



PAL NETWORK
People's Action for Learning



UNIVERSITY OF LEEDS
Faculty of Social Sciences

OUT OF SCHOOL CHILDREN

Evidence Brief #2
in the Leeds/PAL series

**Leave No One
Behind in Education**

INTRODUCTION



In 2015, the global community adopted SDG 4, which aims to ‘ensure inclusive and equitable quality education and promote lifelong learning opportunities for all’. At the same time, a pledge was made to Leave No One Behind (LNOB). The first of SDG 4’s ten targets, Target 4.1, was to ensure that by 2030 all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes. Yet by 2018, an estimated total of 258 million children and youth were still not participating in formal education (23% of primary age, 24% lower secondary, 53% upper secondary (UIS 2019)). In 2013, it was estimated that more than half of the global total of Out of School Children (OOSC) are located in just 14 countries, of which 5 (Nigeria, Kenya, Mali, Pakistan, India) are countries where members of the PAL Network are located.

In 2010, UNICEF and the UNESCO Institute for Statistics (UIS), working with national governments, launched a global Out Of School Children Initiative (OOSCI), which the Global Partnership for Education (GPE) joined in 2013. OOSCI’s objectives include deriving profiles of out-of-school children, analysing barriers that have led to their exclusion, and encouraging stronger international attention towards bringing all children into school. There is a new urgency to this topic, since, in 2020, the global COVID pandemic precipitated widespread drop out from school and exposed the fragility of education systems, particularly for children in highly socio-economically disadvantaged families.

This Evidence Brief focuses on the concept of being left behind in education, with reference to OOSC. There are two prominent international frameworks in use for evidencing exclusion, upon which this Brief draws. One derives from the OOSCI and the second is the CREATE Consortium’s model of [zones of exclusion](#).

- **OOSCI applies UNICEF’s five Dimensions of Exclusion (5DE) model.** Dimensions 1-3 focus on children who are out of school at pre-primary, primary and secondary levels, according to categories of never enrolled, attended but dropped out, or will never enter / will enter late. Dimensions 4-5 focus on children who are in school but at risk of dropping out at primary and lower secondary school levels.

- **CREATE’s model of ‘Zones of Exclusion’ from education charts participation by grade and identifies different groups of children of school age who fail to sustain access to formal education.** There are 7 zones: Zone 0 captures those excluded from pre-school; Zone 1 contains those who never attended school; Zone 2 includes the majority of children who are excluded after initial entry, because they drop out of school and fail to complete a full cycle; Zone 3 includes those in school but at risk of drop out; Zone 4 contains those who fail to transit to secondary education; Zone 5 includes those dropping out of secondary grades; and Zone 6 contains those at risk of drop out from secondary school.

Other frameworks in use (see [FHI 360, Reducing risk factors](#)) share core features of the 5DE and Zones of Exclusion. All of them have three common elements: they provide evidence about children who are: 1. Left out altogether; 2. Enrolled but left behind; and 3. Likely to leave. A recent UIS analysis employs these categories while applying a revised method of estimating the proportion of OOSC to examine global progress towards ensuring that all children are in school (UIS 2019).

This Evidence Brief also draws on these three categories, and populates them with data from six countries in the PAL Network: Kenya, India, Mexico, Pakistan, Tanzania, and Uganda. Specifically, it investigates:

- Three dimensions of being left behind:
 1. Left out altogether
 2. Enrolled but left behind
 3. Likely to leave.
- The implications of being left behind for children’s learning.

In so doing, it contributes to the existing evidence in two key ways:

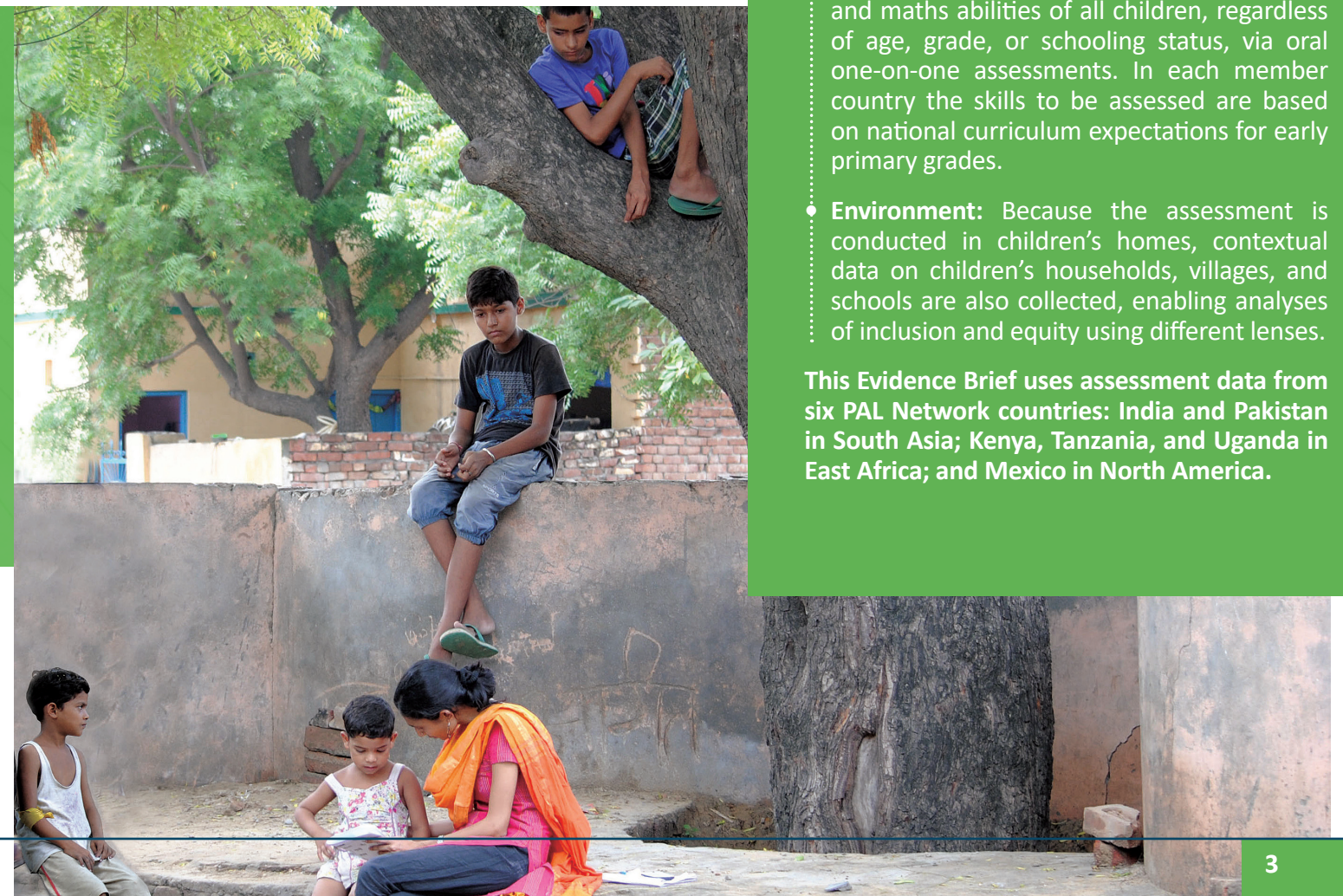
- It demonstrates how data from the PAL Network can be used to populate these zones of exclusion. Because these are household-level data sets, they provide information that many other data sources cannot.
- It illuminates how household surveys can be used to identify specific groups of children in the ‘at risk’ category, which is an important capability for future planning.

