a particular challenge in Ethiopia is posed by retention and progression within the school system (important dimensions of ‘internal efficiency’). A study by the Academy for Educational Development and the Ministry of Education (cited in World Bank/UNICEF 2009: 60) contends that ‘drop-out and repetition are both the cause and the result of the poor quality of primary education’. The concern is that students are leaving school or repeating grades because of the low standard of educational experience on offer; and that, as more students repeat grades, resources are further diluted and standards continue to worsen. Between 2004/05 and 2008/09, the national average primary-school

drop-out rate did not fall at all and is considered to be ‘significantly higher than in most countries in the region’ (ODI 2011: 7). While grade-repetition rates are fairly modest – in 2008/09 the national average rate of repetition between Grades 1 to 8 was 4.9 per cent, with the highest rate of repetition (7.8 per cent) occurring in Grade 8 (Ministry of Education 2010) – the rates of attrition are worryingly high, particularly at lower grade levels.

**Figure 3.** *Net attendance ratios for primary and secondary school*

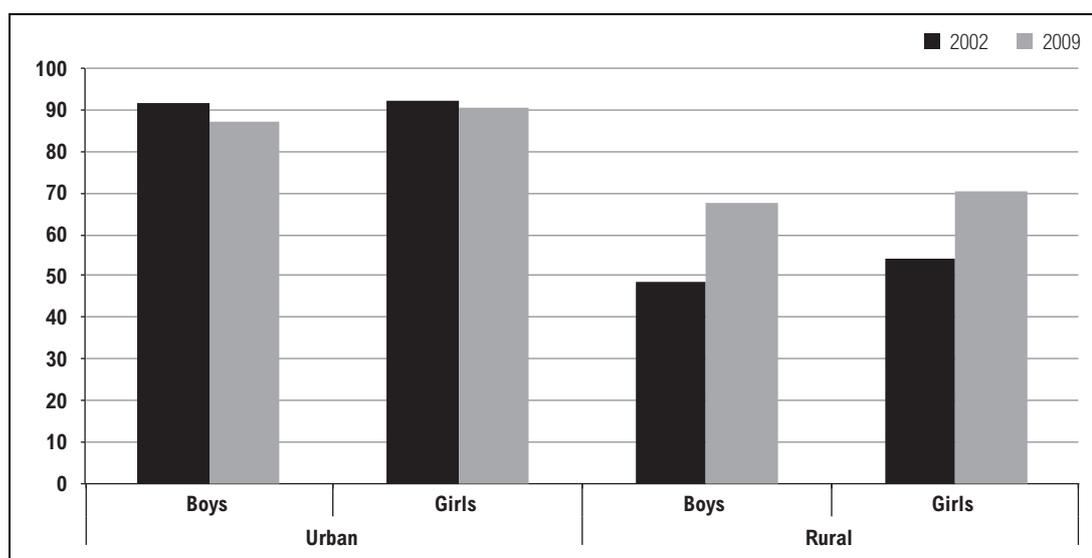


Source: DHS 2005

## 4.2 Changing enrolment

School enrolment can be compared across the two Young Lives cohorts at the age of 8 using data collected in household surveys since they also include children not enrolled in school. The Older Cohort children were 8 years old in 2002 (Round 2 of the household survey), and the Younger Cohort were aged 8 in 2009 (Round 3 of the household survey). Overall enrolment in school increased from 65.6 per cent to 76.9 per cent for 8-year-olds between 2002 and 2009. This is a fairly rapid and substantial increase. Enrolment increased dramatically in rural areas for both boys and girls (see Figure 4). Within our sample, girls seem to have slightly higher enrolment rates, but the difference is not statistically significant. Enrolment rates in urban areas also fell slightly, but this was not statistically significant.

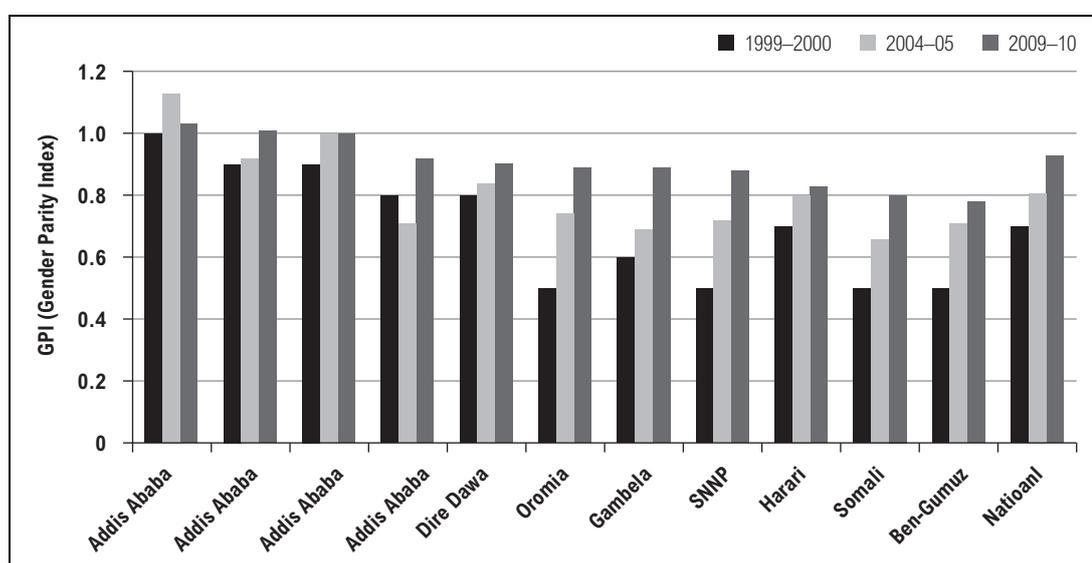
**Figure 4.** *Enrolment rates of 8-year-olds in 2002 and 2009*



Overall the gender gap in Ethiopia, which has traditionally favoured boys, has been narrowing in recent years. This increase in gender parity can be seen in Figure 5, which uses data from the Ethiopian EMIS. The gender-parity index (GPI) is the ratio of the female gross enrolment rate (GER) to the male GER, and thus a GPI of less than 1 indicates that boys have a greater GER, and a GPI of more than 1 indicates that girls have a greater GER.

The GPI in Ethiopia rose from 0.7 in 1999–2000 to 0.93 in 2009–10. All regions showed an improvement in terms of gender parity during this ten-year period, with the greatest increases visible in Oromia and SNNP. By 2009–10 three regions out of eleven in Ethiopia had a GPI of one or more, indicating that girls were faring as well as their male counterparts in terms of enrolment, if not better. These regions were Addis Ababa, Amhara and Tigray, all of which are sampled by Young Lives. The three regions with the lowest gender-parity figures are Harari, Somali and Ben-Gumuz, none of which is sampled by Young Lives.

**Figure 5.** *Gender-Parity Index at primary level (Grades 1 to 8), 1999–2010*



Source: Education Statistics Annual Abstract, Ministry of Education

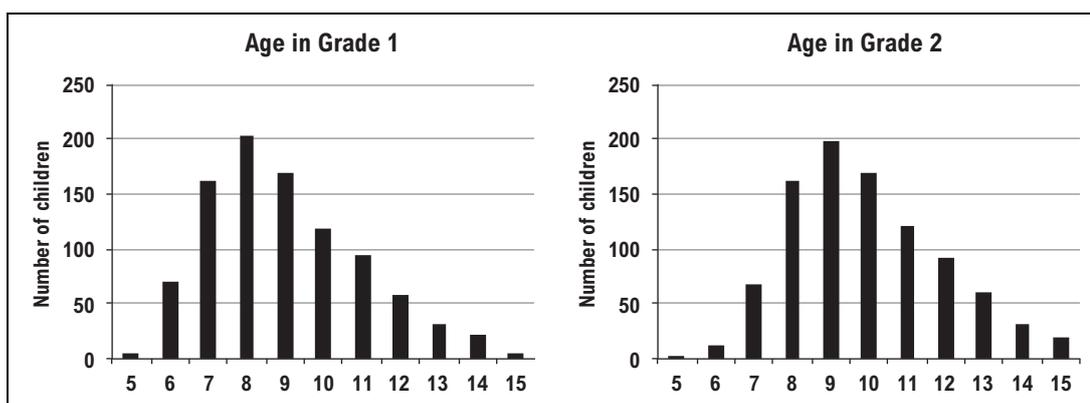
### 4.3 Late enrolment and age for grade

One important proxy indicator of disadvantage in schooling terms is found to be a child's age in relation to the grade in which he or she is studying. Children with stunted growth, for example, are more likely to enrol in school late, and so to be 'over-age' for their grade, and to progress more slowly through the basic education grades. Children from less advantaged backgrounds may also enrol late due to their involvement in domestic or agricultural work; or owing to the family's inability to meet the direct or indirect costs of schooling early on in the child's life. Late and delayed enrolment is found to be associated with both poor progress through the grades and with poor achievement in school. 'Over-age' status is thus an important proxy of educational disadvantage, potentially being both a consequence of deprivation in early life and a proximate cause of later disadvantage.

The official age of entry to primary school in Ethiopia is 7. Late enrolment, however, is pervasive. Young Lives data show that children in Ethiopia first enrol in school at a variety of ages, and consequently children in Grade 1 ranged in age from 5 to 15 years old (see Figure 6). They subsequently progress through school at different rates, so that the Young Lives index children within each cohort are found to be attending school in a wide range of school grades, despite being of similar ages. In addition to late initial enrolment, children may repeat one or more grades in school, or may drop out for a period of time and then return to school. The result is delayed progression through the grades, so that many children in the sample are considerably 'over-age' for their grade, especially in later grades and later years of schooling.

Over-age status in turn disadvantages children in a number of ways. Older children may find it more difficult to make progress educationally. As their age increases, the opportunity costs of schooling rise, and the exigencies of work are stronger (as their productivity rises). For girls, expectations of marriage and the likelihood of pregnancy rise in the later teenage years, so that the pressure to drop out may also rise. Moreover, notwithstanding these potential disadvantages of late enrolment in terms of progression, strong evidence also exists in support of particular benefits in cognitive and developmental terms of early exposure to education *per se*, so that not being exposed to appropriate education in the early years of a child's life may impair progression to some extent, even if a late-starting child does go on to receive a full education.

**Figure 6.** *Ages of children enrolled in Grade 1 and Grade 2*



Children may enrol late in school for a number of reasons, including in particular issues arising from the accessibility and quality of schooling (supply); and issues of affordability, children's work and their physical and mental 'readiness' for schooling or perceptions thereof (demand).

