

# Improving Attendance and Enrolment at School for Children Living in Poverty

Stephen Gorard, Beng Huat See,\* Nadia Siddiqui, Nada El Soufi, Loraine Hitt, & Binwei Lu

*Durham University, United Kingdom*

## ABSTRACT

This paper summarises the findings of a large-scale structured review of 73 studies to identify promising interventions to increase school enrolment and attendance, particularly in less developed countries where school attendance is not mandatory. Evidence from the stronger studies suggests that for children living in poverty, provision of easy access to schools, making schools free at point of delivery and incentivising attendance/enrolment with cash offers are the most promising interventions. Incentives with conditions attached are more effective than non-conditional incentives. Paying cash to parents is more effective for young children, while cash incentives are more effective for older children if given directly. Providing easy access to free schools seems most promising in improving school attendance and enrolment in low and middle-income countries.

**Keywords:** *school attendance; school enrolment; developing countries; cash transfers; access to free schools*

## Introduction

This paper collates and synthesises international evidence on promising interventions to improve school attendance and enrolment for children from early years to age 14 and over. ‘Promising’ here means that the approach has been shown to have a beneficial impact and that this impact appeared in a body of evaluation work that is judged to be reasonably robust. The paper is based on the findings of a much larger study, which also looks at interventions to reduce segregation in schools by poverty and to improve school attainment.

School attendance is considered a human right (Gaviria, 2022). Persistent poverty and adverse circumstances interact with children’s chances of access to education, attendance at school and thus, their attainment outcomes. Poverty may appear in

---

\*Correspondance: Beng Huat See, e-mail: b.h.see@durham.ac.uk

© 2023 Stephen Gorard, Beng Huat See, Nadia Siddiqui, Nada El Soufi, Loraine Hitt & Binwei Lu. This is an Open Access article distributed under the terms of the Creative Commons Attribution 4.0 International License (<https://creativecommons.org/licenses/by/4.0/>), allowing third parties to copy and redistribute the material in any medium or format and to remix, transform, and build upon the material for any purpose, even commercially, provided the original work is properly cited and states its license.

*Citation: Gorard, S., See, B. H., Siddiqui, N., Soufi, N. E., Hitt, L. & Lu, B. (2023). Improving attendance and enrolment at school for children living in poverty. Nordic Journal of Systematic Reviews in Education, 1, 1–29. <http://doi.org/10.23865/njsre.v1.5429>*

the form of poor health, shortage of nutrition and a lack of access to child-care, educational resources or the ability to travel to school. To a large extent, such factors are malleable, and it seems reasonable to invest financial resources to address them. School attendance is a particular issue in some low and middle-income countries where it is not mandatory or enforced by law. Therefore, interventions and initiatives to encourage school attendance and enrolment are high on the education policy agenda in these regions.

We consider here enrolment, absence and participation outcomes, as well as measures of attendance. We also include funding to create or expand schools, to eliminate the costs of attending school, and direct cash transfers to stakeholders such as schools, teachers, families and pupils. We also include some studies on paying for food for children and spending on other incentives in kind.

Education systems in different countries have adopted different policies for the age at which children start school, but usually the starting age of formal schooling has been between five and seven years old (Sharp, 2002). The evidence is inconclusive on the most appropriate starting age for school and whether or not an early start leads to better academic attainment outcomes in later stages of education (Burger, 2010). However, it does suggest some beneficial impacts for disadvantaged children if they start school earlier in life (Heckman, 2006).

Introducing school into children's lives is intended to stimulate and accelerate the cognitive learning process in the early years of life (Black et al., 2017; Noble et al., 2015). Schools also act as a buffer zone against adversity and as a safe place when vulnerable children face challenges at home, such as poverty, neglect and family chaos which impact negatively on their development and educational outcomes (Taggart, 2010). Universal school provision is linked to increased fairness, justice and opportunities for all, but especially for children facing poverty at household level (Raudenbush & Eschmann, 2015). Children who do not attend school are noted to be at a higher risk of abuse, poor health, violence and early participation in the labour force (UNICEF, 2018).

