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Reprioritising inclusion and equity to meet SDG4: Action is needed beyond the education sector – and must begin before school entry☆

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ABSTRACT

This commentary draws on the body of multidisciplinary research produced using the Young Lives Dataset, a 20 + year, mixed-method longitudinal cohort study in four countries in the Global South. In summary, inequality of opportunity in education had been falling over 20 years since the turn of the Millennium, but progress has been reversed by recent global crises. Longitudinal evidence shows that the home and community environment prior to entering the education system is crucial for future learning trajectories, and schooling either reinforces or remediates pre-existing inequalities depending on context. The life-course perspective shows the importance of co-ordinating policies across sectors, including education, to support children's learning, and how policies to support children to stay in education at crisis points during their childhood can complement investments in education systems in order to prioritise inclusion and equity to fully reach SDG4.

1. Introduction

While many policies aimed at achieving SDG4 have justifiably focused on school access, school quality, and more recently, education systems as a whole,[1] the global community needs to think much more broadly to galvanise progress and ensure **inclusive and equitable** quality education for all, including the most marginalised. Importantly, this requires pursuing policies both within *and external to* the school system. Without joined-up thinking across sectors, and stages of childhood, education systems risk leaving a large number of children behind. This argument draws on lessons from a body of research that has built up over the past 20 years using the Young Lives Study (YLS; Barnett et al., 2013; Favara et al., 2021), where I am the current Director.

The YLS was set up at the turn of the Millennium to monitor progress towards the Millennium Development Goals (MDGs), given data gaps in monitoring during the early years of the Goals. It is an illustrative case study showing what lessons are learned when reliable longitudinal data are available, given that it has been following the lives of a cohort of 8000 children born in Ethiopia, India (state of Andhra Pradesh/Telangana), Peru and Vietnam in 2001/2 since their first year of life, alongside an older comparison cohort of 4000 children born in 1994/5.[2]

Now we are at the halfway point to 2030 what have we learned from researching the lives of the 'Young Lives children' for the past twenty years, as they enter young adulthood in the midst of global crisis? Some unique features of the YLS allow a longer-term and multidimensional perspective on child and adult development related to progress on SDG4.

First, the longitudinal element is important to monitor equity and inclusion through the life course. YLS has collected quantitative survey information on a rich set of factors throughout the child's life, starting before they begin school. The inter-cohort comparison (children born

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[1] Young Lives has endorsed the Commitment to Action on Foundational Learning, see https://www.worldbank.org/en/topic/education/brief/commitment-to-action-on-foundational-learning.

[2] A long-sighted decision from the UK Department for International Development (DFID, now the UK's Foreign Commonwealth & Development Office, FCDO) to fund a research programme over two decades. The research cited here has been produced by YLS researchers, but also non-YLS researchers, as all Young Lives quantitative data are publicly available to download from UK Data Service. Data available at https://beta.ukdataservice.ac.uk/datacatalogue/series/series?id=2000060#!/access-data

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seven years apart) allows analysis of short-term trends within countries. Second, YLS has measured a broad range of skills including, but not restricted to foundational learning (reading, mathematics, receptive vocabulary) for all children, including those who were out of school, which is essential to monitor the "leave no-one behind" principle. The survey instruments are as comparable as possible across countries and over time. Third, complementing this longitudinal, household-based survey, are school-based surveys in the study communities, and fourth, more in-depth longitudinal qualitative research has been conducted with a smaller group of children in each country.

The article proceeds to discuss four key findings on the challenges of meeting SGD4, focusing on how to achieve inclusive and equitable quality education throughout the child's life from birth through adolescence, as reflected in the life course of the Young Lives Cohort children. The conclusion then maps these points to the Targets of SDG4, with a particular focus on Target 4.1 (Universal Primary and Secondary Education); 4.2 (Early childhood development and universal pre-primary education); 4.5 (Gender Equality and Inclusion) and 4.6 (Universal Youth Literacy) and suggests avenues for policy focus.