Figure 6 shows the ages at which Older Cohort children were enrolled in Grade 1 and Grade 2. The variation is very wide. The modal ages are 8 and 9, while many children were considerably older when they enrolled in Grade 1, with some being 13 or older: i.e. they started primary school after some of their counterparts in the more advantaged areas would have begun secondary school.

When the figures are examined according to sentinel sites, it is apparent that variation in age on enrolment in primary school is considerable between the geographic sites, including within regions (see Figure 7). In the five Young Lives sites in Addis Ababa, children on average enrolled before the age of 8. Four other sites also show timely enrolment: urban sites in Amhara and Oromia, plus a rural site in Amhara and one in Tigray. The highest ages at enrolment in Grade 1 were found to be in rural areas, especially in two sites in SNNP, where the average age in Grade 1 was over 11. Higher average ages at initial enrolment were typically found in the sites with lower levels of household wealth.

**Figure 7.** Mean age in Grade 1, by site

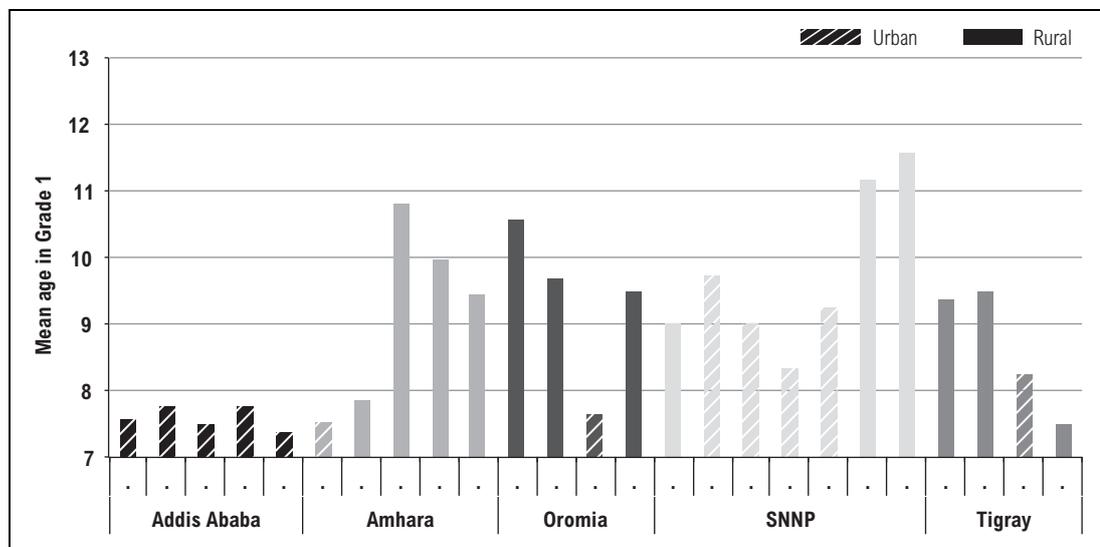
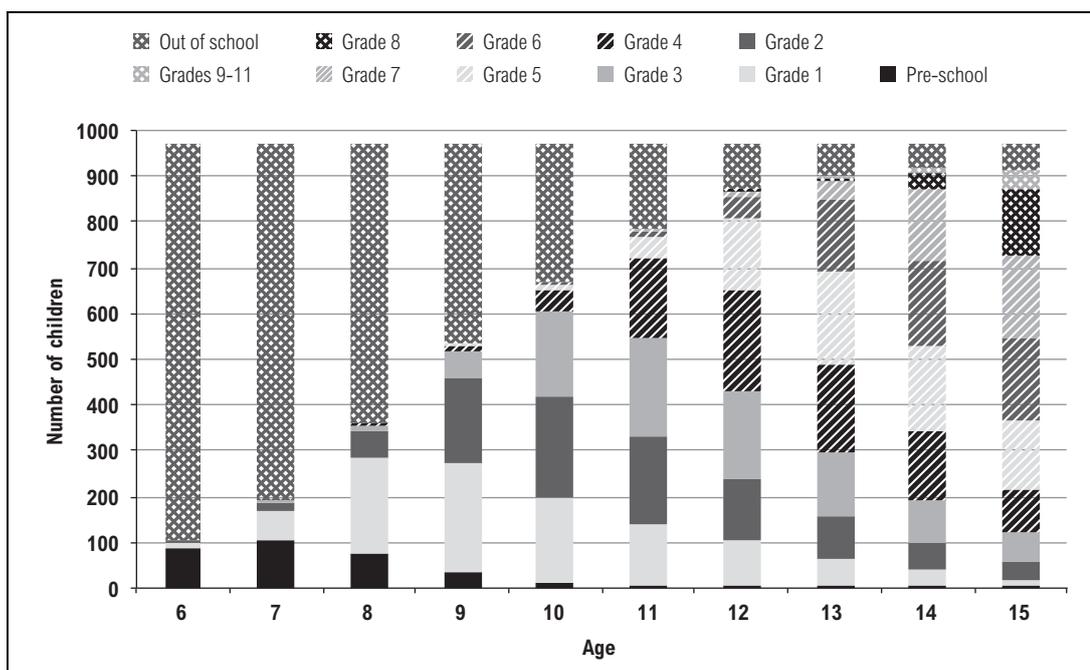


Figure 8 illustrates the patterns of enrolment of children by grade for each of the years 2000–2009 (ages 6 to 15 on the chart). Enrolment is initially low but increases steadily, so that around half of the Older Cohort are in school by 2003, and three quarters by 2005. Late enrolment is common in Ethiopia and is the primary reason why only half of children are enrolled at age 9. Because of the different ages at initial enrolment, children are widely distributed by grade in any particular year. By the age of 15, it appears that all children likely to enter Grades 1 to 3 have done so. But at the same age, it appears that a significant number of children have yet to enter Grades 4 and above. At this rate of progression, some will be well over the age of 20 when reaching Grade 10 (making the achievement of this grade unlikely). Future Young Lives surveys will enable further examination of the progress of these children.

**Figure 8.** *Enrolment by grade for the Older Cohort, 2000-09*



#### 4.4 Predictors of being over-age for grade

The issue of children being over-age for their grade was examined in the previous section in descriptive terms. To develop this analysis, we use regression techniques to isolate important predictors of over-age enrolment. This technique assesses the combined effects of multiple variables on the numbers of years by which a child may be over-age.

Table 1 reports the results of regression analyses to estimate partial correlations between key explanatory variables and the number of years by which children are over-age for their school grade over the period from 2003 to 2009, when the children were aged 9 to 15 (the columns report models for each year). These models show the significance of variables in predicting over-age status, and also the sizes of these effects. In terms of results there are three key findings:

- Caregiver education level is very important. Having a caregiver who could read was found to be associated with a child being closer to the 'expected' age for his or her grade, with this relationship being apparently stronger for the children in school in later years.
- Being in a wealthier household was found to be similarly associated with being less 'over-age', again with the relationship being stronger in later years.
- Children who were taller for their age in 2002 (an indicator of early nutrition) were found to be less over-age (if we control for their exact age in months).

Each of these factors was found to have independent effects on the extent to which children were over-age for their grade (in other words, in isolation each would affect the extent to which children were over-age), but they are also likely to be compounding, given that wealth levels are closely linked with stunting and with caregiver education level.

**Table 1.** *Regression models for the number of years over-age*

	(2) 2003	(3) 2004	(4) 2005	(5) 2006	(6) 2007	(7) 2008	(8) 2009
Sex (F)	-0.094 (-0.82)	-0.053 (-0.50)	-0.132 (-1.17)	-0.182 (-1.60)	-0.187 (-1.55)	-0.172 (-1.31)	-0.246 (-1.73)*
Caregiver can read	-0.226 (-2.88)***	-0.211 (-3.56)***	-0.271 (-3.22)***	-0.290 (-2.44)**	-0.320 (-2.58)**	-0.449 (-3.68)***	-0.448 (-3.98)***
Child's height (cm)	-0.019 (-2.76)**	-0.036 (-4.42)***	-0.049 (-6.51)***	-0.061 (-6.74)***	-0.069 (-7.02)***	-0.074 (-7.08)***	-0.081 (-8.41)***
Wealth index	-0.527 (-1.27)	-1.008 (-2.30)**	-1.418 (-3.07)***	-1.777 (-2.92)***	-1.832 (-2.64)**	-1.798 (-2.65)**	-1.941 (-2.95)***
Age of child (months)	0.052 (4.23)***	0.049 (3.54)***	0.064 (4.41)***	0.070 (4.86)***	0.080 (5.39)***	0.091 (5.32)***	0.083 (4.13)***
Constant	-1.946 (-1.57)	0.807 (0.67)	1.532 (1.06)	2.803 (1.86)*	3.116 (1.71)	2.866 (1.52)	4.674 (2.04)*
Observations	507	640	755	838	868	887	881
R-squared	0.069	0.093	0.135	0.160	0.165	0.173	0.172
Number of sites	20	20	20	20	20	20	20

## 4.5 Dropping out of school

The previous section highlights the links between age at initial enrolment and the chances of drop-out. Some of the reasons for drop-out are considered below. Overall drop-out rates were observed to be higher for rural children. Rural children were also more likely to drop out in earlier grades. In Grades 9 to 12 urban children actually experienced higher drop-out rates than rural children, but few rural children reach these grades in the first place. Perhaps surprisingly, drop-out rates for boys were observed to be higher than those for girls in all grades and in all regions, maybe indicating the importance of work roles for boys. The gender gap was largest in rural areas, especially in Oromia and at higher grades (Figures 9 and 10).

