Improving Education Quality, Equity and Access in Ethiopia: Findings from the Young Lives School Component

Education, particularly basic education, is key in terms of laying a solid foundation for healthy human development and is also strongly related to various social and economic benefits. Impressive and rapid primary enrolment increases have been achieved in Ethiopia, and policymakers are focused on quality improvements through the Education Sector Development Plan and the General Education Quality Improvement Programme. To help inform this policy environment, this brief presents findings from a school-based survey carried out as part of the Young Lives longitudinal study. The brief shows the ongoing powerful impacts of children's household circumstances on learning. Children from poorer backgrounds tend to enrol later, make slower progress and are more likely to drop out without completing schooling, illustrating the importance of school flexibility in supporting many children. The brief also looks at how teaching matters, exploring the relationship between the nature of the learning environment and children's achievements and finding positive links between teacher qualification levels and the education received by pupils.

Ethiopia has recently experienced massive improvement in access to education. Primary school enrolment has increased five-fold since 1994, and there are now more than 14 million children in school compared to five million in 2000. Secondary school enrolment has also shown a modest improvement, with a 3.2% increase in the net enrolment rate between 2005/06 and 2009/10. These are extraordinary achievements in terms of increasing enrolment, but education quality still remains a daunting challenge. Some commentators suggest deteriorations in quality and pupils' progress might be the inevitable corollary of an expanded education system that is more inclusive of pupils from underprivileged members of society.

To address the challenges in educational quality, the government has recently devised two major plans - the Education Sector Development Plan (ESDP IV) and the General Education Quality Improvement Programme (GEQIP), where the emphasis is on enhancing student achievement through better teaching and learning processes. In particular, GEQIP has focused strongly on improving equity and access so as to reduce current rates of drop-out and improve completion and progression to secondary schooling. The programme mainly seeks to increase investment in key inputs, such as textbooks, teacher training and development, and school infrastructure improvements.

In the light of these priorities, this brief presents key findings with important policy implications from the first round of the Young Lives School Component conducted in 2009-10. The evidence suggests that exclusion from education is associated with health, poverty, livelihood, gender, context, levels of parental education and access to support.

Key Findings:

- Increased primary school enrolment creates opportunity, but accessing quality education remains a significant problem for the most disadvantaged children.
- Poorer children and those in rural areas enrol later and make slower progress in learning. This highlights the importance of focusing policy on these disadvantaged groups to improve children's outcomes.
- Teacher characteristics, particularly their qualifications, subject knowledge and motivation for teaching, are predictive of the nature and quality of pupils' classroom experience and of the teaching style that teachers use in the classroom.
- Non-school factors, especially those related to household and individual circumstances, remain very important with respect to both educational opportunity and outcomes.
- Late and delayed enrolment in school are associated with slow grade progression, drop-out and poor achievement.
- Absenteeism and drop-out among boys is often higher than for girls and are largely due to their involvement in unpaid domestic/agriculture work, whereas for girls they are mainly the result of a need to look after younger siblings and the direct cost of schooling (such as school uniforms, exercise books, pens and pencils, parental contributions towards school improvement activities, etc.).

1. Overage and delayed enrolment is associated with poor progress and achievement in school

- Ethiopia has witnessed a rapid and substantial increase in school enrolment. According to the Young Lives data, overall enrolment in school increased from 65.5% to 76.9% for 8-year-olds between 2002 and 2009. In addition, the gender gap in enrolment level, which has traditionally favoured boys, has declined in recent years.
- Nevertheless late enrolment, which is one of the key proxy indicators of educational disadvantage in schooling terms, is common throughout Ethiopia. Children first enrol in school at a variety of ages; as a result children (together with children repeating years) in Grade 1 ranged from 5 to 15 years old. (See Figure 1.)
- Age at enrolment varies considerably between the geographic sites, including within regions. The highest ages of children in Grade 1 were found in rural areas, especially in two sites in SNNP where the average age in Grade 1 was over 11 years. Higher average ages at initial enrolment were also typically found in the sites with lower levels of household wealth.
- Some of the major factors driving the relatively higher level of late enrolment in Ethiopia include children's involvement in domestic or agricultural work, families' inability to meet the direct and indirect costs of schooling early on in the child's life, and stunted growth which often impedes children from entering school at the expected age of 7. Other reasons include the accessibility and quality of schooling (supply); and also the children's physical and mental 'readiness' for schooling or perceptions thereof (demand).
- From a cognitive development perspective, not being exposed to appropriate education in the early years of a child's life may impair progression.
- Late and delayed enrolment are more likely to result in both poor progression through the grades and in poor achievement in school. Many children are considerably 'over-age' for their grades, especially in the later grades and later years of schooling. Overage status also creates a potential pressure to drop out in the later years due to reasons related to marriage, the likelihood of pregnancy and the need to work.
- Thus, being overage is an important indicator of educational disadvantage; it is potentially both a consequence of deprivation in early life (delayed enrolment and slow progression) and a cause of later disadvantage (including drop-out).