2. Inequality of opportunity remains despite decades of progress

In 2002, YL found substantial cross-country variation in basic foundational skills such as maths and reading at age 8, with very low rates in Ethiopia and India (Rossiter et al., 2018). YLS longitudinal evidence has subsequently shown that the country a child is born into matters greatly in terms of the probability they will complete primary and secondary school (Target 4.1), their literacy and numeracy (Target 4.6), and getting a decent job having completed an education. Within each country, other key factors such as early poverty, mother's education, rural/urban location, gender and ethnicity also predict educational achievement.

In the most recent YLS (2021) phone survey, in three of the countries most 20 year olds had completed at least primary education. The exception was Ethiopia, with only 71% (Scott et al., 2022a).[3] This is an intergenerational improvement compared to their caregivers - in Peru in 2002, 83% of caregivers had completed at least primary, 60% in Vietnam, 40% in India and only 11% in Ethiopia - but progress needs to accelerate.

Gender disaggregation reveals a complex pattern– in Vietnam, girls stay in school longer as boys are under pressure to contribute to earnings. In India, girls are worse off under all the educational outcomes that we measure, at all ages. At adolescence a clear gap emerges in socio-emotional skills to the detriment of girls in all four countries (Hossain and Jukes, 2023).

Recent global crises have exacerbated inequalities. YL has followed two cohorts, one born in 1994–5 and the other born in 2000–1. Across all previous rounds, findings were that the younger of the two cohorts achieved better educational (and other) outcomes at the same age but measured seven years later. The COVID-19 crisis eradicated this inter-cohort progress in education, especially for those who were unable to access the internet to continue remote learning (Favara et al., 2022). For older children it is girls, those in rural areas, and the poorest and most marginalized, who were least likely to have returned to school following COVID-19 shutdowns. Girls in particular faced a stark increase in domestic unpaid work to support struggling families (Ford and Freund, 2022). And girls who drop out of school are more likely to get married early, or have a child during adolescence (Favara, Chang, and Sánchez, 2018).

In summary, in the study countries, there is still much to be done in terms of achieving universal completion of primary and secondary education, with progress since 2002 now under threat due to the current polycrisis.

3. The enabling environment for learning is crucial for equity and inclusion

Children's brain development begins in gestation and relies on adequate nutrition, a prerequisite for foundational learning in schools. Nutrition at age one is highly predictive of cognitive skills at age 8, and adverse environmental shocks experienced even in the womb can have persistent effects on a broad range of skills measured in adolescence (Sánchez, 2017; Chang et al., 2022). Adequate nutrition is at least as important as economic and education resources for skills development even into late childhood and adolescence and that nutrition improvements later in a child's life even up to age 15 can improve cognition-meaning that adolescence can be seen as a 'second window of opportunity' for nutritional interventions to improve learning (Crookston et al., 2014; Georgiadis and Penny, 2017).

Access to pre-school educational services (Target 4.2) remains very uneven across the four countries, with good quality early-education often scarce and not accessible to disadvantaged children. By following the same children over time, YL evidence has shown that early child development and pre-school education services can have a positive impact on skills formation and can help put vulnerable children back on the right track, provided the provision of services are of sufficient quality (Cueto et al., 2016).

Economic factors continue to affect educational attainment and skills development as children age. Across childhood, the most frequent reasons reported by children themselves for dropping out of school is that they need to work to earn an extra income (more common for boys), or have to help out in the household (girls), suggesting that economic pressures need to be addressed to enable the poorest children to continue their schooling. Relatedly, many children report specific shocks that have caused them to be taken out of school (environmental, such as droughts or floods; or adult income/job losses; Singh and Mukherjee, 2018).

Parental aspirations and attitudes measured early in the child's life are now found to be correlated with later life outcomes, and there is evidence of gender bias against girls in the educational aspirations of parents for their children at age 8, especially in India and Ethiopia, which is transmitted to the aspirations of children at 12. It is then transformed into gender gaps in cognitive outcomes at age 15 (Dercon and Singh, 2013; Serneels and Dercon, 2021). Such attitudes in Vietnam favour girls rather than boys, though in all four countries, young women, even with the same skill levels as men, are less likely to secure a decent job (Perez-Alvarez et al., 2023).