**Figure 9.** *Drop-out rates by grade*

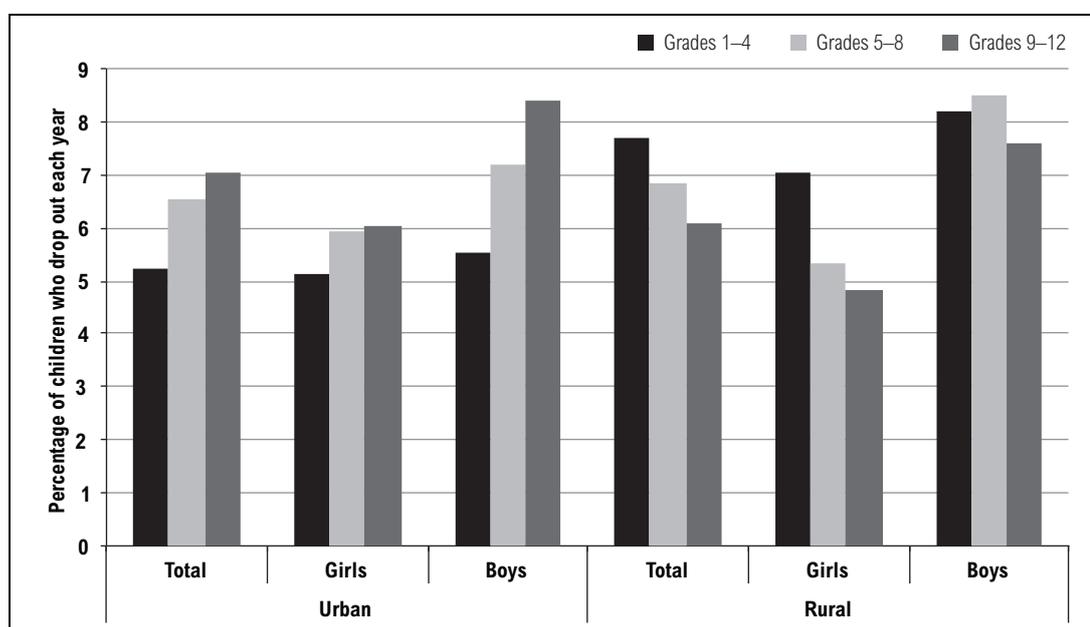
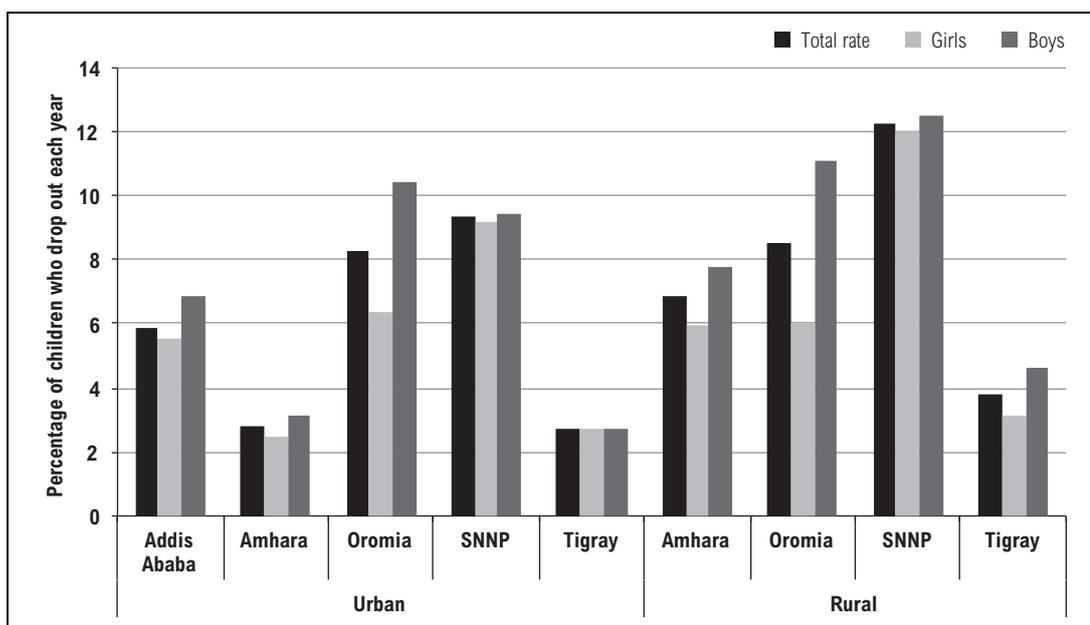


Table 2 summarises the different reasons given for dropping out of school. Overall the most common reason given was that the child was needed for domestic/agricultural work. Children in focus-group discussions said that poor children in rural areas often have only two choices: they can drop out of school in order to work, or they can work and go to school if their work activities are flexible, but they cannot give up work. They said that shift-schooling helped to prevent dropping out, and that teachers should be more supportive of working children by providing extra tutorials to compensate for missed classes. Children who both worked and attended school reported that this adversely affected their school work and their likelihood of remaining in school and of progressing through the grades.

The second most common reason for drop-out was child illness or disablement. Qualitative findings indicate that some children dropped out repeatedly, or experienced long periods of absence due to a variety of health problems. This was a particular problem in rural areas. For example, one child dropped out twice (once in Grade 2 and once in Grade 5) due to malaria, while another dropped out in Grade 1 due to typhoid and re-joined school later, but is now behind in school and fearful that she may drop out again. Illness of a family member also caused children to drop out if it caused a shortage of family labour, including labour for domestic tasks. For example, one girl dropped out of school when she was in Grade 5, explaining that she needed to earn money to pay the medical bills of her sick mother.

**Figure 10.** *Drop-out rates by region*



Girls were much less likely than boys to leave school for domestic or agricultural work. The most common reason for girls to leave school was that they were needed to look after their siblings. The second most common reason for girls dropping out of school was that the direct costs of schooling were considered to be too high. This reason was much more commonly given for girls than boys. However, boys tended to drop out of school because the opportunity cost, rather than the direct cost of school attendance, was too high. Being needed for paid work accounted for only 6.3 per cent of observed drop-outs, although this figure was 10.6 per cent in urban areas. High direct costs were also cited more commonly in urban areas than rural areas, whereas children simply not wanting to go to school was a more common reason in rural areas.

**Table 2.** *Reasons for drop-out in order of prevalence*

	Total		Girls		Boys		Urban		Rural	
	N	%	N	%	N	%	N	%	N	%
Domestic/agricultural work	228	30.6	12	6.4	216	38.6	28	21.2	200	32.5
Illness or disability of child	109	14.6	23	12.2	86	15.4	21	15.9	88	14.3
Child does not want to go	95	12.7	26	13.8	69	12.3	5	3.8	90	14.6
Direct costs too high	71	9.5	27	14.4	44	7.9	21	15.9	50	8.1
Other	48	6.4	14	7.4	34	6.1	13	9.8	35	5.7
Needed for paid work	47	6.3	12	6.4	35	6.3	14	10.6	33	5.4
Other family issues (e.g. illness of family member)	47	6.3	22	11.7	25	4.5	7	5.3	40	6.5
Needed to look after siblings	37	5.0	30	16.0	7	1.3	12	9.1	25	4.1
School too far, or other transport issues	24	3.2	10	5.3	14	2.5	2	1.5	22	3.6
Banned from school	22	2.9	5	2.7	17	3.0	6	4.5	16	2.6
Schooling is not the best way to get a job	19	2.5	7	3.7	12	2.1	3	2.3	16	2.6
<b>Total</b>	<b>747</b>	<b>100</b>	<b>188</b>	<b>100</b>	<b>559</b>	<b>100</b>	<b>132</b>	<b>100</b>	<b>615</b>	<b>100</b>

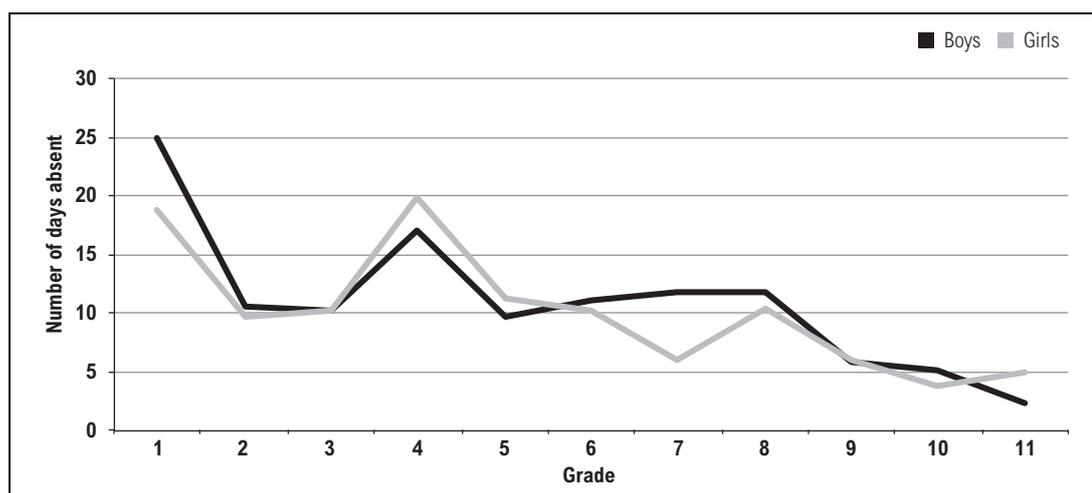
For boys, family illness is cited as often as paid work as a reason for dropping out of school; and for girls the corresponding figure is actually higher. Orkin (2011) has used the Young Lives data to explore the effects of child and parental illness on school participation in rural Ethiopia and concludes that flexibility on the part of teachers and of the school are key determinants of whether or not a child is required to repeat grades.

Some further issues were identified in qualitative data analysis. One such issue is that children reported being advised by their teacher to drop out and re-join school if they experienced repeated or long-term absenteeism. These children often fail to re-join school once they have dropped out, and those who do re-join tend to drop out again quickly. Early marriage and early child-bearing are also given as common reasons for drop-out in the qualitative data. This is a particular problem in rural communities (Bhargava 2006).

## 4.6 Absenteeism

Absenteeism may be considered a precursor to drop-out, as well as a dimension of 'silent exclusion', linked to poor progress and performance, which are themselves linked in turn to the likelihood of a child dropping out.

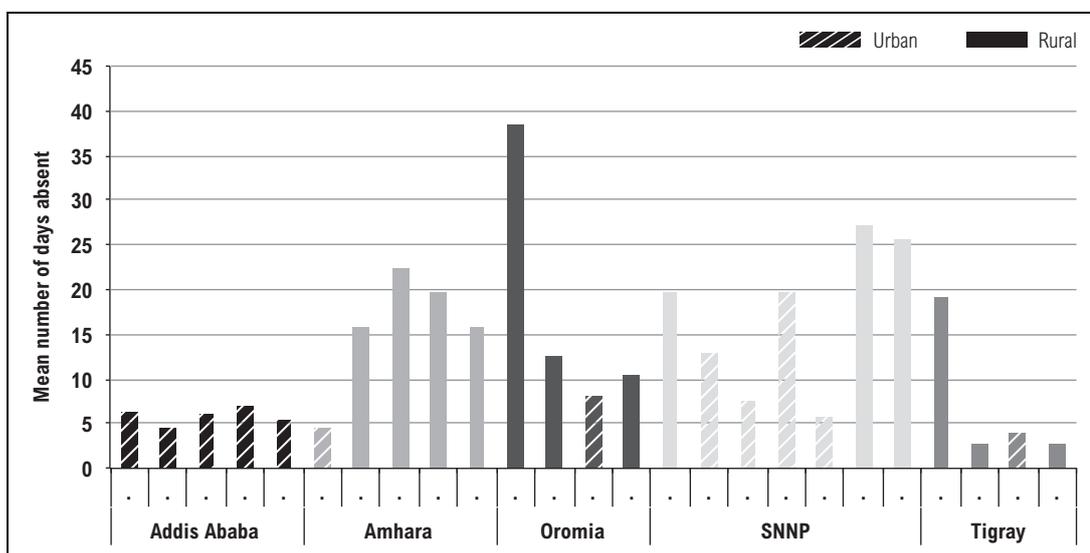
**Figure 11.** *Student absenteeism by grade and gender*



Teachers were asked about the number of days each index child had been absent. The mean number of days absent across all children was 13. Boys generally had a higher reported rate of absenteeism than girls, with the exception of Grade 4, where girls were more likely to be absent. Grade 4 also sees a spike in the reported rate of absenteeism compared with Grades 2 and 3. Apart from the high rate of absenteeism in Grade 4, levels of absenteeism are found generally to fall as grade increases (Figure 11). The reason for the reduction in absenteeism in higher grades may be that children who are prone to absenteeism tend to drop out in earlier grades, repeat grades and start school later, so that they never manage to reach the higher grades.