Figure 1: *Children enrolled in Grade 1 by age*

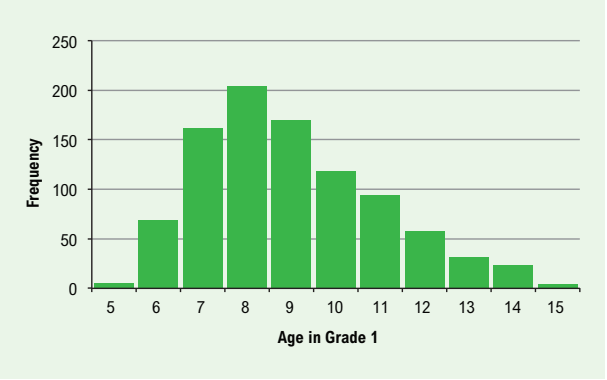
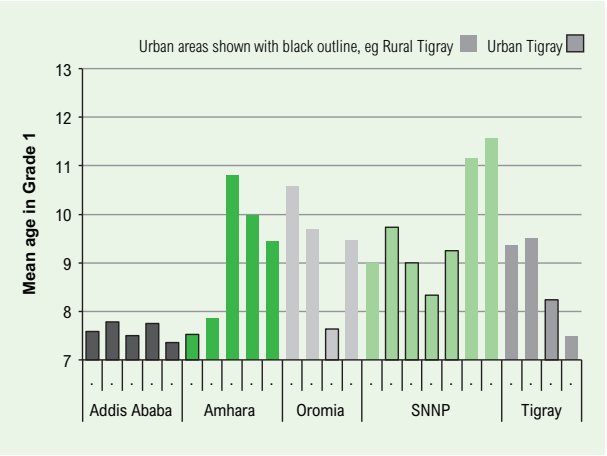


Figure 2: *Mean age in Grade 1 by site*



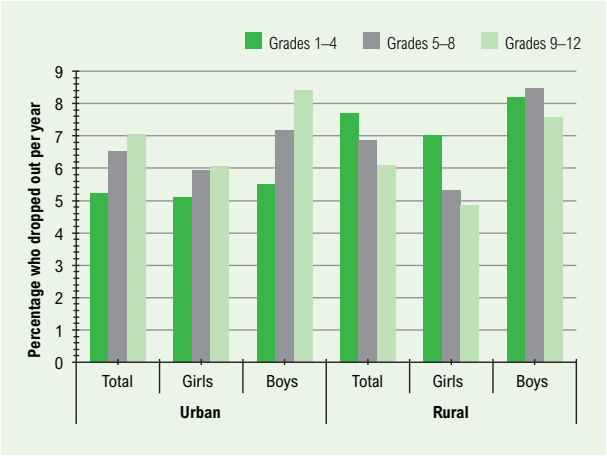
- Various factors predict whether a child is likely be overage or not at enrolment in Grade 1. The key predictors are as follows:
  - The caregiver's ability to read was predicted by the child being close to the 'expected' age for their grade.
  - Children from wealthier households were less overage at enrolment.
  - Children who were taller for their age (an established indicator of early nutrition) were found to be less likely to be overage for their grade.

2. School drop-out is high among rural children

- The average drop-out rate in index schools in the five regions was reported to be about 6%; however, some schools had drop-out rates as high as 33% since the beginning of the school year.
- Drop-out rates were very high in Young Lives sites in Addis Ababa and SNNPR, but lowest in most of the other sites in the urban areas and Tigray. However, children in urban sites actually experienced higher drop-out rates than children in rural sites in Grades 9-12.

- Overall drop-out rates were higher for rural children. Moreover, rural children are also more likely to drop out in earlier grades.
- The drop-out rates for boys in Young Lives sites were higher than those for girls in all grades and all regions, perhaps indicating the importance of work-related roles for boys.

Figure 3: *Drop-out rates by grade*



- School-level infrastructure was found to have important links with the level of drop-out. Schools which have drinking water on site, adequate toilet facilities, and electricity had significantly lower drop-out rates.
- Other factors with a significant effect on drop-out rates were teacher qualification levels, with lower levels of teacher qualification associated with higher drop-out rates.