ABOUT THE PEOPLE’S ACTION FOR LEARNING (PAL) NETWORK

The PAL Network is a South-South collaboration between organizations located in fourteen countries across three continents who use citizen-led assessments to assess children’s basic reading and numeracy competencies. Data sets generated through the PAL member country assessments are unique in several respects:

- **Coverage:** Citizen-led assessments are conducted in children’s households, not in their schools, in order to include children who are not in school; those who are in private or unregistered schools; and those who are absent from school on the day of the assessment.
- **Assessment of foundational skills:** Citizen-led assessments focus on foundational reading and maths abilities of all children, regardless of age, grade, or schooling status, via oral one-on-one assessments. In each member country the skills to be assessed are based on national curriculum expectations for early primary grades.
- **Environment:** Because the assessment is conducted in children’s homes, contextual data on children’s households, villages, and schools are also collected, enabling analyses of inclusion and equity using different lenses.

This Evidence Brief uses assessment data from six PAL Network countries: India and Pakistan in South Asia; Kenya, Tanzania, and Uganda in East Africa; and Mexico in North America.



THREE DIMENSIONS OF BEING LEFT BEHIND

1 LEFT OUT ALTOGETHER: CHILDREN OF SCHOOL AGE WHO ARE NOT IN SCHOOL

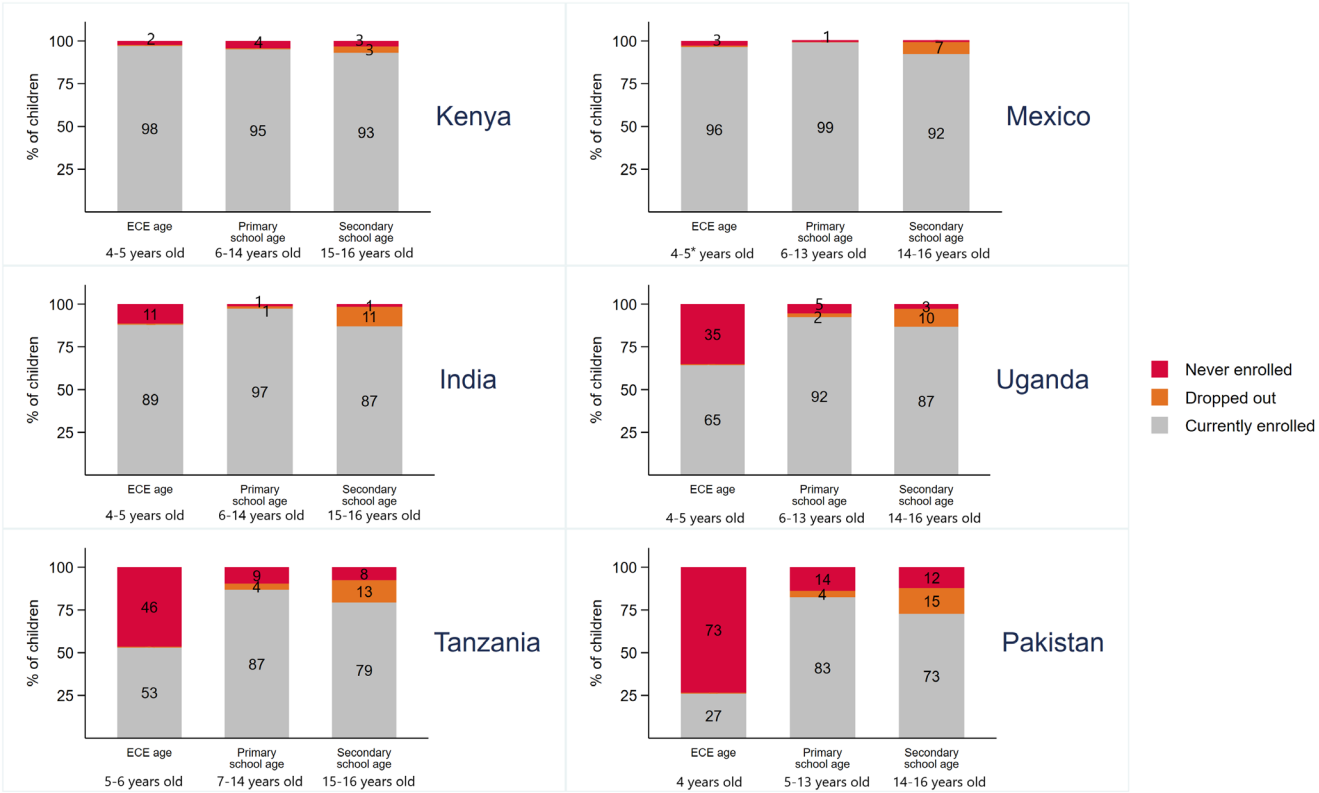
We characterise the dimension of ‘left out altogether’ as those children who, despite being of school-going age, are not in formal education. These children are typically referred to in existing frameworks as ‘out of school children’, or OOSC.