When a variety of factors were controlled for, using regression techniques, rural children were found to be absent more often than urban children, and boys more often than girls. Some sites were more prone to absenteeism than others, with children in one site in rural Oromia being absent for an average of more than 38 days, which is almost two months of school time. This may be due to opportunities for wage labour at certain times of year. (See Figure 12.) This finding also highlights the combination of household and geographic factors associated with absenteeism, and therefore the need for context-specific practices and interventions to support children’s attendance.

**Figure 12.** *Student absenteeism in each study site*



Absenteeism was also found to be associated with having younger siblings, and with total household size. Looking after younger siblings was previously identified as an important reason for drop-out, and it appears that this may also cause children to miss school when they are enrolled. Girls with no younger siblings missed 10 days of school on average, compared with 21 days for children with five younger siblings, and 49 days for children with seven younger siblings (although few children had this many siblings). Boys with younger siblings were also more likely to be absent, but the effect was much less pronounced than for girls. Older siblings did not have a particularly adverse effect on attendance when other factors were controlled for.

Qualitative work found that some schools had put in place some innovative structures to deal with community-level factors which caused children to miss school. This use of autonomy at school level to address community-based reasons for absenteeism suggests that policies for school flexibility may be beneficial with respect to absenteeism. For example, schools might

be given more control over their calendars in order to reduce absence where this is seasonal, although this would need to be balanced by ensuring *Woreda* control to ensure an adequate teaching schedule across the year. Qualitative findings also indicate that teachers think that shift-schooling allows children with other responsibilities to come to school more often. Shift-schooling is further explored in section 5.2.

## 5. School facilities, operation and management

### 5.1 School characteristics

Tables 3–5 describe our sample of schools, showing differences in key indicators according to whether those schools are urban or rural, and according to region. Descriptive statistics are not representative of regions as a whole and so may not necessarily identify differences in levels between regions.

**Table 3.** *School characteristics*

	All	Type of site		Region					
		Urban	Rural	Addis Ababa	Amhara	Oromia	SNNP	Tigray	
<b>N</b>	120	44	76	16	29	21	30	24	
<b>School is cluster centre (%)</b>	47.1	59.1	42.3	56.3	32.0	33.3	69.0	50.0	
<b>Grades covered</b>	<i>1st cycle only</i>	33.0	22.5	40.8	7.1	40.9	38.1	33.3	41.7
	<i>1st and 2nd cycle</i>	52.3	60.0	47.1	71.4	45.5	47.6	51.9	50.0
	<i>Secondary</i>	14.7	17.5	12.1	21.5	13.6	14.3	14.8	8.3
<b>Working electricity (%)</b>	47.1	79.5	28.0	81.3	37.9	38.1	58.6	29.2	
<b>Working computers (%)</b>	14.9	29.5	5.3	43.7	13.8	9.5	13.8	0.0	
<b>Library (%)</b>	63.6	79.5	54.7	87.5	51.7	42.9	69.0	75.0	
<b>Students using library (%)</b>	36.4	47.7	29.3	50.0	27.6	28.6	37.9	41.7	
<b>Access to a play area (%)</b>	73.6	68.2	77.3	43.8	75.9	85.7	86.2	66.7	
<b>School compound is secure (%)</b>	57.0	84.1	40.0	87.5	34.5	52.4	69.0	50.0	

In terms of facilities, urban schools were found to be more likely to have working electricity, working computers, a library and a secure school compound. Rural schools were more likely to have a play area, although comparatively few schools had access to play areas overall. Schools in Addis Ababa were particularly well equipped, compared with those in the other regions.

In terms of sanitation, only around 50 per cent of schools had access to water on site. Fewer than 50 per cent of schools provided toilets for girls with an acceptable degree of privacy. Just 7 per cent of schools had toilets that were described by the field workers as being very clean, although a further 38 per cent were described as moderately clean. Sixteen per cent of schools were reported to have ‘filthy toilets’, and 15 per cent did not have any toilets at all. Rural schools were less likely to have toilets or water. The schools sampled in Amhara were particularly lacking in terms of toilet facilities, with almost one third providing no toilet facilities at all. That said, it was Oromia where the existing toilets were of the poorest quality: they were described as being filthy in 10 of the 21 schools visited.

With regard to classroom conditions, more than 90 per cent of classrooms were well lit and had chalk and a blackboard. Students sat on the floor in fewer than 10 per cent of classrooms, all of which were in rural areas, and students did not generally sit at crowded desks. Sixty per cent of classrooms were clean, although many of these were not orderly. Ten per cent of classrooms were dirty and not orderly, and classrooms in this condition were more common in Amhara and Oromia. Around one in five classes in Amhara had children sitting on the floor, a figure which was substantially higher than in the other regions, although all the classes did at least have a blackboard and chalk. In Oromia, on the other hand, no children had to sit on the floor, but a quarter of classrooms did not have a blackboard or chalk.

**Table 4.** *School sanitation*

		All	Type of site		Region				
			Urban	Rural	Addis Ababa	Amhara	Oromia	SNNP	Tigray
<b>N</b>		120	44	76	16	29	21	30	24
<b>Availability of water on site (%)</b>		52.1	65.9	42.7	91.7	50.0	42.9	55.2	50.0
<b>Degree of privacy for girls (%)</b>	<i>Excellent or good</i>	45.5	63.6	34.7	43.8	37.9	38.1	62.1	41.7
	<i>Poor or unacceptable</i>	19.0	18.2	20.0	31.3	10.3	23.8	13.8	25.0
	<i>Shared facilities</i>	20.7	11.4	25.3	12.5	20.7	38.1	13.8	16.7
	<i>No toilets for pupils</i>	14.9	6.8	20.0	12.5	31.0	0.0	10.3	16.7
<b>Sanitary condition of all toilets (%)</b>	<i>Very clean</i>	7.4	13.6	4.0	12.5	0.0	0.0	13.8	12.5
	<i>Moderately clean</i>	38.0	40.9	34.7	25.0	44.8	9.5	44.8	50.0
	<i>Quite dirty</i>	24.8	29.5	22.7	37.5	20.7	42.9	17.2	16.7
	<i>Filthy</i>	15.7	11.4	18.7	18.8	3.4	47.6	13.8	4.2

**Table 5.** *Classroom conditions*

		All	Type of site		Region				
			Urban	Rural	Addis Ababa	Amhara	Oromia	SNNP	Tigray
<b>N</b>		120	44	76	16	29	21	30	24
<b>Classroom is well lit (%)</b>		90.1	90.9	90.7	93.8	89.7	90.5	96.6	83.3
<b>Cleanliness of teaching area (%)</b>	<i>Very clean</i>	33.9	45.5	28.0	50.0	13.8	19.0	48.3	45.8
	<i>Clean but not orderly</i>	26.4	25	28.0	37.5	31.0	4.8	24.1	37.5
	<i>Dirty but orderly</i>	28.9	22.7	32.0	6.3	37.9	61.9	20.7	12.5
	<i>Dirty and not orderly</i>	10.8	6.8	12.0	6.2	17.3	14.3	6.9	4.2
<b>Mean number of students per desk</b>		2.7	2.7	2.6	2.6	2.0	3.0	3.0	2.8
<b>Mean number of students for whom desks were designed</b>		2.6	2.7	2.5	2.6	1.9	3.0	2.7	2.6
<b>% of classrooms where students sit on the floor</b>		9.1	0.0	14.7	0.0	20.7	0.0	6.9	12.5
<b>Availability of blackboard and chalk (%)</b>		91.7	90.9	93.3	93.8	100.0	76.2	96.6	91.7

## 5.2 Shift schooling and flexibility

Overall, two thirds of the schools sampled operated a shift system, and just one fifth operated a full-day system (see Table 6), indicating the importance of shift-schooling in the Ethiopian context. In Amhara, Oromia and Tigray virtually no schools taught for a full day, while in Addis Ababa nearly all the schools taught for the full day. Eight schools in the sample reported that they operated for just half a day and did not offer a shift system.

**Table 6.** *Distribution of schools operating as a full-day, half-day, or shift school (2009–10)*

	All	Type of site		Region				
		Urban	Rural	Addis Ababa	Amhara	Oromia	SNNP	Tigray
<b>N</b>	120	44	76	16	29	21	30	24
<b>Full day (%)</b>	21.5	34.1	13.2	87.5	3.4	0.0	30.0	4.2
<b>Half day (%)</b>	6.6	2.3	9.2	6.3	6.9	14.3	0.0	0.0
<b>Shift-school (%)</b>	66.9	61.4	73.7	6.3	75.9	81.0	66.7	95.8
<b>Missing (%)</b>	5.0	2.3	3.9	0.0	13.8	4.8	3.3	0.0

Shift-schooling may be important, because the need to help with unpaid domestic and agricultural work in the household is a major cause of drop-out. Attempts to prevent children from working at all are arguably more likely to lead to drop-out, while flexible or shift schooling might allow children to combine work and school. Flexibility in context is vital, however. In rural Oromia, for example, schools put in place some innovative structures to deal with community-level factors which caused children to miss school. In Awassa and rural Tigray, schools reported that children often missed school on market days and had to be given extra tutorials to catch up, often at weekends. Schools could perhaps close on market days and open at weekends to avoid this problem. In Tigray, girls were left at home to look after younger children on days when their mothers were at market, so the school provided a child-care facility.

