

## Evidence and Gap Map Research Brief

### UNICEF STRATEGIC PLAN 2018–2021 GOAL AREA 2: EVERY CHILD LEARNS

#### What this research brief is about

This research brief is one of a series of five briefs which provide an overview of available evidence shown in the Campbell Collaboration-UNICEF Mega-Map on the effectiveness of interventions to improve child welfare in low- and middle-income countries. These briefs summarize evidence as mapped against the five goal areas of UNICEF's 2018–2021 Strategic Plan, although it is anticipated that they will also be useful for others working in the child well-being space.

The Campbell-UNICEF Child Welfare Mega-Map maps evidence synthesis studies – evidence and gap maps and systematic reviews – which report on the effectiveness of interventions to improve child welfare. The evidence is structured by intervention categories, such as education, nutrition and rights, and outcome domains, such as school attendance and learning outcomes or healthy development.

Systematic reviews help establish which programmes are effective, for who, and in what circumstances. Evidence maps guide users to the evidence from systematic reviews and impact evaluations. The Mega-Map is an evidence and gap map of 302 systematic reviews and 16 evidence and gap maps, organized into six intervention categories and six outcome domains.

The map shows evidence syntheses which summarize evidence from around the world. It does not show individual impact evaluations. The map shows what evidence syntheses are available and the quality of the included studies, not what the evidence says.

This brief provides an overview of the available evidence

related to interventions to ensure every child learns.

The purpose of this research brief is to identify

- Areas in which there is ample evidence to guide policy and practice, and so to encourage policy makers and practitioners to use the map as a way to access rigorous studies of effectiveness
- Gaps in the evidence base, and so encourage research commissioners to commission studies to fill these evidence gaps.

#### What interventions are included for child education?

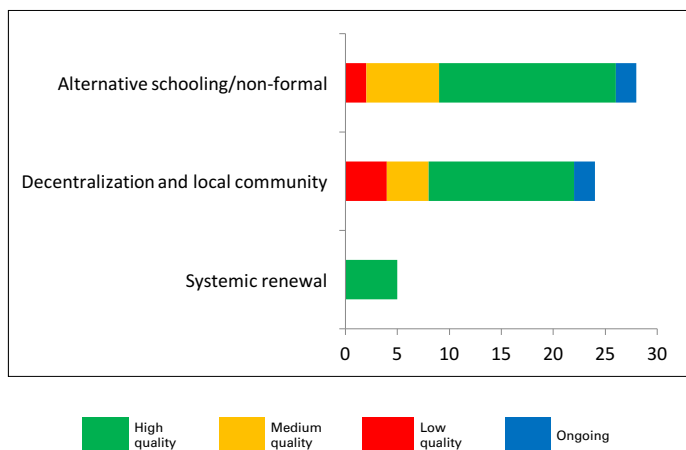
In the UNICEF 2018–2021 Strategic Plan, the strategic goal that every child learns is touched on in two Sustainable Development Goals (SDGs): (i) SDG 4: Ensure inclusive and quality education for all and promote lifelong learning; and (ii) SDG 5: Achieve gender equality and empower all women and girls.

Interventions to ensure that every child learns are mainly in the education intervention category of the evidence and gap map which has the following subcategories, divided here into three groups with an example of reviews for each subcategory.

## SCHOOL SYSTEMS AND MANAGEMENT

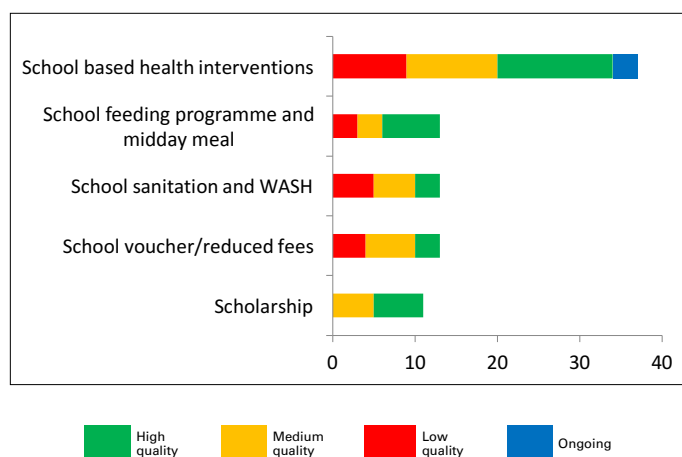
- Decentralization and local community (24 studies); e.g. Best (2013) [The impact of national and international assessment programmes on education policy, particularly policies regarding resource allocation and teaching and learning practices](#)
- Systemic renewal (five studies); e.g. Conn (2017) [Identifying Effective Education Interventions in Sub-Saharan Africa](#)
- Alternative schooling/non-formal (28 studies); e.g. Randolph (2014) [Montessori Education for Improving Academic and Behavioral Outcomes Among Elementary Students](#)