This longitudinal evidence shows the importance of the pre-school era to enable children to enter school as well-nourished and with economic and parental support to begin and achieve their journey through the education system and build skills.

4. Schools both reinforce and reduce inequalities that pre-exist before entry

Although some cross-sectional gaps in test scores between the YLS countries are evident at preschool ages, these grow substantially in the first 2–3 years of schooling, and notably, a year of schooling in Vietnam is much more effective than in other countries using the comparable YLS tests (Singh, 2020).

The effectiveness of schools at addressing inequality depends on context- schools are *not* less effective for disadvantaged groups in Vietnam- in fact female students experience higher value added. In contrast, in Peru, ethnic minority students and students who enter primary school with low cognitive skills appear to learn less in school than ethnic majority students and students with relatively high skills, and amongst those enrolled in the same school (Glewwe et al., 2017). In India, girls attend less effective schools than boys, with the opposite true in

[3] Note that the YL sample is designed to be pro-poor, so we do not have a comparison with the richest children born at a similar time (Barnett et al., 2013).

Vietnam. In Ethiopia, inequality between urban and rural areas in school effectiveness is more pronounced than that of gender (Marshall and Moore, 2022).

Longitudinal perspectives show the cumulative effects of inequality in learning – in that learning progress is itself highly predictive of school retention. One standard deviation higher test score is associated with 50% lower odds of dropping out between 8 and 12, with a similar association at ages 12 and 15 (Kaffenberger et al., 2023). Qualitative findings from YLS show a direct relationship between low learning and dropout, and low learning interacts with and exacerbates some other non-school based causes of dropout, including early marriage and leaving school to work (ibid). There is a complex interplay between intersecting inequalities upon entry to school, and the learning environment, including safety and dignity (Morrow and Pells, 2018). Long term follow-up interviews show that it is essential to intervene as early as possible to support disadvantaged children in school and ensure inclusion of the most marginalised.

5. A broad spectrum of policies is needed support education and skills development

From Section 3 above, it is clear the effects of recent and worsening climate shocks on children younger than 1000 days old will be long-lasting without remediation policies. However, recent research from YLS has shown that social protection schemes can remediate early life adversity with respect to foundational cognitive skills development, even later in childhood, with evidence from participation in the Productive Safety Net in Ethiopia (Freund et al., 2023) and JUNTOS in Peru (Scott et al., 2022b). The research combines data from the surveys across the children's lives with meteorological geo-coded information on early life climate shocks, as well as subsequent participation in social protection programmes. This builds on earlier evidence that household receipt of social protection is associated with improved maths and vocabulary test scores (Favara et al., 2019). More generally, policies to improve child nutrition can improve educational outcomes and cognitive skill development at all stages of childhood. For example, Fink and Rockers (2014) find that catch-up physical growth (linked to improved nutrition) is associated with improvements in cognitive test performance between age five and eight.

Relieving pressure on families to withdraw their children from school when a crisis hits also will have high returns for the poorest children. This holds especially for girls, who when withdrawn even temporarily from school are at higher risk of early marriage (Singh and Vennam, 2016; Briones and Porter, 2019). Reducing violence in schools and address harmful social norms can all have an effect on education and skills for the most marginalised, complementing policies to provide inclusive equitable education within the school system.

Some of the most marginalised children may need specialist programmes to help them complete an education, as documented in qualitative YLS evidence:

> *Sarada grew up in a village with her family who belonged to a low-caste community. She was an ambitious child but a physical disability meant she could only walk short distances, and couldn't stand for any length of time. When their house collapsed Sarada and her younger siblings were taken out of school to work to pay off debts incurred. However, against her parents' will, Sarada insisted on going to school, and the local self-help group, the Disabled People's Association, provided her with financial support, enabling her to continue into secondary school. Aged 20, Sarada was two years into her degree and teaching part-time in a night school with the ambition to become a professionally qualified teacher. The Disabled People's Association had not only directly supported her, it also provided a source of informal support, empowering her to challenge her parents when they wanted her to work instead of going to school.*
>
> (Paraphrased from Crivello and Morrow, 2020).[4]

This section shows that policies from multiple sectors are required as complementary investment in a child's education, the importance of investing in education notwithstanding. In particular, the most vulnerable and marginalised may need extra support, and ideally policy should adapt to new information and conditions (e.g. shock-responsive social protection).