Most available datasets in effect estimate OOSC by subtracting the number of children appearing in official school enrolment records from the total child population. In contrast, the PAL Network datasets contain household-level data and therefore provide direct information on children’s enrolment status. This is important in countries where school-based datasets do not always include the entire range of educational institutions that children attend (such as private schools, unrecognised schools, and religious schools).

To understand how many children are ‘left out altogether’, we focus on three major stages within formal education systems: pre-primary education (ECE), primary school, and secondary school (until either the school leaving age or age 16, whichever is lower). We group children by stage according to the given country’s age norms, as shown in Table 1.

Figure 1 shows the proportion of children in each country who are ‘left out altogether’, either because they have dropped out of education or have never enrolled in any level of formal education. It is important to note that children who are designated ‘currently enrolled’ in this Figure may be in a different educational stage from the one expected for their age group. For example, a child in the ECE age group may already be enrolled in primary school, or a child in the secondary school age group may still be in primary school.

Figure 1: Proportion of children who are not in education, by schooling level



Note: Age groups (ECE, primary school, secondary school) are calculated according to each country’s national norms.
*Although the ECE age group for Mexico is 4-5 years, the CLA data for the country does not include age 4 children, hence the estimates for the ECE age group in the figure only includes 5 year old children.
Countries are presented from top to bottom in ascending order of the proportion of ECE age children who are not enrolled anywhere.

Table 1. Sample description and key national policy parameters

Country	Citizen led assessment data used in this analysis				Selected national policy parameters			
	Year	Coverage	Age group	Number of sampled children	Grades included in the primary school cycle	Grades included in secondary school cycle	Prescribed age of entry to Grade 1	Automatic promotion through primary grades?
India	2018	Nationwide, rural	4-16	509,610	1-8	9-12	6 *	Yes
Pakistan	2018	Nationwide, rural **	4-16	237,948	1-8	9-12	5	Yes
Kenya	2015	Nationwide	4-16	156,540	1-8 ***	9-12	6	Yes
Uganda	2015	Nationwide	4-16	126,988	1-7	8-13	6	Yes
Tanzania	2015	Nationwide	5-16	140,752	1-7***	8-13	7	Yes
Mexico	2015, 2016	Six states ****	5-16	13,621	1-6	7-12	6	In Grades 1-3

* According to national norms, as reflected in the Right of Children to Free and Compulsory Education (RTE) Act, 2009. However many states permit entry to Grade 1 at age 5.
** Estimates not weighted by population.
*** Kenya and Tanzania have subsequently changed the grades covered by each cycle, but we use the prior formulation that maps onto this data’s survey year, 2015
**** Includes 3 states covered in 2015 and 3 covered in 2016.

Three types of variables are used to characterise children’s personal characteristics, home background, and learning outcomes:



Variables that are directly comparable across countries, such as children’s age, gender, and grade



Variables that have been recoded using a common scale, such as mothers’ education level (never attended versus ever attended school) and house construction material (permanent versus other wall construction material)



Learning assessment data, where items are not directly comparable across countries, but instead are pegged to a common norm (e.g. Grade 2 level reading, as defined by each country).