**Figure 1: Number of studies by group 'school system and management' by study quality**



- School sanitation and WASH (13 studies); e.g. Birdthistle et al. (2011) [What impact does the provision of separate toilets for girls at schools have on their primary and secondary school enrolment, attendance and completion](#)

**Figure 2: Number of studies by group 'school-based programmes' by study quality**



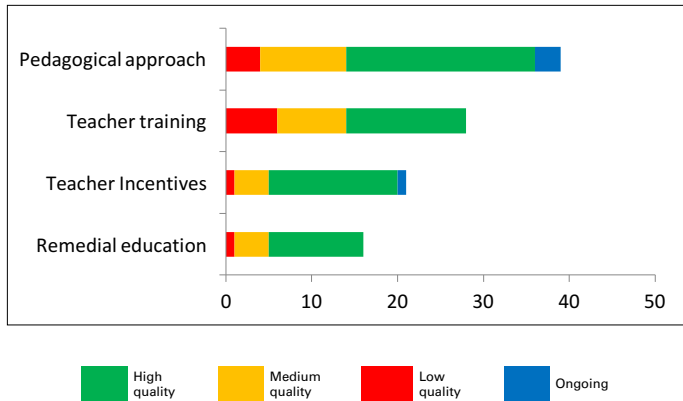
## TEACHERS AND TEACHING

- Teacher incentives (20 studies); e.g. Guerrero (2012) [What works to improve teacher attendance in developing countries?](#)
- Teacher training (28 studies); e.g. Aslam (2016) [Reforms to Increase Teacher Effectiveness in Developing Countries: Systematic Review](#)
- Remedial education (16 studies); e.g. Maynard (2012) [Indicated Truancy Interventions: Effects on School Attendance Among Chronic Truant Students](#)
- Pedagogical approach (39 studies); e.g. Orr (2013) [What are the impacts and cost-effectiveness of strategies to improve performance of untrained and under-trained teachers in the classroom in developing countries?](#)

## SCHOOL-BASED PROGRAMMES

- School voucher/reduced fees (13 studies); e.g. Baird (2013) [Relative effectiveness of conditional and unconditional cash transfers for schooling outcomes in developing countries](#)
- Scholarships (11 studies); e.g. Paruzzolo (2009) [The impact of programs relating to child labor prevention and children's protection](#)
- School feeding programme and midday meal (13 studies); e.g. Kristjansson (2007) [School feeding for improving the physical and psychosocial health of disadvantaged students](#)
- School-based health interventions (37 studies); e.g. Welch (2016) [Deworming and Adjuvant Interventions for Improving the Developmental Health and Well-being of Children in Low- and Middle-income Countries](#)

**Figure 3: Number of studies on teachers and teaching by study quality**



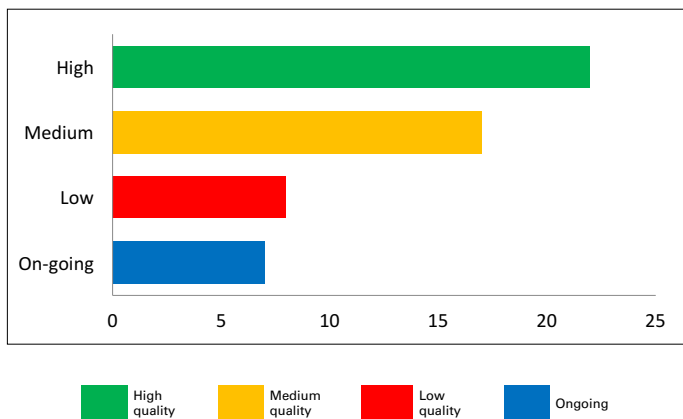
Studies for ‘every child learns’ are concentrated in the education interventions / learning and development outcomes section of the Mega-Map. There are 12 intervention subcategories and five outcome subdomains, making a total of 60 cells. All but three of these cells contain studies. These three empty cells are all in the school water and sanitation intervention subcategory row.

Study quality is assessed using the widely used AMSTAR quality assessment tool (*see endnote*). There is a higher percentage of high quality reviews relating to education (54 per cent) than overall (40 per cent), but also a higher share of low quality ones (24 versus 20 per cent).