Qualitative research with rural informants reveals five justifications for shift schooling. First, there is a view that drop-out rates will increase in the absence of shift schooling, because many students work. One teacher describes the situation of one boy working on a *bajaj* (auto-rickshaw):

“Since he works on a *bajaj* during the day, the regular classes were not suitable for him. He asked to be changed to the evening shift not to stop learning at all, and we permitted him to attend evening classes. Now he is learning in the evening shift.”

According to another teacher: “Students prefer the shift system, because they want to work in the shops in the afternoon.” Also, there is a view that full-day schooling would be impractical, due to the socio-economic characteristics of the students:

“Our students come from the countryside. They have economic problems. How could they stay until 3 in the afternoon? Can they bring their lunches? It would have been good to teach a full day, but it is difficult due to the economic problem.” (Headteacher)

A third complaint was that the “weather is too hot” (headteacher) to sustain full-day education. Fourthly, some respondents suggested that a shortage of infrastructure in rural schools necessitates shift-schooling, so as not to diminish the educational experiences of the students where resources are limited. One headteacher said:

“We have mainly decided to implement the shift system, due to shortage of classrooms. “We have got many students and we cannot accommodate them in one shift.”

Finally, some teachers have expressed a preference for shift-schooling because they wish to supplement their wage by teaching at private colleges in the afternoons.

Figure 13 shows the reasons that schools gave for operating a shift system. In urban areas lack of physical space was cited as a reason for shift-schooling by all 27 schools that operated on a shift system, whereas a quarter of shift-schools in rural areas did not see this

as a problem. A lack of teachers was cited as being a problem for 30 per cent of rural schools, compared with 18 per cent of urban schools. The two main child-related reasons given for shift-schooling were that children would need to work on the family farm, and that they had too far to travel to attend for the full day. However, these child-centred reasons were less common than school-related reasons, indicating that if schools were better resourced they might increase learning time, and this would not necessarily discourage children from attending school, especially in urban areas. That said, more than 70 per cent of rural schools said that they operated a shift system to allow children to work on the family farm in conjunction with their schooling. An improvement in teacher numbers and classroom availability would not solve this problem. A quarter of rural schools also said that children had too far to travel for them to stay for a full day: an indication that travel times are a potentially important cause of under-achievement in some areas.

**Figure 13.** *Reasons given for shift schooling*

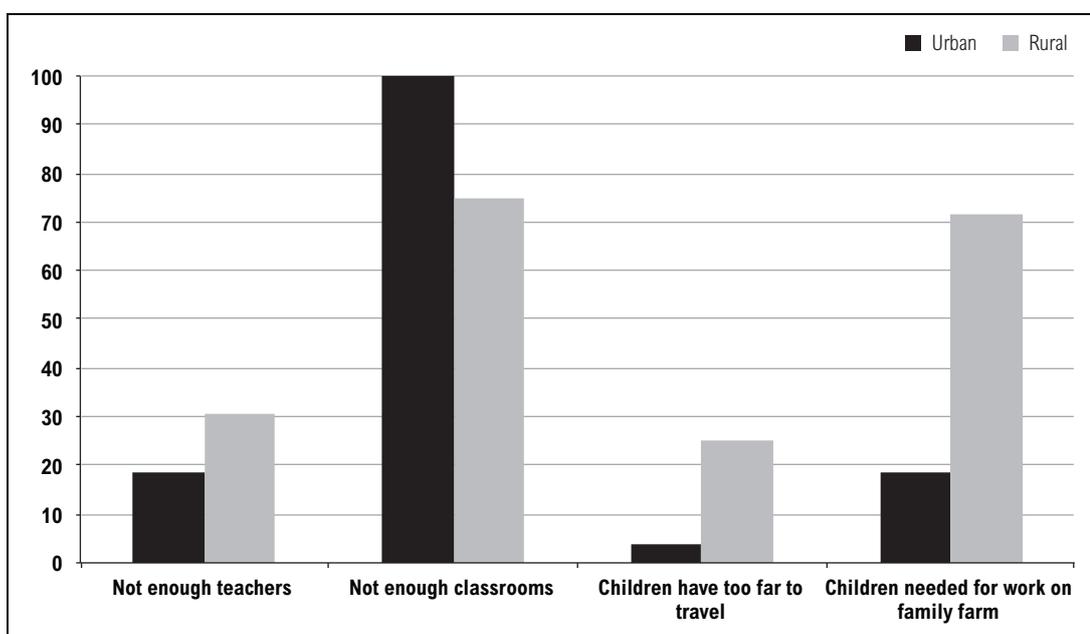


Table 7 shows how flexible schools were at harvest time for the five years preceding the survey. In general the proportion of schools adjusting their opening times during the harvest increased between 1998 and 2002 from 22.7 per cent to 37.3 per cent in rural areas, and from 4.5 per cent to 18.2 per cent in urban areas. The percentage of schools that were told to be flexible around the harvest by the district office also increased.

Teaching days were lost mainly for unexpected reasons, including times when the school was open but teaching failed to take place. Construction work and teacher training caused very few days to be lost: on average just 1.2 days per school, compared with 3.2 days when schools were open but no teaching occurred (data from the academic year prior to the survey). Unfortunately we do not have more detailed information on why schools opened but did not engage in teaching, or what were the unexpected reasons for closure, but we do know that this caused 2.5 days of teaching to be lost on average.

**Table 7.** *School flexibility and closure days*

		All	Type of site		Region				
			Urban	Rural	Addis Ababa	Amhara	Oromia	SNNP	Tigray
<b>N</b>		120	44	76	16	29	21	30	24
<b>Average number of days lost for school closure due to:</b>	<i>Unexpected factors</i>	2.5	1.6	3.0	2.6	3.2	3.4	2.3	1.0
	<i>Construction</i>	0.1	0.0	0.2	0.0	0.5	0.0	0.0	0.0
	<i>Teacher training</i>	1.1	0.7	1.4	0.2	1.7	2.0	0.8	0.7
	<i>School open but no teaching</i>	3.2	3.3	3.2	4.9	3.6	3.0	1.7	3.8
<b>Percentage of schools which adjusted opening times for harvest</b>	1998	15.7	4.5	22.7	0.0	17.2	19.0	31.0	4.2
	1999	19.8	6.8	28.0	0.0	31.0	28.6	31.0	8.3
	2000	25.6	9.1	34.7	0.0	37.9	42.9	34.5	8.3
	2001	28.9	9.1	40.0	0.0	41.4	42.9	41.4	4.2
	2002	29.8	18.2	37.3	6.3	41.4	57.1	37.9	0.0
<b>Percentage of schools told by district office to be flexible around harvest</b>	1998	16.5	4.5	24.0	0.0	17.2	33.3	24.1	4.2
	1999	23.1	6.8	33.3	0.0	37.9	47.6	24.1	0.0
	2000	30.6	11.4	41.3	6.3	41.4	66.7	31.0	0.0
	2001	34.7	9.1	49.3	0.0	62.1	61.9	31.0	4.2
	2002	39.7	20.5	50.7	6.3	62.1	85.7	34.5	0.0
<b>Average number of days lost for the harvest</b>	1998	1.2	0.2	1.8	0.0	1.8	2.2	1.5	0.0
	1999	1.6	0.3	2.3	0.0	3.0	2.9	1.5	0.0
	2000	1.9	0.4	2.8	0.0	3.5	4.0	1.6	0.0
	2001	2.0	0.3	3.0	0.0	3.9	3.7	1.9	0.0
	2002	2.1	0.9	2.9	0.7	3.3	5.1	1.5	0.0

### 5.3 School improvement

As enrolment rates and operational costs have increased, annual expenditure per student has had to be reduced (as a general trend) to accommodate the rapid expansion (World Bank/UNICEF 2009). The situation has been further exacerbated by the fact that recurrent budget expenses have 'been consumed increasingly by wages and salaries, leaving a negligible amount for the non-salary operational expenditure, which, in the past, had been supplemented by fees' (ibid: 59). Within the wider context of decentralisation, policy measures such as the GEQIP School Improvement Programme (SIP) and the accompanying School Grants Programme have sought to assist schools to make operational expenditures, as well as building capacity in school planning and increasing community involvement. This 'school-effectiveness model' is based on the rationale that individual school autonomy and accountability are central to enhancing the quality of education (GEQIP 2008: 41).

In terms of general organisation, the schools sampled tended to follow a timetable, and they start and end their school day on time (Table 8). It is likewise encouraging that 94 per cent of sampled schools reported giving awards or prizes. However, classes were observed without teachers in one third of schools: an indication of a problem with absenteeism. The prevalence of missing teachers was higher in the urban schools than in the rural schools. On the other hand, when field workers were asked to rate the school's organisation and management they rated just 8 per cent of rural schools as very good, compared with 24 per cent of urban schools. Around 30 per cent of rural schools were rated as poor or very poor by field workers,

in terms of both organisation and orderliness. In comparison, just 5 per cent of urban schools were rated as being poor or very poor in terms of organisation and management, and just 11 per cent were rated as poor or very poor in terms of neatness and orderliness.

**Table 8.** *Measures of school effectiveness*

		All	Type of site	
			Urban	Rural
<b>N</b>		120	44	76
<b>School day starts and ends on time</b>		81.7	87.8	77.8
<b>Most activities follow schedule/timetable</b>		90.9	97.7	86.7
<b>Classes observed with no teacher</b>		32.2	37.2	29.3
<b>Field-worker rating of organisation and management</b>	<i>Poor or very poor</i>	19.8	4.8	29.2
	<i>Average</i>	23.1	23.8	25.0
	<i>Good</i>	39.7	47.6	37.5
	<i>Very good</i>	14.0	23.8	8.3
<b>Field-worker rating of neatness and orderliness</b>	<i>Poor or very poor</i>	22.4	11.9	29.1
	<i>Average</i>	28.4	16.7	36.1
	<i>Good</i>	32.8	42.9	25.0
	<i>Very good</i>	16.4	28.6	9.7
<b>School gives awards or prizes</b>		94.2	97.7	92.0

The majority of schools in the Young Lives sample had written a school-improvement plan (SIP). Out of 120 schools, only nine said that they had not written such a plan. (See Table 9.) Of those who had, 93 per cent had also drawn up a budget for the plan. However, fewer than half the schools which had a SIP and a budget drawn up had enough funding to actually implement the plan. Funding was a particular problem in Oromia, where fewer than 10 per cent of schools in the sample had funding to implement their SIP.