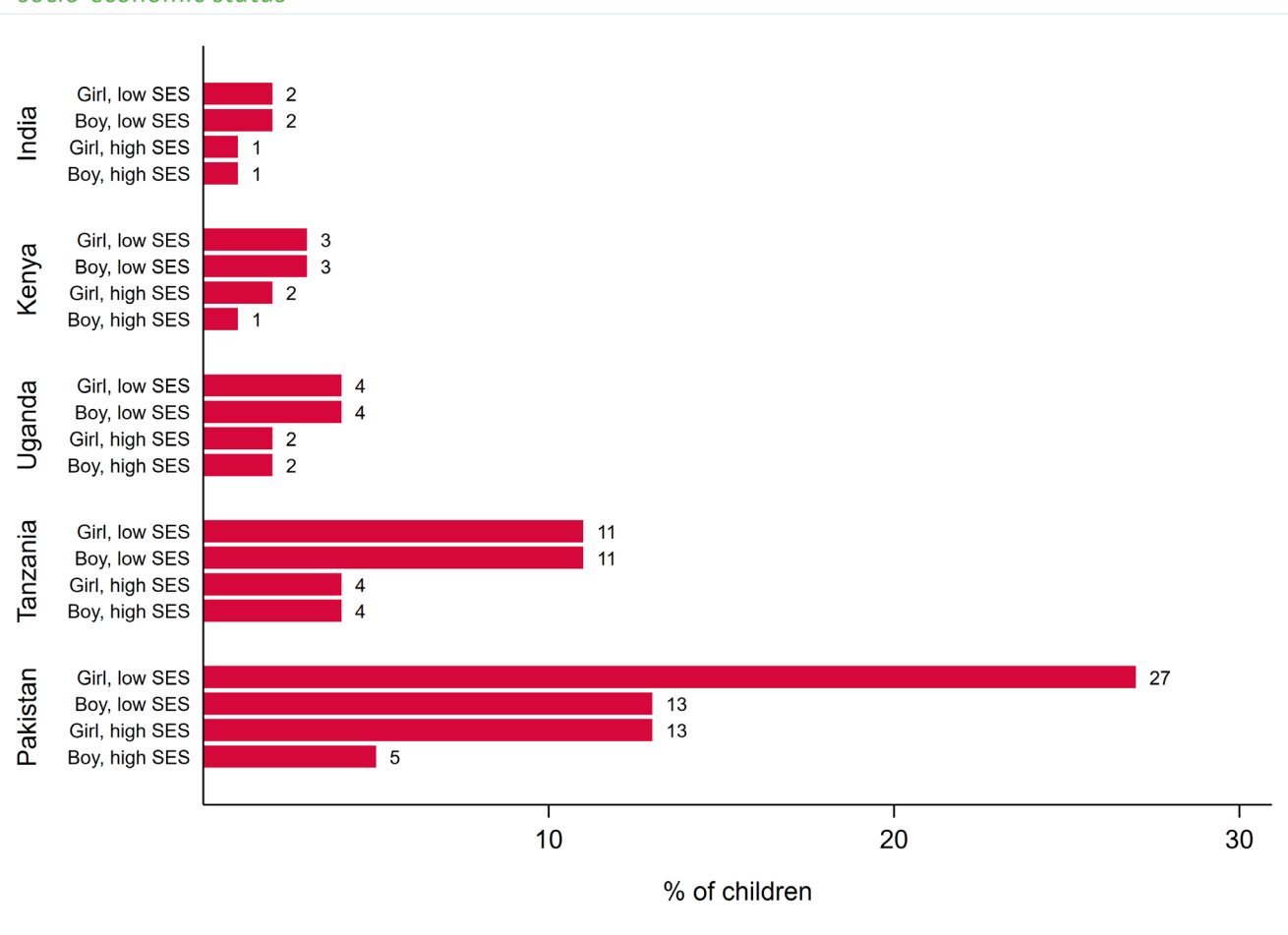
It is worth noting that the extent to which ECE is required varies across countries: from compulsory (Mexico); mandated by policy but without legal compulsion (India and Tanzania); legislative and policy decision taken by individual county/provincial governments (Kenya and Pakistan); to optional (Uganda). Yet, with the sole exception of Pakistan (27%), the majority of ECE-age children in each country are enrolled in some form of education provision. The highest rates are in Kenya (98%), Mexico (96%), and India (89%).

For the primary-school age group, the great majority of children are currently attending school, with three countries exceeding 93% enrolment. In the two countries with lower enrolment (Pakistan, 83%, and Tanzania, 87%), the majority of children who are being 'left out altogether' have never begun school (14% in Pakistan and 9% in Tanzania). In other words, in these countries very few children of primary school age have entered the system but subsequently exited (4% in both Pakistan and Tanzania).

The proportion of children in school during the secondary-school years is significantly lower but still close to or above 80% in all countries except Pakistan (73%). With the exception of Kenya and Mexico, about 1 in every 10 children drop out of the school system during the secondary schooling years, with the largest proportion visible in Pakistan, at 15%.

Country averages are potentially misleading, as some groups of children are far more likely than others to be 'left out altogether'. To illustrate this, we examine how the likelihood of never having enrolled in school among older children (age 14-16) varies by the intersection of child gender and household socio-economic status (SES) (Figure 2). The common proxy used for SES for all countries in this Brief is household wall material: high SES refers to households with walls made of permanent materials such as cement and bricks, and low SES refers to households with walls made of temporary materials such as mud and grass.

Figure 2: Proportion of children aged 14–16 who never entered school, by gender and socio-economic status



Note: Mexico is excluded from this analysis due to unavailability of data on household socio-economic status (SES) indicators. Countries are presented from top to bottom in ascending order of the proportion of low SES girls who never entered school.