Also relevant to every child learns is the intervention subcategory early childhood education and parenting in the early childhood intervention category (54 studies); e.g. Spier (2016) [Parental, Familial, and Community Support Interventions to Improve Children’s Literacy in Developing Countries](#). (*see Figure 4*).

The evidence and gap map shows what evidence is there but not what it says. So, to give a taste of the evidence contained in the studies, Box 1 summarizes the evidence of selected studies, with a partial focus on cash transfers.

**Figure 4: Number of studies on early childhood education and parenting by study quality**



Most intervention categories are covered by a moderate number of reviews. There are more reviews for health than for education. For health there are over 100 reviews for the main intervention subcategories. There are also more reviews for early child development, with 50 to 100 reviews per intervention subcategory. However, the number of reviews for ‘every child learns’ is higher than for most interventions in the other categories of environmental health and governance, including child rights.

**Box 1: What works in primary and secondary education? Findings from selected reviews**

The sector-wide review published by the International Initiative for Impact Evaluation (3ie) reviewed evidence about 216 education programmes and their effectiveness in improving school attendance and learning outcomes (Snilstveit et al., 2016). The main findings are shown in the table below, identifying five classes of intervention as effective in improving attendance and four that improve learning outcomes.

	Children and households		Schools and teachers		Systems	
	Attendance	Learning outcomes	Attendance	Learning outcomes	Attendance	Learning outcomes
Positive impact	Cash transfers, school feeding	Merit-based scholarships, school feeding		Structured pedagogy	Low-cost private schools, community-based monitoring	Community-based monitoring
Promising			Remedial education, building classrooms, additional instruction time			
Unclear impact				Materials		
Little or no impact	Providing information on benefits of education, reducing user fees, school-based health programmes			Teacher incentives	School-based management	

Cash transfers are a programme with a considerable body of evidence. The 3ie review reports findings from 50 impact evaluations. A body of evidence of this size allows examination of heterogeneity to explore effective programme design features. Such an examination shows that (Saavedra, 2012):

- Cash transfers have a bigger effect for secondary enrolment than primary
- The size of the transfer matters
- There is a larger impact if conditions refer to performance not just attendance
- The timing of the transfer matters, with less frequent payments having a larger impact, especially if made when education-related expenses need to be made

Another review shows that conditions also matter. Conditional transfers have more effect on attendance than unconditional transfers, especially if the conditions are properly monitored and enforced (implementation matters) (Baird, 2013).

**What outcomes are reported?**

The evidence and gapmap also shows studies according to the outcomes they report, which fall under the two outcome domains, namely healthy development, and

learning and development.

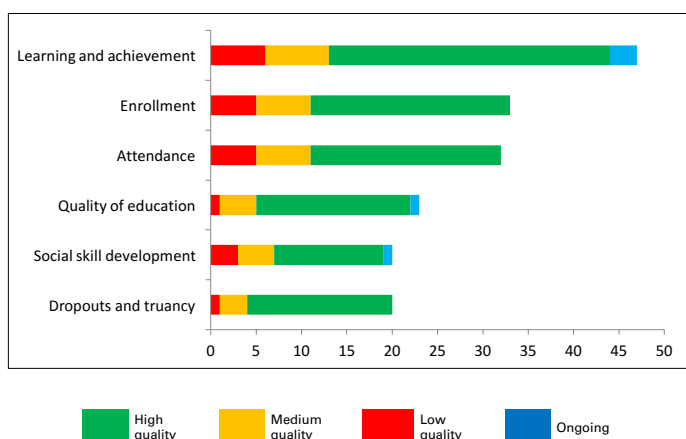
Table 1 shows the number of studies for each outcome subdomain, classified by the relevant SDG. The largest number of studies relates to cognitive development (50) and learning and achievement (47). There are no

**Table 1 Number of studies by outcome domain, classified by SDG**

Goal Area 2: Every Child Learns	Sustainable Development Goal	
	4: Ensure inclusive and quality education for all and promote lifelong learning	5: Achieve gender equality and empower all women and girls
Healthy development	Cognitive development (50)	Gender disaggregated data
Learning and development	Enrollment (33) Attendance (32) Dropouts and Truancy (20) Learning and achievement (47) Social skill development (20) Quality of education (23)	

outcomes for which there is a notably small number of studies.

**Figure 5: Number of studies by learning and development outcome categories by study quality**



### Where is the evidence from?

Systematic reviews are often global in scope. We included in the map all reviews for which studies from developing countries were eligible for inclusion, whether or not there were actually any studies from developing countries included. The screening process did not include a check as to whether the review actually included studies from developing countries.