There may be further associated benefits of children's school attendance, such as assisting parental, especially women's, participation in the workforce (Dahl & Lochner, 2012; Morrissey, 2017; Tsai et al., 2009), reducing early child labour force participation (Berlinski & Galiani, 2007), and delaying early child marriage and teenage pregnancy (Birchall, 2018). Schools may also be useful in overcoming social and economic inequalities following periods of war, natural disasters and economic adversity (Hermanussen et al., 2018).

However, this does not imply that schools are the only places where learning takes place. In countries where attendance at school is not enforced by state laws, many children do not attend school and still learn to survive and adapt to their context (Amury & Komba, 2010; Gorard et al., 2022). It is also possible to attend school and leave after completing compulsory education without achieving minimum learning levels, even in OECD countries where school systems are

well-established and sufficiently resourced (Thomson, 2019). Indeed, schools may even damage some attendees, but the worldwide assumption is that encouraging attendance is the way forward, at least to ensure that all children have a level playing field in access to formal education and thus potentially improving their life chances.

Given that the advantages of attending school outweigh the disadvantages for the most deprived children, it is thus important to know how school attendance and enrolment can be best facilitated for these children, especially those in low and middle-income countries where school attendance is often not mandatory or monitored. Our study, therefore, assembles and evaluates evidence from international research to identify the most effective ways to improve attendance and enrolment in school.

## **Methods used in our structured review of evidence**

### *Search strategy*

The major search terms used include categories for developing nations, evaluation, enrolment outcomes and youth. They are presented here in logical groups representing geography, research designs suitable for a causal research question, the outcomes used, and the age range for children of formal education age.

### Developing/low or middle-income nations

List of developing countries:

Afghanistan\* OR Albania\* OR Samoa\* OR Angola\* OR Argentina\* OR Armenia\* OR Azerbaijan\* OR Bangladesh\* OR Pakistan\* OR Bengal\* OR Belarus\* OR Byelorussia\* OR Belize\* OR Hondur\* OR Benin\* OR Dahomey\* OR Bhutan\* OR Bolivia\* OR Bosnia\* OR Herzegovina\* OR Botswana\* OR Bechuanaland\* OR Brazil\* OR Bulgaria\* OR Burkin\* OR Volta OR Volta\* OR Burundi\* OR Cambodia\* OR Khmer\* OR Kampuchea\* OR Cameroon\* OR Verde\* OR Africa\* OR “Ubangi-Shari” OR Chad\* OR Chile\* OR China\* OR Colombia\* OR Comoros\* OR Congo\* OR Zaire\* OR Rica\* OR “Cote d’Ivoire” OR “Ivory Coast” OR Cuba\* OR Djibouti\* OR Somali\* OR “Afars Issas” OR Domini\* OR “Santo Domingo” OR Ecuador\* OR Egypt\* OR Salvador\* OR Eritrea\* OR Ethiopia\* OR Abyssinia\* OR Fiji\* OR Gabon\* OR Gambia\* OR Georgia\* OR Ghana\* OR “Gold Coast” OR Grenada\* OR Guinea\* OR Guyana\* OR Guiana\* OR Haiti\* OR India\* OR Indonesia\* OR “East Indies” OR Iran\* OR Persia\* OR Iraq\* OR Jamaica\* OR Jordan\* OR Kazakhstan\* OR Kenya\* OR Kiribati\* OR “Gilbert Islands” OR Korea\* OR Kosovo\* OR Kyrgyz\* OR Lao\* OR Latvia\* OR Leban\* OR Lesotho\* OR Basutoland\* OR Liberia\* OR Libya\* OR Lithuania\* OR Macedonia\* OR Madagascar\* OR Malaw\* OR Nyasaland\* OR Malaysia\* OR Malaya\* OR Maldives\* OR Mali\* OR Sudan\* OR “Marshall Islands” OR Mauritania\* OR Mauritius\* OR Mayotte\* OR Mexic\* OR Micronesia\*

