Technical Note 37

Young Lives

The Design of the 2016-17 Young Lives School Survey in India

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www.younglives.org.uk

DECEMBER 2016

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First published by Young Lives in December 2016

Printed on FSC-certified paper from traceable and sustainable sources.

About Young Lives

Young Lives is an international study of childhood poverty, following the lives of 12,000 children in four countries (Ethiopia, India, Peru and Vietnam) over 15 years. **www.younglives.org.uk**

Young Lives is funded by UK aid from the Department for International Development (DFID).

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.

Core Funded by

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1. Introduction to the survey

Young Lives is an international study of childhood poverty in Ethiopia, India (Andhra Pradesh and Telangana), Peru and Vietnam. Its aim is to improve understanding of the drivers and impacts of child poverty and development.

Following the Young Lives primary school survey in India (conducted in 2010-11), Young Lives is conducting a survey on secondary school effectiveness in 2016-17. This study will examine school effectiveness through multiple outcome measures: Class 9 students' performance in Maths, Functional English, and Transferable Skills. Student performance in Maths and Functional English is being assessed using repeated measures, through the administration of linked cognitive tests at the beginning and the end of Class 9 (Wave 1 and Wave 2 of data collection respectively). This will allow students' progress over the course of one year of secondary schooling to be considered in relation to student, class, teacher and school factors.

The primary school survey in India focused upon Young Lives 'Younger Cohort' children (born in 2001-2), tracking them to their schools and classrooms to understand more about their educational experiences and achievement. The secondary school survey, which will take place in 2016-17, and which is the focus on this design note, is structured to collect data from children in the same school grade as many of the 'Younger Cohort' (age 15) within a sample of schools in the Young Lives sites in Andhra Pradesh (henceforth AP) and Telangana. This design will generate rich evidence about school and classroom effectiveness and the drivers of learning within schools which the Young Lives cohort of children could access. It focuses on Class 9, the penultimate year of secondary education before children complete secondary school and take the Board Exam at the end of Class 10.

Priority areas for secondary education policy and practice in India have been identified in consultation with key stakeholders at national and state level, including MHRD, Andhra Pradesh and Telangana Ministries of Education, World Bank, DFID-India, Azim Premji and Pratham. These have guided the development of the main research questions for the survey:

1. How does student learning differ between different types of school?
2. How does teacher motivation, attitude and practice impact on student learning?
3. How does school size and number of teachers (subject-wise) impact on school efficiency and student learning?
4. How do learning and progress differ between students with different media of instruction (MoI)?
5. What models of school leadership and governance are in place to hold teachers and schools accountable, and how do these relate to differences in school effectiveness?
6. What are some of the factors (in-school and outside school) to which differences in students' functional English skills can be attributed?

2. Context and policy background

School enrolment at elementary level in India is now almost universal, in large part due to the success of the government's flagship *Sarva Shiksha Abhiyan* (SSA) programme, which launched in 2000. Secondary enrolment too is increasing, with the launch of *Rashtriya Madhyamik Shiksha Abhiyan* scheme (RMSA) in 2009 intended to support a similar drive towards the universalisation of secondary education. Gross enrolment rates for secondary education in India are currently around 71% (RMSA 2015), and targets aim for universal completion of secondary education to be achieved by 2020. Yet as attendance has increased, the quality of secondary education has become a policy concern (Planning Commission 2013) as multiple studies reveal that student learning levels have fallen far below curriculum requirements (Educational Initiatives 2010; ASER 2015), and are continuing to decline over time (Rolleston and James 2015).

As India moves towards universal secondary education, national policy relating to this stage of schooling can be categorised within three overlapping categories: access; equity; and quality (World Bank 2009). With low levels of learning identified throughout the education system, it has been noted that one of the biggest constraints to universal enrolment at secondary level is the shortfall in children completing elementary education (World Bank 2009). This is particularly true for girls and children from disadvantaged groups, who are both less likely to enrol in secondary school (NUEPA 2008) and to complete it (Singh and Mukherjee 2015).