However, many education reviews focus on developing countries such as Baird (2013) 'Relative effectiveness of conditional and unconditional cash transfers for schooling outcomes in developing countries' (Baird, 2013) and Baker-Henningham (2013) 'Early Childhood Stimulation Interventions in Developing Countries: A comprehensive literature review' (Baker-Henningham, 2013).

Moreover, some reviews are focused on specific developing regions such as Asim (2015) 'Improving Education Outcomes in South Asia' (Asim, 2015) and Conn (2014) 'Identifying Effective Education Interventions in Sub-Saharan Africa' (Conn, 2014).

### Where are the evidence gaps?

There are no absolute evidence gaps for 'every child learns' as there are studies in virtually every cell. However, the evidence is not evenly distributed. There are reasonable bodies of evidence synthesis related to teacher training and incentives. There is less evidence around remedial education, non-formal education and scholarships. The most notably weak evidence base is for the intervention subcategory 'systemic interventions'. It would be useful to undertake more detailed maps of the evidence in developing countries relating to these subcategories.

However, digging deeper shows areas in which evidence is lacking. For example, there is no review of education delivery in humanitarian settings or of inclusive education for people with disabilities. The evidence base should be further assessed against priority areas such as these.

### Implications of findings

There is a reasonable body of evidence synthesis to support policies, programmes and practice for ensuring that every child learns.

The largest bodies of evidence are for both learning outcomes and cognitive development. At the same time, there is a widespread learning crisis across the developing world. As such, there is an opportunity to sort through that evidence to develop a clear set of minimum child development and education standards.

Since this is a map of evidence synthesis studies, the lack of evidence synthesis does not mean there are no primary studies. In areas in which there is a reasonable amount of evidence synthesis already—which is most areas of the Mega-Map – it is recommended that evidence and gap maps be constructed to get an idea of the extent of the developing country literature, and also to develop a taxonomy of approaches relevant in these contexts. This could certainly be done for early child cognitive development, teacher incentives, teacher training and pedagogy. Attention should also be paid to policy areas of interest such as supporting the transition to secondary education, obtaining gender equality in education and reaching ‘last mile’ populations.

Where there are fewer studies or where studies are dated, it is recommended to update these reviews, applying meta-analysis where appropriate. Reviews of remedial education and different pedagogic approaches (identified when constructing the evidence and gap map) would be useful, as well reviews of developing country literature on teacher incentives and tackling teacher absenteeism.

### How can the map be used by UNICEF?

The map can help UNICEF staff and partners to identify evidence-based programmes and practice to help achieve the agency’s strategic goals.

Whilst the evidence base is comparably thin in this area, there are reviews on interventions of great interest to UNICEF, such as school feeding programmes. The map should help UNICEF staff and partners to identify relevant evidence for their work. There is an opportunity to draw on this evidence base to develop evidence-based guidelines for programmes across UNICEF or indeed for all governments and development agencies.

However, there are important areas where the evidence base is thin – such as remedial and non-formal education – or non-existent, such as education in humanitarian settings. Thus, for UNICEF, and other agencies adopting an evidence-based approach, to become truly evidence-based, there is a need for substantial, strategic investments to generate evidence of what works.

### Endnote: How we assessed the quality of reviews

For systematic reviews, we scored each study using the 16 item checklist called AMSTAR 2 (‘Assessing the Methodological Quality of Systematic Reviews’ version 2; Shea et al. 2017). The 16 items cover: (1) PICOS in inclusion criteria, (2) ex ante protocol, (3) rationale for included study designs, (4) comprehensive literature

search, (5) duplicate screening, (6) duplicate data extraction, (7) list of excluded studies with justification, (8) adequate description of included studies, (9) adequate risk of bias assessment, (10) report sources of funding, (11) appropriate use of meta-analysis, (12) risk of bias assessment for meta-analysis, (13) allowance for risk of bias in discussing findings, (14) analysis of heterogeneity, (15) analysis of publication bias, and (16) report conflicts of interest.

Items 2, 4, 7, 9, 11, 13 and 15 are termed ‘critical’. Study quality is rated high if there is no more than one non-critical weakness, and medium if there is no critical weakness but more than one non-critical weakness. Studies with one or more critical weaknesses are rated low quality.

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### About this UNICEF Research Brief

This research brief was prepared by Howard White and Ashrita Saran with assistance from Yashika Kanojia, Campbell Collaboration. The production of the brief benefited from technical inputs provided by Kerry Albright, Lawrence Chandy and Priscilla Idele, UNICEF. Funding to support its production was provided by UNICEF's Office of Research-Innocenti. Comments may be sent to [info@campbellcollaboration.org](mailto:info@campbellcollaboration.org) or to [research@unicef.org](mailto:research@unicef.org).