Main reasons for drop-out

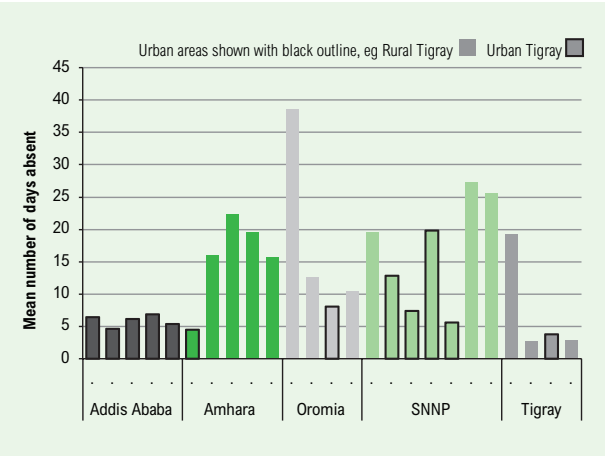
Detailed interviews were also carried out to explore how children report the reasons children had left school. This suggested:

- Overall the most common reason they gave was that they were needed for domestic or agricultural work, indicating the importance of shift schooling and flexible schooling to help working children stay in school.
- The second most common reason, particularly in rural areas, was child illness. Health problems such as malaria and typhoid are common, forcing children to drop out due to extended absenteeism. The illness of a family member also forced children to drop out when this causes a shortage of family labour.

3. Absenteeism is one dimension of 'silent exclusion' from education

- Absenteeism is often a precursor to drop-out as well as a dimension of 'silent' exclusion, linked to poor progress and performance.
- 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.
- Rural children were also found to be absent more often than urban children as Figure 4 demonstrates.

Figure 4: *Student absenteeism by sentinel site*



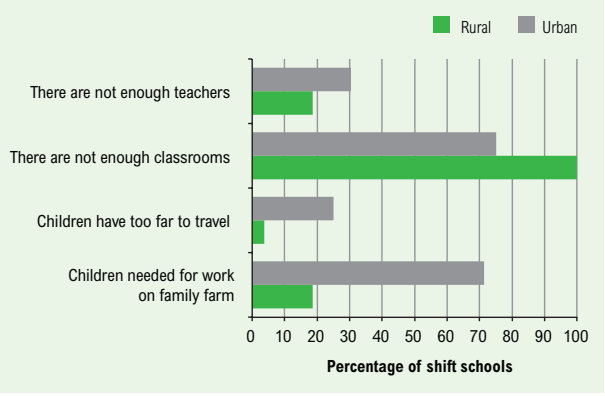
- The findings highlight the combination of household and geographic factors associated with absenteeism, indicating the need for more context-specific practices and interventions to encourage and support children's attendance.
- Absenteeism was found to be associated with looking after their younger siblings and with total household size.
- Some schools have put in place innovative structures to deal with community-level factors that caused children to miss school. This suggests that policies for school flexibility could help cut absenteeism levels.

4. Shift schooling and flexibility could play important roles in addressing problems of physical space and lack of teachers

- Two-thirds of the schools sampled operated a shift system, indicating the importance of shift schooling in the Ethiopian context.
- Shift schooling is important since the need to help with unpaid domestic and agricultural work in the household is a major cause of drop-out, and flexible or shift schooling can allow children to combine work and school.

- Some of the main justifications forwarded by teachers and principals for shift schooling include: (1) drop-out rates would increase if there was no shift schooling because many pupils have to work; (2) full-day schooling would be impractical due to the socioeconomic backgrounds of the pupils; (3) it is difficult to sustain full-day education in very hot places; and (4) the shortage of infrastructure, particularly in rural schools, necessitates shift schooling.

Figure 5: *Reasons given for shift schooling*



- The major reasons schools gave for operating a shift system were lack of physical space and children's involvement in farm-related work (Figure 5). However, the child-centred reasons were less common than the school-related reasons, indicating that if schools were better resourced, then learning time might increase.