A further area of policy concern in India relating to the access/equity/quality focus concerns the multiple sizes and types of secondary schools. To ensure that all children can have physical access to secondary education, all states are required to ensure there is a secondary school within 5km of all habitations (RMSA 2009). However, this has led to a new concern that there are now a large number of very small schools which are neither cost-effective nor able to provide the facilities and number of teachers required for quality teaching (RMSA 2015). A further area of interest relate to the type of school: with over half of all secondary schools in India either private aided or private unaided (World Bank 2009), there is a great deal of interest in understanding more about the performance of different school types, and the roles they have to play in ensuring equitable access to quality secondary education.

The Young Lives secondary school survey will generate evidence which can be used to address some of these policy concerns in AP and Telangana.

3. Survey sample

The second Young Lives India school survey will focus upon the quality and effectiveness of education within different types of schools in AP and Telangana. To do this requires a sample design which ensures that each school type of interest is included in sufficient numbers to allow us look at school-type effects. As a result, a sample design which is stratified by school type has been used. The school types of interest are: state government; private unaided; private aided; and tribal/social welfare. The school types, which emerged as areas of interest in meetings with stakeholders, cover and expand upon the 'private /government' school debate in India. DISE/SEMIS data (from 2014-15) revealed that these four school types make up 99% of the total schools in the twenty Young Lives sites. Other

school types are also present (for example central government schools and madrasas), but in such small numbers that it was not possible to include them in the sample.

Prior to finalising the sample design, analysis of the latest available DISE-SEMIS data (2014-15) was undertaken, which revealed that there were around 800 schools which cover Class 9 across the twenty Young Lives sites. In addition, a pre-survey tracking exercise, undertaken in autumn 2015, informed us that the Young Lives Younger Cohort children were attending in around 530 different schools in 2015-16. As a result, it was not possible to survey all schools attended by Young Lives children, or all the schools in the sites, as the numbers were too high. The distribution of Young Lives children across multiple grades and schools also made it difficult to prioritise including them in the sample without visiting a very large number of schools. Instead, the decision was made to focus the sample on schools within the sites in which the Young Lives children live, to provide insight into the different types of schools which people within this site (including the Young Lives households) could choose between. The final sample covers schools where we anticipate around 120 Young Cohort children will currently be in Class 9.

To ensure that each site was represented in the sample, sampling was done at site level. Schools were selected through a simple random sample, drawn at site level within each stratum, using the DISE-SEMIS 2014-15 school list as a sample frame. The number of schools sampled in each site is proportional to the number of schools in that site, using a sliding scale. As they are less prevalent across all of the sites, tribal/social welfare schools and private aided schools have been census-sampled to ensure sufficient numbers. This sampling strategy maximises the number of different schools from each site, providing data which is representative at the site level. In total, the sample covers 205 schools: 83 government schools; 54 private unaided schools; 30 private aided schools; and 38 tribal/social welfare schools.

Within each school, the survey covers all Class 9 students, along with their maths and English teachers. The total number of children covered by the survey is just under 10,000.

4. Research Design

The secondary school survey will provide policy-relevant observational data relating to factors which may impact upon school effectiveness and better learning outcomes. These findings can then inform policy and implementation decisions. To explore the role which different factors have to play in student learning, a ‘value-added’ approach will be used.

Students’ learning over the course of Class 9 will be assessed using three cognitive tests: Maths, Functional English and Transferable Skills. The Maths and Functional English tests will be repeated measures, carried out at the beginning and end of the school year to assess the value added to these skills by one year of schooling. The Transferable Skills test will be a one-off measure (as it has a less direct relationship with the school curriculum), undertaken at the end of the school year to understand students’ problem-solving and critical-thinking skills levels by the end of Class 9. In addition, background instruments will collect data on students, teachers, principals, and school infrastructure and facilities. Table 1 provides an overview of survey instruments, and Table 2 outlines the timeline for the secondary school survey. For a more in-depth discussion of instruments used in the survey, see Young Lives technical notes on the Maths, Functional English and Transferable Skills tests, and psychosocial skills measurement.