**Table 9.** *School-improvement plans*

	All	Type of site		Region				
		Urban	Rural	Addis Ababa	Amhara	Oromia	SNNP	Tigray
<b>N</b>	120	44	76	16	29	21	30	24
<b>School has written a school-improvement plan</b>	92.3	95.5	90.1	100.0	96.0	76.2	89.7	100.0
<b>School has drawn up a budget for this plan</b>	85.5	84.1	87.3	75.0	96.0	66.7	96.6	87.5
<b>School has enough funding to implement plan</b>	42.7	43.2	43.7	50.0	56.0	9.5	37.9	62.5

A majority of schools reported having a bank account (see Table 10), although this feature was rarer in rural areas, with just 53 of 76 schools (70 per cent) reporting having an account. However, the absence of a bank account did not stop schools from receiving a school block grant or capitation grant, as 107 schools reported receiving one. A majority (99 schools) reported that they received the money from the *woreda* and could decide for themselves how to spend the money. A second round of data collection would enable us to find out how this money was actually spent. Nine schools reported that the *woreda* received the money on their behalf, using it to buy resources for them. Most of these schools were in Tigray and they did not have a say in how the money was spent.

**Table 10.** *School bank accounts*

		Urban		Rural	
		N	%	N	%
<b>Does the school have a bank account?</b>	Yes	39	88.6	53	69.7
	No	5	11.4	18	23.7
	Missing	0	0.0	5	6.6

## 6. Quality: increasing learning outcomes

### 6.1 Context

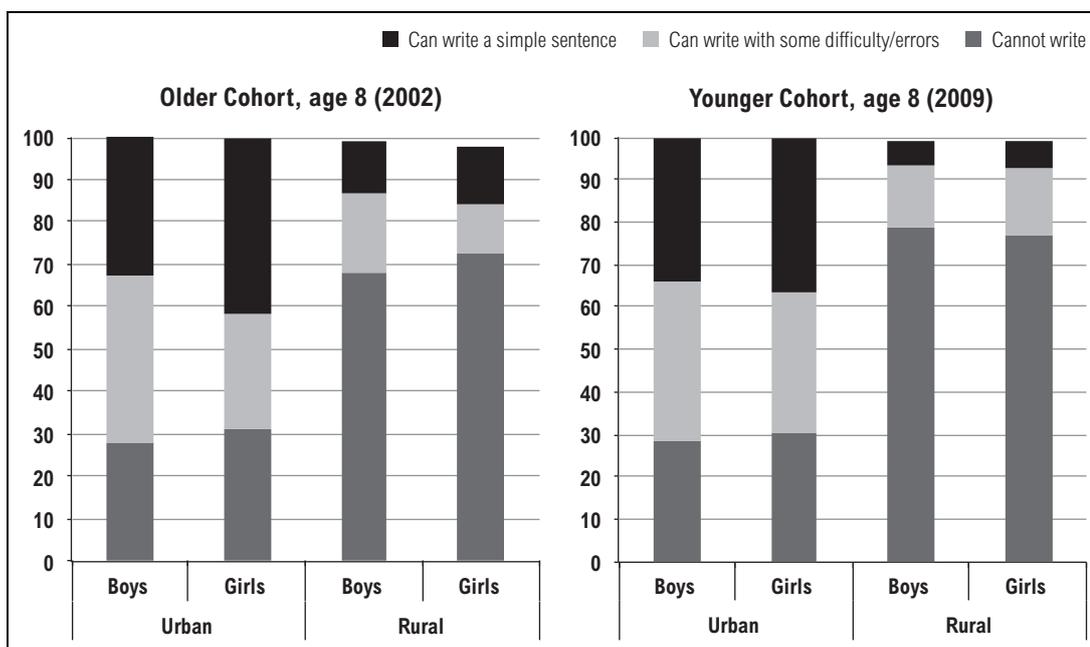
Within the current policy framework in Ethiopia, emphasis is put on increasing student achievement through improving teaching resources, and on the use of a ‘school-effectiveness model’, which aims to increase the autonomy of individual schools to identify and address their own specific needs (GEQIP 2008). In this section we examine the learning outcomes of Young Lives children, and then we consider the school-related factors which play a role in determining these outcomes.

#### 6.1.1. *Achievement in relation to demographic and household characteristics*

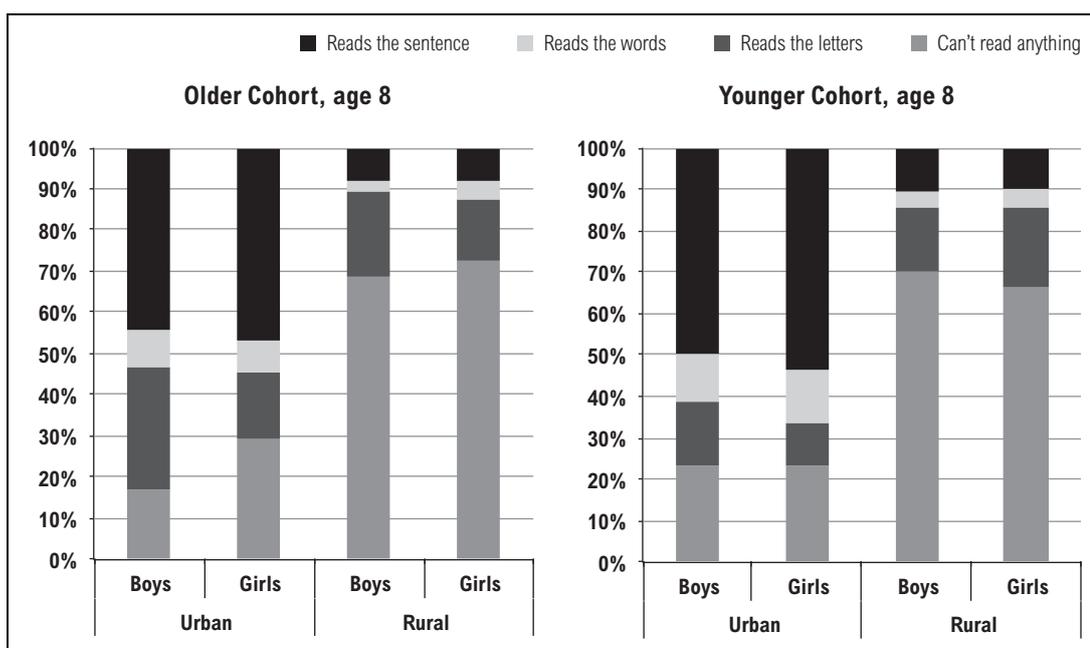
Large inequalities are found in terms of achievement outcomes for children with different demographic and socio-economic characteristics. Achievement here is measured in terms of reading and writing. These skills were tested with two simple tests in which children were asked to read a sentence and write a sentence. Their ability to achieve these two tasks successfully was then categorised.

Figure 14 shows inequalities in writing ability for the two cohorts of children when they were 8 years old, by gender and urban/rural location. The most significant inequalities visible are between urban and rural locations, with rural children being much poorer at both reading and writing. For the Older Cohort at the age of 8, there was a significant gender gap for reading in urban areas and for writing in rural areas, although Older Cohort girls were generally weaker at reading and writing irrespective of location. When the Older Cohort children were aged 11 to 12 years, the gender gaps were generally less substantial. However, rural girls still lagged behind rural boys significantly in terms of writing ability. This was despite the fact that rural girls were more likely to attend school, were less likely to be over-age for grade, and tended to have fewer days absent from school when they attended. For the Younger Cohort children, aged 8, there are no significant gender gaps within urban or rural locations. The urban–rural gap remains just as large for the Younger Cohort as it was for the Older Cohort eight years previously. Similar patterns can be observed in terms of reading ability (see Figure 15).

**Figure 14.** Children's writing level by gender and urban/rural location for the two cohorts at age 8



**Figure 15.** Children's reading level by gender and urban/rural location for the two cohorts at age 8

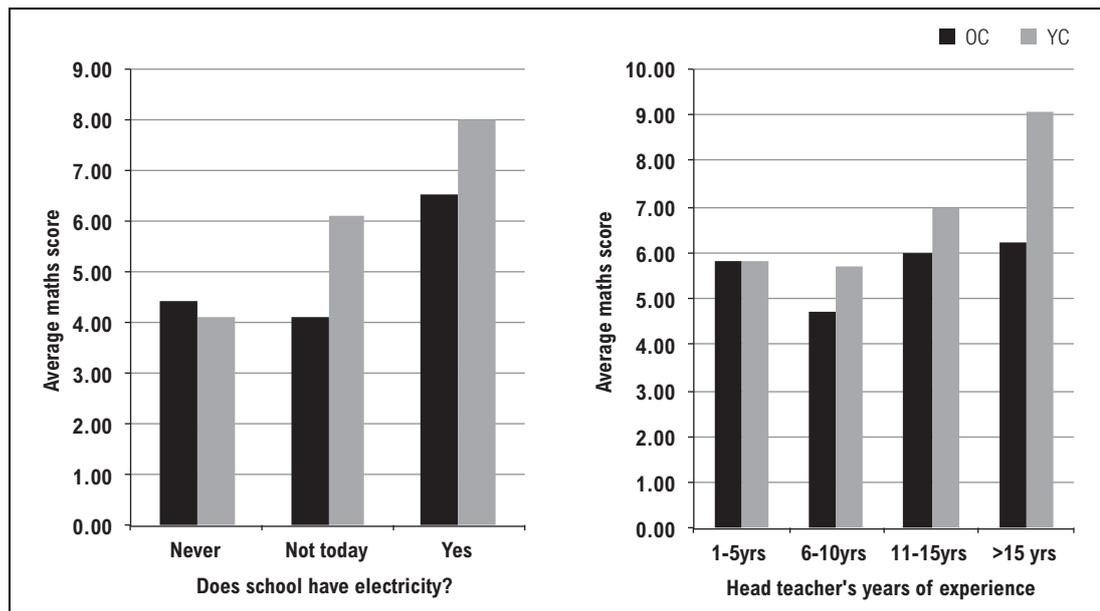


### 6.1.2 Achievement in relation to school characteristics

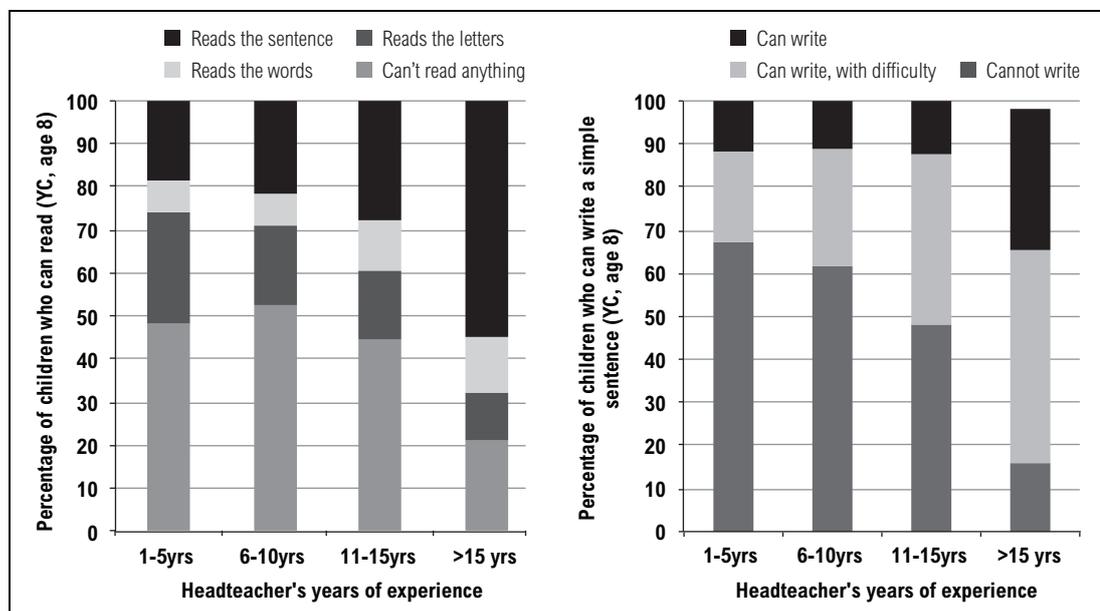
Achievement also varies by school characteristics, with children whose headteacher had more years of experience doing better in terms of maths scores, reading and writing. The differential between children with the most experienced and least experienced headteachers increased between the two cohorts (see Figures 16 and 17).