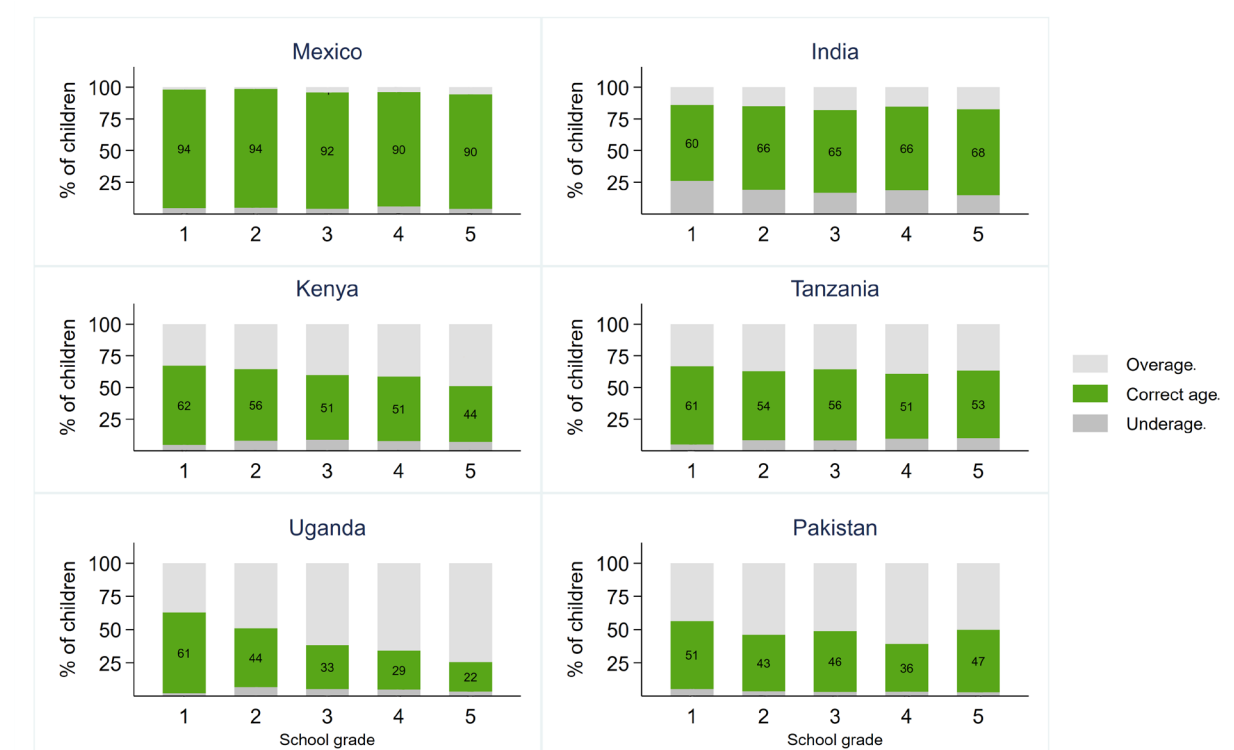
As Figure 2 shows, among children aged 14–16, those from typically disadvantaged groups are more likely never to have been enrolled in school. While the proportion of children who have never enrolled varies across countries, in all cases children from low SES households are at least twice as likely never to have enrolled. However, although SES disparities are apparent in all five countries, Pakistan is the only country to also show a discernible gender inequality. Among children from low-SES households, girls (27%) are around twice as likely as boys (13%) to have never enrolled in school. A similar scale of differential is apparent among higher SES children, with girls (13%) again twice as likely as boys (5%) never to have enrolled.

2 ENROLLED BUT LEFT BEHIND

We characterise the dimension 'enrolled but left behind' as comprising children who are in school but not in the age appropriate grade. Only key information is presented here, with further detail available in Evidence Brief 1, Left Behind in School¹, including inequalities in who is enrolled but left behind, as well as consequences for learning.

By 'enrolled but left behind', we are referring to two groups: first, those who are overage relative to the expected age for grade, and second, those who are underage. Although overage children have received more attention in prior literature, the presence of underage children is also a concern. Children who are underage may be at risk of a poor learning experience in the age for grade system, as they may have insufficient preparation and development to engage in classes designed for older children. Figure 3 shows that being 'enrolled but left behind' is prevalent in all but one of the six countries covered by this Brief. The exception, Mexico, has more than 90% of enrolled children in the age-appropriate grade throughout primary school.

Figure 3: Proportion of children enrolled in Grades 1-5 who are underage, of the correct age, and overage for their grade



Note: For each country, 'correct' age for grade is calculated based on the prescribed age of entry to Grade 1 (see Table 1) plus one year. For example, children who are 6 or 7 years old in Grade 1 are at the correct grade for age in all countries except Pakistan, where they should be 5 or 6 years old; and Tanzania, where they should be 7 or 8 years old. Similarly, the correct age for Grade 5 is 10 or 11 years in all countries except Pakistan, where it is 9 or 10 years; and Tanzania, where it is 11 or 12 years. In the case of India, these calculations are based on national rather than state policy. Countries are presented from top to bottom in descending order of the proportion of children of the correct age in Grade 1.

¹ See Evidence Brief 1, Left Behind in School available at https://palnetwork.org/wp-content/uploads/2019/11/2019_PAL-Network_Brief.pdf

In Kenya, Tanzania, Uganda, and Pakistan, around 40% of children in Grade 1 are ‘enrolled but left behind’, almost all of whom are overage. Despite a policy of automatic grade promotion in all of these countries, in each successive grade the proportion of overage children increases. This trend is most pronounced in Uganda, where 78% children in Grade 5 are ‘enrolled but left behind’.