6. Discussion – policy engagement

Analysis of Young Lives' data has produced a large body of evidence on the educational trajectories of the cohort children over a significant period of time, and drawn important policy conclusions. Some of this evidence has directly influenced policy, and this highlights the importance of both long-term data collection and research, but also engagement with policymakers. Taking early childhood development (ECD) as an illustrative example, sustained interaction and sharing of YLS evidence by the country-based team led to a more structured role providing advice to the Ethiopian Ministry of Education since 2015 for ECD teacher training and improving the development of an age-appropriate curriculum and pedagogical materials. YLS evidence and influencing has also had a direct impact on the overhaul of the Peruvian government's national early childhood development (ECD) programme to deliver the strengthened 'Cuna Más' programme over several years (beginning with evidence from Cueto et al., 2009).[5]

7. Conclusion

Despite decades of progress, education attainment and many other life chances are highly predicted by characteristics at birth, showing that progress towards Target 4.1 (Universal primary and secondary school completion); and Target 4.5 (Gender equality and inclusion) is not on track. The enabling environment for learning and achieving Target 4.6 also depends heavily on factors other than the education system. In the YLS study countries, Target 4.2 is also far from being met, and YLS longitudinal evidence clearly shows the long-term benefits of investments in ECD and pre-primary education. Evidence also shows that school effectiveness interacts with pre-existing household and community enabling environments to either reinforce or reduce inequalities. Importantly, policies outside the education sector can make a significant difference to educational outcomes, even in adolescence. In aiming for each and every child to reach adulthood with "relevant and effective learning outcomes that prepare them for life ahead" the global community therefore need to think across the life cycle and across sectors. Achieving SDG1 (Poverty), SDG2 (Zero Hunger) and SDG13 (Climate Action) are inextricably linked to the achievement of SDG4.

A recent global review of the effectiveness of policies to improve foundational learning by the Global Education Evidence Advisory Panel (GEEAP; Akyeampong et al, 2023) mentions some of the above policies – giving information to parents on the returns to schooling is a 'great buy', safeguarding students from violence, teaching socio-emotional and life skills, and targeting interventions towards girls are 'promising, but limited evidence'. Transferring cash (as a tool for improving learning) is

[4] See https://www.younglives.org.uk/beating-odds-why-some-children-fare-well for more life histories of children like Sarada and Mulu who managed to "beat the odds" and gain an education, despite a difficult start in life.

[5] For many more examples of impact case studies including informing the school curriculum in Vietnam, or addressing violence in schools in Peru, see https://www.younglives.org.uk/impact-case-studies.

ranked as 'effective, but relatively expensive'.

However, interventions that may not be 'great buys' in terms of efficiency may still be worth considering for two reasons – first, the returns may increase when incorporating long term impacts, removing the efficiency/equity tradeoff. For example, providing social protection in the early years is likely to increase the efficiency of future educational investments – so calculating the lifetime rewards improves the cost-effectiveness of this investment – this finding depends crucially on the long-term follow-up of the research design of YLS. Second, equity should be prioritised over efficiency in some cases. Investing in young lives like Sarada's above is not likely to be a 'smart buy' when it comes to efficiency, but the quote above shows how financial and psychosocial support can make a difference to a marginalised child's future. Even if policymakers face an efficiency-equity trade-off, equity should be valued, in order to include the most disadvantaged and honour the UN's 'leave no one behind' principle.

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Porter Catherine: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Writing – original draft, Writing – review & editing.

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