5. Better qualifications and upgrading enhance teachers' knowledge for teaching

- Teachers who have a diploma or degree tend to have better subject knowledge than those who have a one-year certificate. Having a degree is the single most important factor with a significant effect on teachers' subject knowledge.
- Teachers who have qualified in a particular subject area usually have better knowledge of teaching that subject (Maths and Physics were the two subjects considered for this study). This evidence challenges the prevailing self-contained system in the first cycle of primary school (Grades 1-4) where groups of children are taught by the same teacher in all subjects.
- Whether teachers are more experienced or have participated in continuous professional development in the last five years does not seem to have a substantial impact on their knowledge for teaching.
- A major improvement in teacher scores is seen when teachers have degrees compared to when they have diplomas or certificates. Therefore, the government should invest more in upgrading teachers to diploma level and, where possible, to degree level if they are teaching at higher grades.

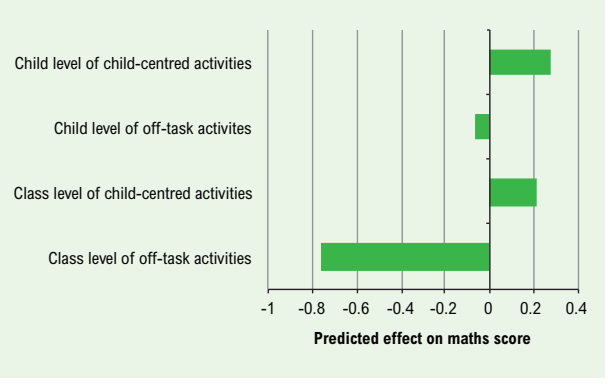
6. Classroom experience and teaching style influence children's achievement

- Classroom observations in maths classes indicated that teacher-orientated activities were the most common and accounted for three-quarters of the observed activities. Child-centred activities accounted for just 11% of observed activities, whereas 13% of the activities observed were 'off-task'.

Impact of teaching style on children's achievement

- In terms of the predicted effect on children's maths scores, the effect of being in a class where off-task activities were common (and therefore disruptive to learning) was substantially detrimental to achievement. On the other hand, child-centred activities had a positive effect on maths scores, both at a class- and child-level.
- Children who were involved in child-centred activities and also in a class where child-centred activities were widely promoted benefited the most.

Figure 6: *Predicted effect on maths achievement and the children's tendency to be off task or involved in child-centred activities*



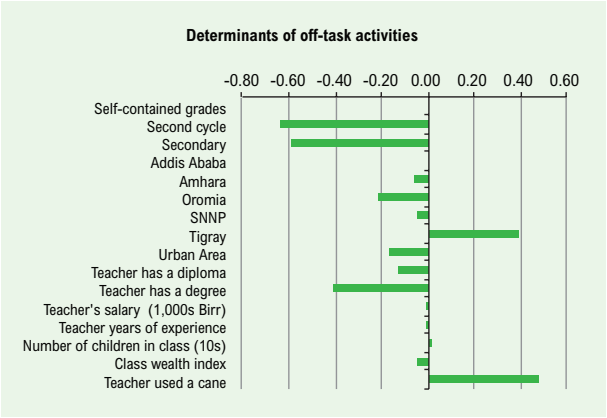
Determinants of off-task activities

- Figure 6 suggests time off task is associated with less good maths results. Off-task activities were found to be less common in urban areas and higher-grade classes. Teachers with higher qualification levels taught classes with less time off task.

Determinants of child-centred activities

- In terms of regional variations, child-centred activities were found to be most common in Tigray and least common in Addis Ababa and Amhara. Higher grades spent less time on child-centred activities, as did classes in urban areas. Teachers with higher salaries spent more time on child-centred activities (Figure 7). Also, the more children there were in a class, the less likely they were to take part in child-centred activities.

Figure 7: *Determinants of off-task and child-centred activities as compared to teacher-oriented activities*



Conclusions: Children's learning outcomes are affected by a range of teacher-, school- and household-related factors

- Children in rural areas made less progress in learning mathematics. This is partly due to the fact that most rural schools are staffed with less qualified and less experienced teachers. Another reason is that seasonal absenteeism for agricultural work is more common.
- Children from wealthier households made more progress than the poorest groups. One reason for this is that children from wealthier households tend to enter school at the appropriate age plus they often benefit from pre-schooling. In addition, the poorest children in both urban and rural areas tended to have less well-qualified teachers and this adversely affected their learning progress.
- Children in schools with higher than average teacher qualifications made more progress in learning maths. This could be because teachers with higher qualification levels taught classes with less time off task, and therefore learning was more effective.
- Children in schools with lower levels of teacher absenteeism made greater learning gains.
- In-depth interviews highlight that children in larger classes make smaller learning gains. The suggested underlying reason for this was that the number of children in a class prevented the child-centred activities which were themselves associated with higher achievements in maths.
- Children with more educated mothers made more progress. This is partly due to maternal education being positively linked with the child being close to the 'expected' age for his/her grade, which influences progression through the grades and school achievement.
- Children who were more engaged in 'child-centred' activities made greater learning gains than those engaged in 'off-task' activities, who made less progress in maths learning.