Table 1: *India Secondary School Survey Instruments*

Student outcome measures	Background instruments
Maths test Repeated measures, administered at the beginning and end of Class 9. Assessing students' curriculum knowledge, and ability to apply curriculum knowledge in less familiar contexts.	**Principal questionnaire** Collects background data on the principal and the school (including school management practices).
Functional English test Repeated measures, administered at the beginning and end of Class 9. Assessing students' English reading skills relevant to the contexts in which they use (or will use) the language.	**Teacher questionnaire** Collects background data on Class 9 Maths and English teachers (including teacher motivation and class-level information).
Transferable Skills test Cross-sectional measure, administered at the end of Class 9. Assessing problem-solving and critical-thinking skills.	**Student questionnaire** Collects background data on Grade 10 students (including academic support within and beyond school, and psychosocial measures).
	School facilities observation Collects data on school infrastructure.
	Teacher professional knowledge questionnaire Collects Mathematics teacher performance on an assessment of specialised content knowledge for teaching.

Table 2: *India Secondary School Survey Timeline*

2016	February 2016	Wave 1 Pre-pilot
	March 2016	Wave 1 Full Pilot
	April – June 2016	Wave 1 Pilot Data Analysis and Item Selection
	June 2016	Training of Fieldworkers for Wave 1
	July – August 2016	Wave 1 Data Collection
	October 2016	Wave 2 Pilot
	November – December 2016	Wave 2 Pilot Data Analysis and Item Selection
2017	January 2017	Training of Fieldworkers for Wave 2
	January – March 2017	Wave 2 Data Collection

5. Policy and Practice Implications

Through its focus on the effectiveness of schools of different types, sizes and locations, and of the school, teacher and class-based factors which may affect school effectiveness, this survey will offer evidence which is relevant to the access, equity and quality agenda of Indian policy makers. The 'value-added' design will provide an opportunity to explore which schools are supporting students to make more progress, and some of the school and teacher factors associated with greater progress. As policy makers seek to find ways to improve the quality of learning within schools (particularly government schools) in India, the insights into 'what works' offered by this survey will fill a key evidence gap.

The longitudinal nature of the Young Lives study also offers unique insights for policy and practice. For example, school effectiveness data collected at Class 9 in the school survey can be analysed alongside Young Lives household survey data, as Round 5 of household

data collection is taking place at the same time (2016-17) and with Younger Cohort children who are the same age as those in the school survey sample. This will contextualise school survey findings within five rounds of Young Lives household survey data collection which has taken place in the same sites.

The research questions for the school survey relate to policy concerns which are ongoing in India, and as such the survey can provide policy relevant evidence which can:

- Inform debates about how student learning levels differ between different school types and some of the factors relating to this;
- Inform teacher education and CPD policies by providing evidence on the types of teacher beliefs and practices which best support student learning;
- Improve evidence on the extent to which very small schools are able to support student learning;
- Inform policy relating to the medium of instruction in school through providing evidence on how medium impacts on student learning;
- Offer guidance about the models of school management and governance which offer both accountability and support.

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An International Study of Childhood Poverty

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*
- *Pankhurst Development Research and Consulting plc, Ethiopia*
- *Centre for Economic and Social Studies, Hyderabad, India*
- *Sri Padmavathi Mahila Visvavidyalayam (Women's University), Andhra Pradesh, India*
- *Grupo de Análisis para el Desarollo (GRADE), Peru*
- *Instituto de Investigación Nutricional (IIN), Peru*
- *Centre for Analysis and Forecasting, Vietnamese Academy of Social Sciences, Vietnam*
- *General Statistics Office, Vietnam*
- *Oxford Department of International Development, University of Oxford, UK*

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