School resources are also associated with achievement. For example, Young Lives children in schools with working electricity had substantially better maths scores than children in schools without any electricity (Figures 16 and 17). Again the differential was wider for Younger Cohort children. It is not clear whether this indicates a genuine increase in educational inequalities, but this may be indicative and a cause for concern if children in the richest areas are moving further ahead while those in the poorest areas are increasingly being left behind.

**Figure 16.** Comparison of maths achievement by school factors



**Figure 17.** Reading and writing ability of Younger Cohort children by their headteacher's years of experience

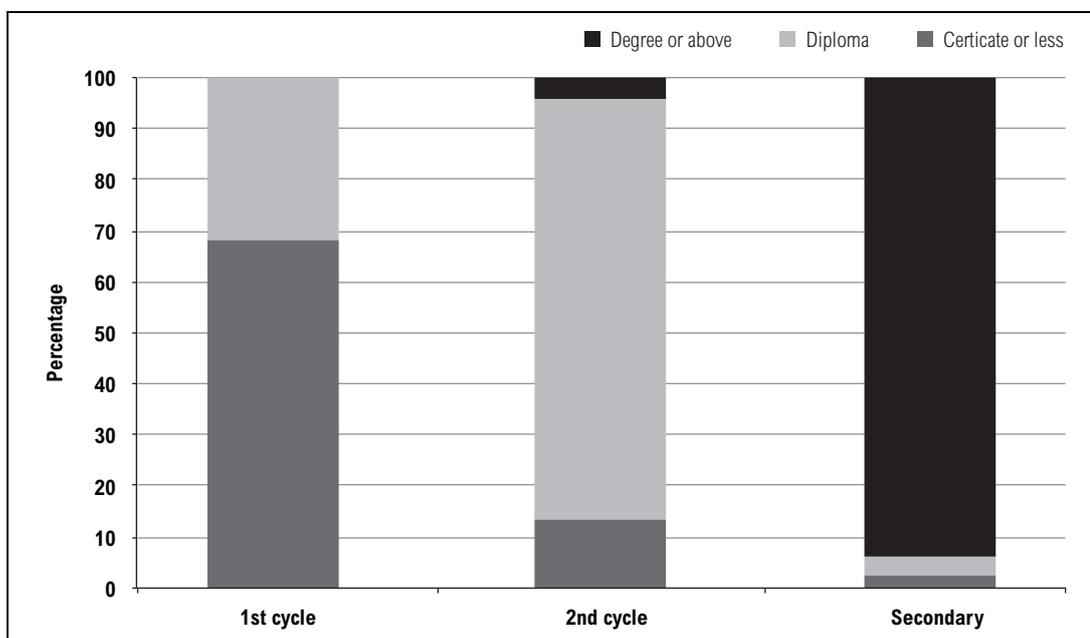


## 6.2 Teaching quality

ESDP IV focuses on improving the teaching/learning process and on transforming schools into motivational, child-friendly environments, as well as on increasing the number of trained teachers from 37 per cent to 60 per cent. The Teacher Development Programme is also one of the five pillars of GEQIP. Different levels of qualification are required of teachers, depending on the grade they teach. A minimum of a diploma is required for first-cycle primary (Grades 1 to 4), while an advanced diploma or (preferably) a degree is required for second-cycle primary (Grades 5 to 8), and a degree is required for secondary-level teaching.

Figure 18 shows the distribution of teacher's qualifications depending on what grade the teachers taught. Given that all teachers are now expected to have a diploma as a minimum qualification, many teachers in the sample were not qualified, especially those who taught the first cycle. However, more than 90 per cent of secondary teachers had at least a degree.

**Figure 18.** *Teacher's qualifications by grade taught*



As can be seen from Table 11, very few teachers in our sample had a degree or equivalent level of qualification: just 10 per cent in rural areas and 19 per cent in urban areas. In our sample of children, just 5 per cent had maths teachers whose qualification level was equivalent to a degree. The poorest children in both urban and rural areas tended to have maths teachers with poorer qualifications, although this was generally due to their being in a lower grade. In our sample, the best-qualified teachers were concentrated in Addis Ababa. Thirty per cent of teachers with degrees were in Addis Ababa in our sample, but just 13 per cent of our sampled teachers were from Addis. This association was not simply a result of being an urban area, because Addis Ababa had a significantly higher percentage of well-qualified teachers compared with other urban areas.

**Table 11.** *Distribution of teacher's qualifications by region*

		All	Type of site		Region				
			Urban	Rural	Addis Ababa	Amhara	Oromia	SNNP	Tigray
<b>N</b>		540	238	297	73	127	87	128	120
<b>Highest teacher qualification</b>	<i>Certificate or less</i>	43.1	37.0	48.1	32.9	61.4	35.6	49.2	29.2
	<i>Diploma</i>	42.4	44.1	41.4	35.6	27.6	51.7	38.3	60.8
	<i>Degree or above</i>	14.4	18.9	10.4	31.5	11.0	12.6	12.5	10.0

Children's workbooks were observed as part of the survey. The quality and frequency of marking was noted, and a summary of these data is given in Table 12. The ability of the children to present their work clearly in the workbook was also assessed. Overall, just 20 per cent of workbooks had all of the work in them fully marked. Workbooks in urban areas were more likely to have more work marked; the difference is small but statistically significant and remains when controls are included for grade, teacher qualification and region. Quality of marking within the workbooks observed is generally low. Just 1.4 per cent of books observed were described as having detailed and frequent marks. More than half the workbooks observed contained only simple marks. Only Tigray stands out from the other regions in terms of the large numbers of workbooks that were marked, and the relatively high quality of marking within those books, although the quality of children's work observed in the books in Tigray was worse than in most other regions.

**Table 12.** *Quality of workbooks*

		All	Type of site		Region				
			Urban	Rural	Addis Ababa	Amhara	Oromia	SNNP	Tigray
<b>N</b>		4778	2166	2612	538	1141	852	1069	1179
<b>Amount of written work marked</b>	<i>All or nearly all</i>	20.3	21.6	19.3	22.1	15.7	16.0	19.3	28.2
	<i>Some</i>	37.7	39.7	36.1	34.2	50.1	28.9	33.0	38.0
	<i>Little</i>	28.2	26.5	29.6	26.8	24.4	37.2	28.1	26.1
	<i>None/nearly none</i>	13.7	12.2	15.0	16.9	9.8	18.0	19.6	7.6
<b>Quality of marking</b>	<i>Detailed and frequent marks</i>	1.4	1.5	1.3	0.2	0.5	0.6	0.6	4.2
	<i>Simple grades or comments</i>	21.8	29.8	15.3	10.6	15.2	14.6	21.7	38.7
	<i>Simple marks</i>	55.9	50.1	60.7	61.7	61.4	66.1	46.3	49.4
	<i>No marking</i>	20.8	18.6	22.7	27.5	22.9	18.8	31.5	7.6
<b>Quality of child's work</b>	<i>Good</i>	32.8	34.8	31.2	41.1	24.9	43.2	31.3	30.6
	<i>Average</i>	48.8	50.4	47.5	47.2	54.6	42.8	49.3	47.9
	<i>Poor</i>	18.3	14.8	21.3	11.7	20.5	14.0	19.4	21.5

### 6.3 Teachers' applied knowledge of mathematics

A section of the school survey attempted to develop a relatively simple measure of teachers' applied knowledge of mathematics. This applied knowledge is related to the notion of pedagogical-content knowledge (PCK) and mathematical knowledge for teaching (MKT), which goes beyond knowledge of the subject matter to the dimension of subject-matter knowledge for teaching (Hill et al. 2008). The questionnaire asked teachers to examine error

patterns in and/or solutions to six mathematical tasks given by children at Grade 2 level, and to identify which children made similar types of mistake. The test included six items measuring teachers' applied knowledge of mathematics. Consent needed to be obtained separately for the teacher test, and some teachers chose not to participate, which meant that nearly 100 of the 580 teachers were included in other areas of the survey but did not complete the teacher test.

There is not a large difference in teachers' applied knowledge for teaching, whether schools are rural or urban. This is possibly because of the policy of allocating many new teachers to schools without a choice of school for the first few years of their service, and allowing relatively few transfers of teachers from rural to urban areas. Knowledge for teaching is strongly positively correlated, however, with whether the teacher has a diploma, compared with those who have only a certificate or less, and with whether the teacher has a degree. These effects disappear once school-related fixed effects are controlled for. This may be because teacher qualifications do not vary widely within schools (in first- and second-cycle schools, teachers should have diplomas; in secondary school they should have degrees).

Whether the teacher specialised in maths or physics is always strongly positively correlated with his or her score in applied knowledge for teaching. This is the strongest finding in relation to these data, indicating that subject-specific qualification is important in order to ensure that teachers have the necessary knowledge for teaching subjects. Once other variables are controlled for, teacher participation in a variety of teacher-training programmes is not found to be correlated with applied knowledge. But this does not mean that programmes are not effective. Programmes are not randomly allocated to teachers, and we do not know their initial stock of knowledge when they embark on the programme, so the teachers who engage in the programme may be systematically better or worse than those who do not. It is very difficult to establish whether certain types of teacher participate in training programmes, because our information on them relates only to their post-training performance. But the upgrading of a qualification is correlated with higher applied knowledge when other variables are not controlled for. Upgrading may improve this knowledge, or alternatively teachers with higher knowledge may be selected for upgrading programmes.