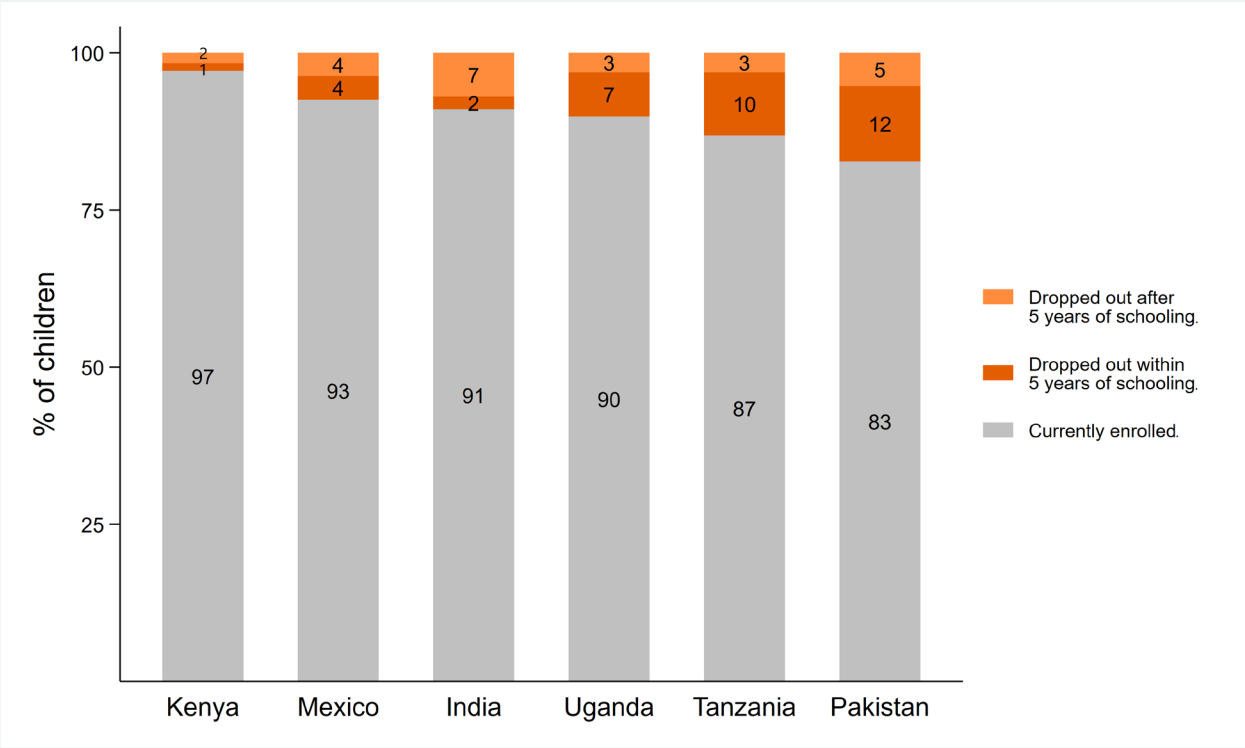
In India, while a large proportion of children are also ‘enrolled but left behind’, patterns differ from the other countries in two important ways. First, the proportion of children in an age-appropriate grade remains fairly stable across the primary school grades. Second, many children, averaging around a fifth of all those in Grades 1-5, are underage – reflecting the earlier age of entry permitted by many individual states in the country.

3 LIKELY TO LEAVE

We characterise the dimension of ‘likely to leave’ as those children who are currently in school but are likely to leave prior to completion of the primary/secondary school cycle. By definition, these children are still in school; the key for this group is to predict who is likely to be at risk of future drop out. We do this by examining the educational trajectories of children currently aged 14-16 in our datasets, and using these trajectories to predict the likelihood of dropout among future cohorts in this age group². Since the focus of this analysis is on identifying those who are in school but likely to leave, the denominator excludes children in the 14-16 age group who have never enrolled.

Figure 4 shows that the majority of 14-16-year-olds in each country are still likely to be in school. In Mexico, the number of children who are ‘likely to leave’ is small but equally balanced across the primary and secondary years (4% each). In Pakistan, Tanzania, and Uganda, children are more than twice as likely to drop out within the first five years of schooling than at a later stage. On the other hand, in Kenya and, especially, in India, children who entered school are more likely to leave after completing five or more years of schooling.