Implications: The implementation of the school improvement programme (SIP) faces myriad challenges

- Given the limited human and financial capacity of schools, the SIP, which is one of the main components of the GEQIP, faces enormous challenges, though there are successes in some areas which can be built upon.
- While many schools in the Young Lives sites failed to achieve the SIP's objectives, some made remarkable headway in certain aspects. Headteachers in these schools commented that since the SIP was rolled out, schools have made a great deal of progress in achieving quality teaching and learning. One key achievement often highlighted was that the school community had become more responsible and accountable for the activities they are implementing. Organising effective experience-sharing programmes, which helped smaller schools to access the resource centres of bigger ones, was another achievement often cited.
- Insufficient cooperation by the community in supporting school initiatives poses one challenge. This is partly due to the fact that teachers and headteachers have not done enough to raise the awareness of parents and communities about the importance of quality teaching and learning for their children. This is due to the lack of incentives for teachers and headteachers to carry out such awareness-creation activities.
- The other major challenge highlighted was budget limitations. The budget allotted by the government for non-salary activities is low. The study revealed that some of the schools in the Young Lives sites tried to address this problem by raising money from the community. However, this has not been sufficient to support their school improvement initiatives. Plus, raising additional revenue locally will reinforce differences between schools, since communities with lower resource levels will be less able to contribute, even though the need in their schools may well be greater.

- Though SIP has prioritised the expansion of the use of information communication systems and technologies in order to improve the teaching and learning process, teachers and headteachers in most primary schools across the Young Lives sites reported that they have not succeeded in improving ICT services.
- One of the SIP's key areas is capacity building. In this regard, interviews with teachers indicated that capacity-building activities are effective in most cases but sometimes the criteria for selecting the teachers for the teacher development programme is not clear. Teachers also reported that while some teachers were able to participate in various teacher training sessions and teacher development programmes, others had limited opportunities to do so.
- Another concern expressed by many of the teachers was that some of the headteachers do not have the skills and knowledge to manage the school and school activities. As a result, the SIP's impact has been limited in those schools.
- By and large, our evidence indicated that the implementation of the SIP has faced several challenges at the local level, mainly due to lack of implementation capacity, financial constraints, lack of proper support from above and low awareness of parents and communities. If the programme is to be properly implemented, then systematic and well-organised efforts are required.

THE YOUNG LIVES SCHOOL COMPONENT

Understanding what happens to children at school has become particularly important in a context of increasing diversity in the provision of education. Through the introduction of the School Component, Young Lives has become one of only a handful of surveys which gathers detailed information not only about children and their households and communities, but also their schools.

Young Lives is following 12,000 children in four countries – Ethiopia, the state of Andhra Pradesh in India, Peru and Vietnam – over 15 years. The School Component of Young Lives was introduced in 2010 after the third round of household data collection. It follows a sample of the Young Lives children to school, where two rounds of data about the character and quality of the education they receive will be collected.

The School Component seeks to develop understanding of the contribution of educational experience in relation to the causes and consequences of childhood poverty. Data for this component are collected at the schools attended by index children in the younger cohort at two significant points in their educational experience. Young Lives will begin a second round of data collection within schools in late 2012. This additional data will enable further analysis on school effectiveness.

For more information about the School Component, please contact:

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- Improving Education Quality, Equity and Access: A report on Findings from the Young Lives School Component in Ethiopia prepared by Melanie Frost and Caine Rolleston (2011)
- Teacher Knowledge for Teaching, Qualification and Upgrading: A Policy Note prepared by Kate Orkin, Santiago Cueto, M. Alejandra Sorto (2012)
- The Classroom Experience: Key findings sheet based on findings from the Young Lives School Component (2012)
- Schooling, teachers and learning outcomes: evidence from Ethiopia: Key findings sheet prepared by Caine Rolleston (2012).

Young Lives is a 15-year study of childhood poverty in Ethiopia, India, Vietnam and Peru, following the lives of 3,000 children in each country. In Ethiopia Young Lives tracks 2,000 younger and 1,000 older children, who were aged 7-8 and 14-15 respectively at the last survey round in 2009.

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The full text of all Young Lives publications and more information about our work is available on our website: **www.younglives-ethiopia.org**

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Young Lives
An International Study of Childhood Poverty

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