## 6.4 Motivation of school teachers

Qualitative data from the school survey revealed that teacher motivation is an important factor in their performance. Teachers' own perspectives emphasised the importance of incentives and of feeling valued by the community. A key reason cited for low motivation was low salaries, particularly in relation to the levels of responsibility involved, and in comparison with other civil servants. Teachers reported that they worked extra hours without compensation, such as time spent on co-ordinating student clubs, organising teacher-parent associations and providing extra tutorial classes. In rural areas, new and inexperienced teachers may also be assigned to schools in very remote localities without additional incentives. These teachers tended to be less motivated and to view their environments as hazardous and under-resourced. Some teachers reported wanting to change to a non-teaching profession as a result of these factors, as one teacher from a rural school explained:

“Parents do not give recognition to teaching profession. They look down at teachers. They do not accept our advice when we try to make them aware of the importance of sending their children to school. The community as a whole has little respect for teaching profession. It is also the least paid profession. As a result, I am not happy to continue in teaching.”

By contrast, some teachers reported that material benefits are not the main motivators for a teacher; instead they emphasised more internal values such as enthusiasm and passion for teaching their students. Other teachers added that motivation is the cumulative effect of all kinds of reward (both material and financial), recognition (certificates of awards), support from the community and personal interests.

Finally, a number of teachers reported problems of management in the day-to-day activities of the schools. They felt that their headteachers failed to give sufficient attention to supervising the conduct of the teaching–learning process in the classroom, or that they were too occupied with logistical and financial management activities such as relations with the *woreda* education bureaux. It was also felt that some headteachers did not deal with problems of repeated teacher absenteeism, excessive use of corporal punishment, and failure to finish courses during the year.

## 6.5 Pedagogy and participation in class

One of the more unique aspects of this survey is the inclusion of classroom observations. This is significant, since policy attention is becoming increasingly focused on the quality of the learning experience within the classroom. Donor support has contributed to the upgrading of teacher qualifications and the teacher-education system (2000–2005) and to the introduction of a programme for continuous professional development for teachers (2005–2010). There are plans to introduce further measures to improve teacher motivation, and to promote child-centred teaching methods and the inclusion of disadvantaged groups between 2011 and 2015. Issues of educational access go beyond enrolment to the various teaching and learning experiences of children once they reach school.

Classroom observations were carried out in maths classes involving Young Lives children. Children were observed at 15 different time points throughout the lesson, and their activity was coded into one of 12 different categories (see Figure 19). These categories were further grouped together into teacher-oriented, child-centred and off-task. Teacher-oriented activities were most common and accounted for three quarters of the observed activities. Child-centred activities accounted for just 11 per cent of observed activities, whereas 13 per cent of observed activities were 'off-task'. This is in line with the findings of previous research, as follows.

[M]ost teachers implemented learner-centred or active-learning in a limited way ... For the most part, classroom interactions were teacher-directed, even in classes that followed forms of active learning such as discussion within groups. When asked why they use the lecture method, many of the teachers claimed that the curricular materials were not written to be used in active learning classrooms; the textbooks are full of large amounts of information to be memorised by students for the examinations and, thus, teachers feel the responsibility to cover the curriculum in the available time. The flexibility and time required for successful active learning is not easily accomplished within the context of a crowded and prescriptive curriculum.

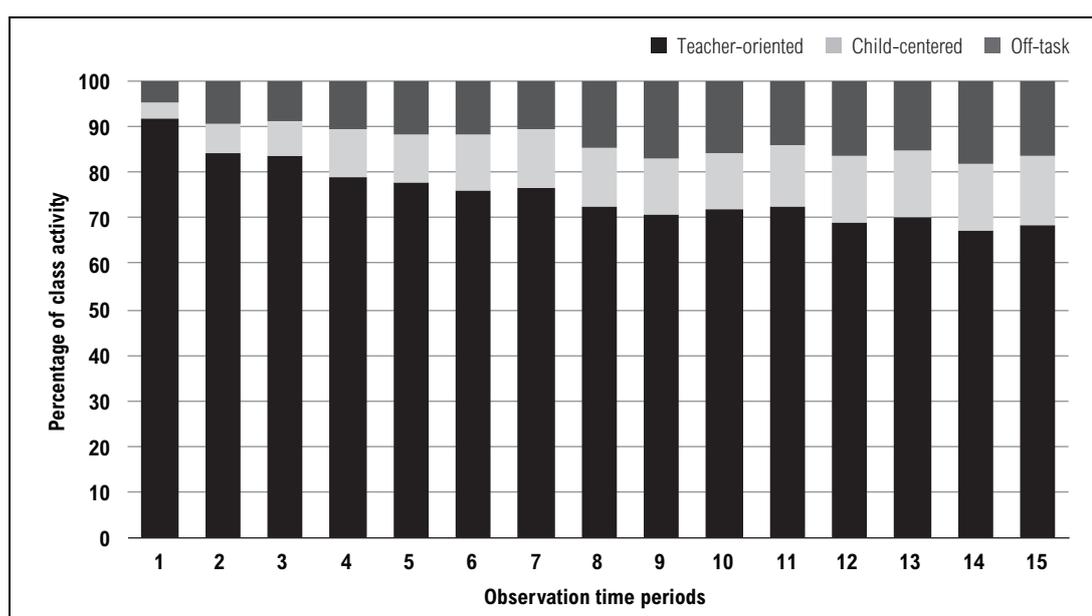
Asegdom et al. 2006: 29–30

In terms of individual students, the tendency to be off-task was predicted by age. Younger Cohort children were much more likely to spend their time off-task than Older Cohort children who are eight years their senior. There was no visible gender gap in terms of spending time off-task. Teachers were, unsurprisingly perhaps, the key predictors of observed classroom activity. Less time was spent off-task in classes with better-qualified teachers, as well as with

teachers who were male. Teacher’s salary did not make a difference to time off-task, but better-paid teachers tended to have a more child-focused pedagogy, and their lessons included more time spent on child-centred activities. Female teachers also tended to employ more child-centred methods.

Children in higher grades tended to be more off-task and less child-centred. Urban classes meanwhile tended to be more child-centred than rural areas, but also spent more time off-task.

**Figure 19.** *Average time spent on different types of activity during classroom observation*



## 7. Summary of key findings

- Access to education remains a significant problem, especially in terms of children starting late and dropping out.
- Girls in the Young Lives sites typically start school earlier than boys, are less likely to be over-age for their grade and are less likely to drop out, but nonetheless they do not have higher achievement scores.
- Teacher characteristics are predictive of children’s classroom experience and of the pedagogical strategies that teachers adopt. Classes with better-qualified teachers spend less time off-task, while better-paid teachers are more likely to promote more child-centred teaching methods.
- Household and individual factors – those beyond the school gates – remain crucial with respect to both educational opportunity and outcomes. Notwithstanding improvements in educational access, inequity issues will not be adequately addressed if these patterns of advantage and disadvantage remain unchanged.

- While the majority of schools in our sample had written a school-improvement plan and had drawn up a budget, fewer than half reported having enough funding to implement their plan.<sup>2</sup> The implementation of such plans will be an important future test for the effectiveness of the GEQIP programme.
- The evidence demonstrates links between late entrance to school, slow grade progression and early exit. This is a problem both for children (lower learning levels) and for school-system efficiency, and it highlights the importance of helping children to progress through grades.
- The most common reason given for drop-out by boys relates to their involvement in unpaid domestic/agricultural work, which explained almost 40 per cent of drop-out. Girls were much less likely than boys to leave school for this reason. Rather, the most common reason for girls to leave school was a need to look after siblings. The second most common reason for girls dropping out was that the direct costs of schooling were considered to be too high (a reason which was much more commonly given for girls than for boys).
- Absenteeism from school was found to be more common for boys, which is probably due to their work responsibilities in many cases. For girls, having younger siblings was found to increase the likelihood of their being absent for extended periods of time.

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<sup>2</sup> This may now have changed though, since data was being collected as GEQIP was rolled out.

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# Improving Education Quality, Equity and Access: A Report on Findings from the Young Lives School Survey (Round 1) in Ethiopia

This report presents key findings from Young Lives school survey in Ethiopia conducted in 2009–10, contextualised by cross-sectional evidence from the Ethiopian Demographic and Health Survey. The findings suggest that educational exclusion operates through complex mechanisms which conspire to limit the access opportunities of disadvantaged children during the course of the education life-cycle. Exclusion is associated with family ill-health, poverty, livelihood and labour demands, gender-related constraints, geographical context, and lack of parental education and support. Notwithstanding recent improvements in educational access and teacher training, unequal opportunities will not be adequately addressed if these patterns of disadvantage remain unchanged.

Large numbers of children, especially in rural areas, enter education late, are frequently absent from school, and drop out early. The most common reason given for boys' absenteeism and drop-out is their involvement in paid or unpaid domestic/agricultural work, whereas for girls the most common reason is the need to care for younger siblings. Some schools have adopted innovative policies to deal with such problems, including flexible hours to reduce seasonal absenteeism, and shift-schooling to enable children with family responsibilities to attend school more often.

The report endorses the value of decision-making autonomy at school level, but also emphasises the need for improved standard-setting and resourcing from central government: while the majority of schools in the survey sample had written a school-improvement plan and had drawn up a budget, fewer than half reported having enough funding to implement their plan. The implementation of such plans will be an important test for the effectiveness of the government's General Education Quality Improvement Programme (GEQIP).



## About Young Lives

Young Lives is an international study of childhood poverty, involving 12,000 children in 4 countries over 15 years. It is led by a team in the Department of International Development at the University of Oxford in association with research and policy partners in the 4 study countries: Ethiopia, India, Peru and Vietnam.

Through researching different aspects of children's lives, we seek to improve policies and programmes for children.

## Young Lives Partners

Young Lives is coordinated by a small team based at the University of Oxford, led by Professor Jo Boyden.

- *Ethiopian Development Research Institute, Ethiopia*
- *Centre for Economic and Social Sciences, Andhra Pradesh, India*
- *Sri Padmavathi Mahila Visvavidyalayam (Women's University), Andhra Pradesh, India*
- *Grupo de Análisis para el Desarrollo (Group for the Analysis of Development), Peru*
- *Instituto de Investigación Nutricional (Institute for Nutrition Research), Peru*
- *Center for Analysis and Forecasting, Vietnamese Academy of Social Sciences, Vietnam*
- *General Statistics Office, Vietnam*
- *Child and Youth Studies Group (CREET), The Open University, UK*
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