Figure 4: Proportion of children aged 14–16 who have already left school

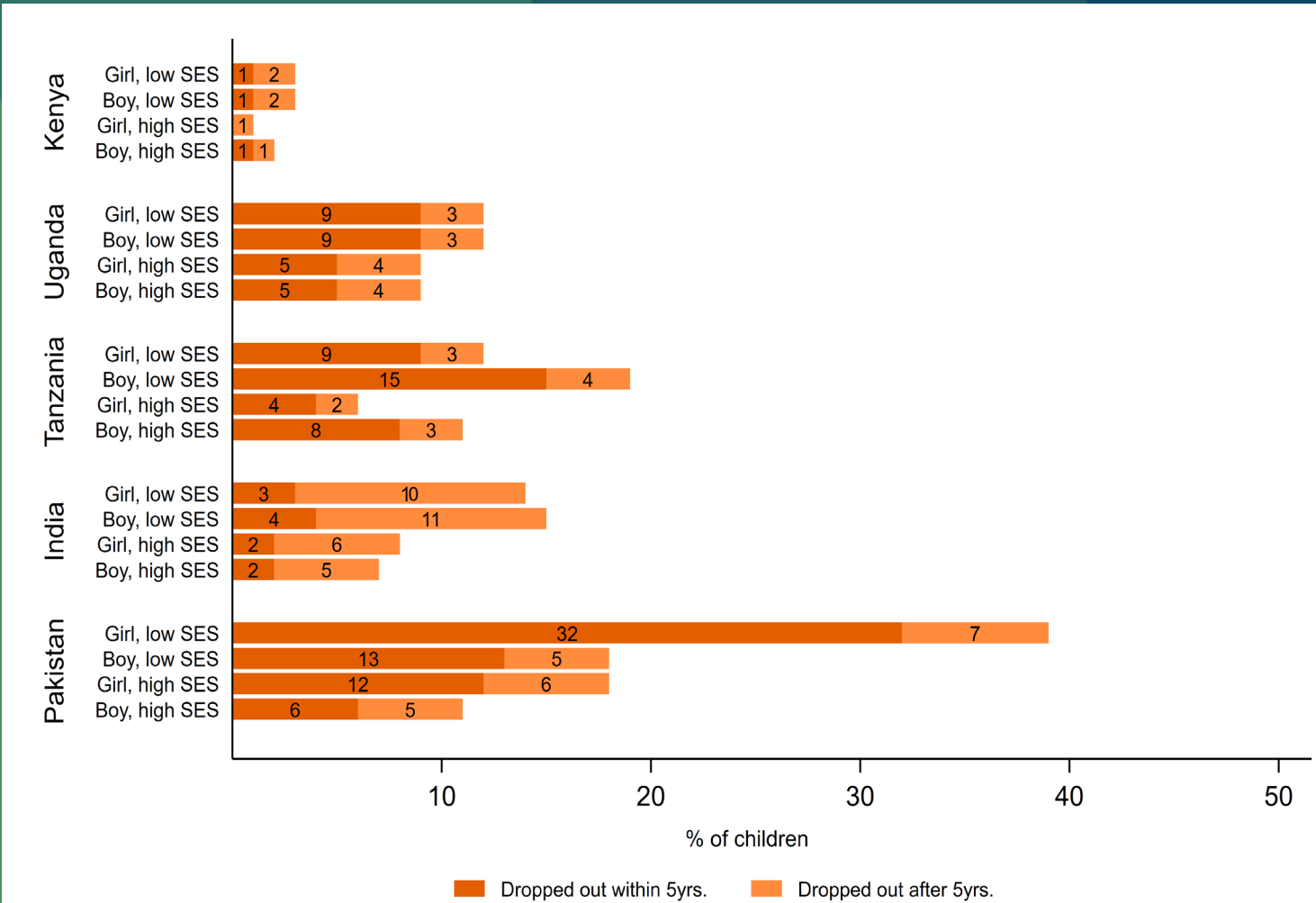


Note: Countries are presented from left to right in descending order of the proportion of children currently enrolled.

In addition to identifying what proportion of children are ‘likely to leave’ the school system, from an inequalities perspective, a key element is to consider which specific groups of children are at maximum risk of being likely to leave. We do this by exploring the intersection of gender and SES within each country. We focus here only on children who have ever enrolled in school; children who never entered are not included in this analysis.

Figure 5 shows that lower SES children are far more likely than higher SES children to leave school. With the exception of India, dropout for lower SES children is more likely to happen within the first five years of schooling. While there are clear common trends by SES, patterns by gender are more equivocal. The two countries that clearly show differential patterns between girls and boys are Tanzania and Pakistan, although these two countries have contrasting patterns: in Tanzania, boys are more likely to drop out, whereas in Pakistan, girls are more likely to do so.

Figure 5: Proportion of children aged 14–16 who have already left school, by gender and socioeconomic status



Note: Mexico is excluded from this analysis due to insufficient data on household socioeconomic status (SES). Countries are presented from top to bottom in ascending order of the proportion of low SES girls who dropped out.



² While recognising that there may be differences between this older cohort of children and those who are currently moving through the earlier school years, we assume that there are enough substantive similarities between the groups to make meaningful comparisons.

THE IMPLICATIONS OF BEING LEFT BEHIND FOR CHILDREN’S LEARNING

Having examined trends across the countries in terms of access and risk of leaving, we now look at the implications of being left behind for children’s learning. This poses a notable methodological challenge, since for current cohorts of children we do not, by definition, know the full extent of how many of these children will be left behind. For example, we know neither which in-school children are going to drop out (and so become left behind) nor which out of school children will eventually enter the education system (and potentially cease to be left behind). For this analysis we therefore infer outcomes for these children by examining outcomes for an older cohort who are closer to having fully passed through the system. In other words, we focus on children aged 14–16 and compare those who are currently enrolled with those who have dropped out of school (deemed ‘likely to leave’) and those who never enrolled in schooling (deemed ‘left out altogether’)³. The key assumption of this approach is that patterns among 14–16 year olds are going to be replicated in younger cohorts; while imperfect, we see this as the most plausible proxy available.

We use two learning outcomes: a reading task and a maths task, each of which correlates to the Grade 2 level in the child’s country. Given the foundational level of skills that these tasks assess, it is reasonable to expect that close to all children of the 14–16 age group should be able to complete them⁴.

Across both reading and maths, there is a strong association across countries between continuing in school and acquiring foundational reading skills. In other words, those who are left behind are also less likely to learn. However, the direction, if any, of the causality between being left behind and learning is unclear. It may be that children are not learning because they are leaving school, but it is also possible that children are leaving school because they are not learning. A number of other factors not considered in this analysis could affect these outcomes as well.

Nonetheless, the strength of the relationship between being left behind and not learning is striking. Turning first to reading, Figure 6 shows that those who have never enrolled have either a small chance of being able to read (18–36% across Uganda, Mexico, and Kenya) or simply next to no chance (3–5% across India, Pakistan, and Tanzania). With the exception of Mexico, where learning levels are relatively high, in all other countries those who have dropped out within the first 5 years are less than half as likely to be able to read as are those who dropped out after 5 or more years, and less than a third as likely as those who are currently enrolled.

Figure 6: Proportion of children aged 14–16 able to read grade 2 level text, by schooling trajectory



Note: countries are presented from top to bottom in ascending order of the proportion of children who have never enrolled.



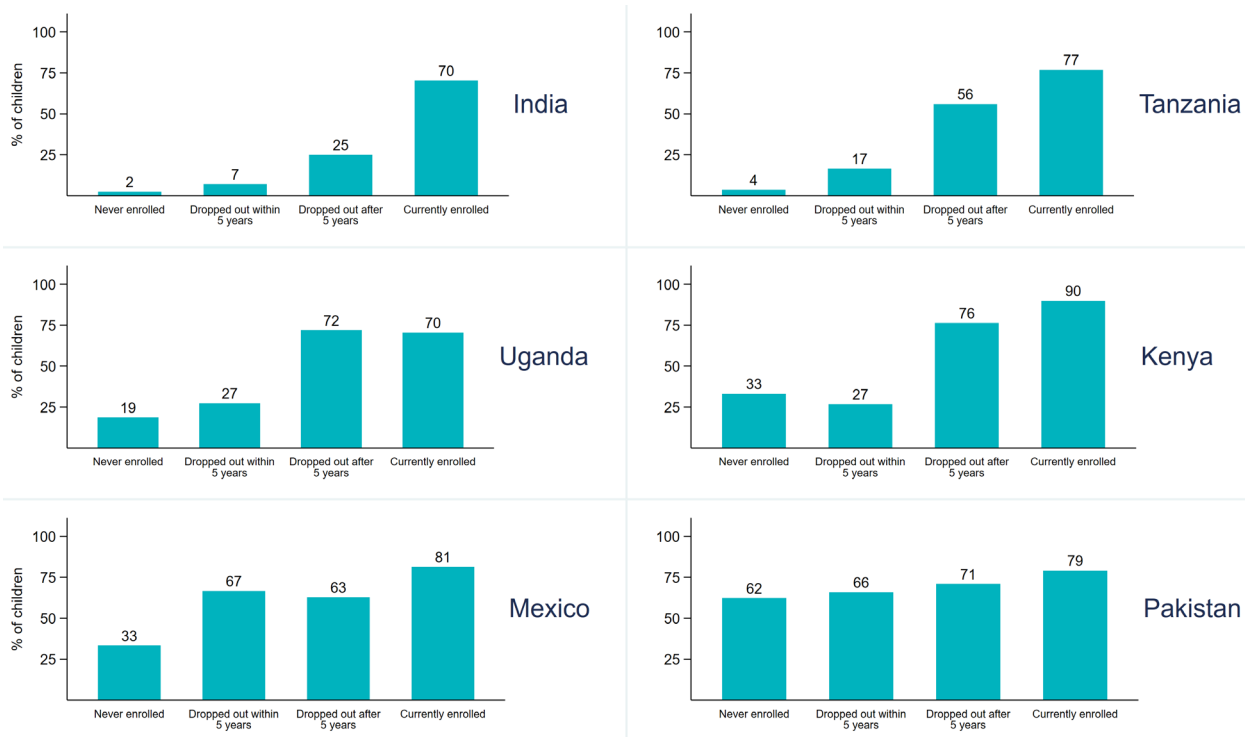
³ For implications for learning of the other dimension of being left behind – enrolled but left behind – see Evidence Brief 1, Left Behind in School, available at https://palnetwork.org/wp-content/uploads/2019/11/2019_PAL-Network_Brief.pdf

⁴ Further information on the specifics of each country’s learning assessment is available at <https://palnetwork.org/tools/>.

CONCLUSION

Similar relationships are apparent in the case of maths. As Figure 7 shows, once again, those who have never enrolled are the least likely to have learned the requisite mathematical skills; the one exception is Kenya, where this group (33%) has a slightly higher rate than those who dropped out within 5 years of starting school. Nonetheless, in all countries, those who are still in education or have completed more years of schooling are more likely to have learned foundational maths skills.

Figure 7: Proportion of children aged 14–16 able to solve Grade 2 level maths question, by schooling trajectory



Note: countries are presented from top to bottom in ascending order of the proportion of children who have never enrolled.

The pre-COVID global estimate of 258 million OOSC shows that, although there had been some reduction since the 2015 SDG launch date (when the estimate was 264 million), total numbers of OOSC around the world remain very high. The global COVID-19 pandemic has already left 1.6 billion children out of school because of the sudden and prolonged closure of schools. Further, [the World Bank estimates](#) that income shocks resulting from the pandemic could force almost 7 million students in primary and secondary education to drop out of school. Rates of drop out are highest among girls, students with disabilities and children from other marginalised groups.

This global scenario highlights now more than ever the importance of data that can identify a child’s age, schooling status, and background factors and link these in meaningful ways to school attendance, retention, and learning. Household level data, such as those collected by the PAL Network, are better able to provide such information than school-based administrative data, since school-based data are likely to miss those who are out of school, and are less able to provide meaningful information about children’s household characteristics. The scale and depth of the PAL network data shed light on different facets of being left behind, and enable connections to be drawn between being left behind and household disadvantage- and, ultimately, learning.

This Evidence Brief has used household data to present three categories of being left behind: 1. Left out altogether: children of school age who are not in school; 2. Enrolled but left behind; 3. Likely to leave. It shows that there are significant numbers of children in each of these categories in the six countries examined here. The Brief has particular value in addressing the OOSC-related pattern of children who fall behind and drop out of school, because it allows prediction of which children are likely to be at risk.

The ‘learning crisis’ and challenges of ensuring educational quality for all children have rightly been at the centre of recent policy debates. In this wider context, this Brief shows that there are a significant number of children aged 14-16 who are still in school but have not learned foundational skills, i.e. they have not attained the outcomes specified for children at Grade 2 level. Achievement of the foundational, Grade 2 level among children in this age group falls short by about 20%. In same age group though, those who never enrolled or have dropped out are considerably less likely to have acquired even foundational skills.

The Brief also shows that the likelihood of being left behind is closely correlated with markers of inequality, i.e. child sex and socio-economic status. Low socio-economic status is consistently correlated with being left behind in all the countries included in this Brief. Gender as a contributing factor appears to be more contingent on context, but remains a critical dimension in any discussion of exclusion and being left behind in education.

Global debates about OOSC are increasingly calling for attention to children who are ‘likely to leave’ and ‘at risk’. To enable meaningful prediction about who these children are, this Evidence Brief has drawn on data from large populations across a range of countries in the Global South that provide information about characteristics associated with being ‘at risk’. In light of the global pandemic and given that the SDG deadline is now just ten years away, the analysis this Brief offers can support intensified effort to interrupt trajectories of poor learning and school exclusion and contribute to an acceleration of the reduction of numbers of children who are out of school altogether, or at risk of leaving.

ABOUT THE LNOB EVIDENCE BRIEF SERIES

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