OR Moldova\* OR Moldavia\* OR Mongolia\* OR Montenegro\* OR Yugoslavia\*  
OR Morocco\* OR Mozambique\* OR Myanmar\* OR Burma\* OR Namibia\* OR  
Nepal\* OR Nicaragua\* OR Niger\* OR Nigeria\* OR Palau\* OR Pakistan OR Gaza  
OR Palestine OR Panama\*OR Paraguay\* OR Peru\* OR Phillipin\* OR Filipino\*  
OR Poland\* OR Polish\* OR Romania\* OR Russia\* OR Rwanda\* OR “Sao Tome  
Principe” OR Senegal\* OR Serbia\* OR Seychelles\* OR “Sierra Leone” OR  
“Solomon Islands” OR Lanka\* OR Ceylon\* OR “St. Kitts” OR Nevis\* OR Lucia\*  
OR “St. Vincent” OR Grenadines\* OR Suriname\* OR Swaziland\* OR Arab\*  
OR Syria\* OR Tajikistan\* OR Soviet\* OR Tanzania\* OR Thai\* OR Siam\* OR  
Timor\* OR Togo\* OR Tonga\* OR Tunisia\* OR Turk\* OR Uganda\* OR Ukraine\*  
OR Uruguay\* OR Uzbekistan\* OR Vanuatu\* OR Hebrides OR Venezuela\* OR  
Vietnam\* “West Bank” OR Gaza\* OR Yemen\* OR Zambia\* OR Zimbabwe\* OR  
Bogota\* OR Asia\* OR “Latin America” OR “developing nation” OR “developing  
region” OR “developing countr\*” OR “third world nation” OR “third world coun-  
try” OR “third world region” OR “low income nation” OR “low income country”  
OR “low income region” OR “impoverished country” OR “impoverished region”  
OR “impoverished region” OR LMIC

AND

#### Evaluation

evaluat\* OR random\* OR controlled OR “control group” OR comparison\* OR  
propensity OR discontinuity OR match\* OR lotter\* OR “study design” OR  
rigorous OR trial OR experiment\* OR intervention\* OR “randomi\* control  
trial” OR “RCT” or “regression discontinuity” or “causal evidence” OR “quasi-  
experimen” OR “difference-in-difference” or “instrumental variable\*” or strategy\*  
OR “approaches”

AND

#### Intervention

impact\* OR effect\* OR effectiveness

AND

#### Enrolment outcomes

schooling OR enrol\* OR attend\* OR absent\* OR absence\* OR dropout\* OR “drop-  
out” OR “drop-outs” OR “grade repetition” OR “repeat grade” OR “complete  
grade” OR “test score” OR “grade completion” OR “standardi\* test” OR matricul\*  
OR retention OR “staying on”

AND

### Children

youth\* OR child\* OR student\* OR adolescent\* OR teen\* OR boy\* OR girl\* OR pupil\* OR youngster\* OR juveniles OR minors OR kids OR “primary” OR elementary OR “middle school” OR “junio\* school” OR “mobile child\*” OR migrant\*

A pilot review was first conducted to test out the sensitivity of the search terms and to ensure that the search terms picked up relevant pieces of literature, including studies already known to us. For different databases we had to modify the syntax. Some had limits on the number of search terms used in one go and others had more limited Boolean functions. But we used the same key words, as far as possible, and made adjustments according to the idiosyncracies of each of the databases.

### *Databases*

These search terms were applied to the main educational, psychological and sociological electronic databases, including:

- JSTOR
- Social Sciences and Education Full Text
- Web of Science
- Science Direct
- Proquest Dissertations and Theses
- EBSCOhost (which includes ERIC, PsychINFO, British Education Index, PsycARTICLES and International Bibliography of the Social Sciences)
- Australian Education Index
- Cochrane Central Register of Controlled Trials (CENTRAL)
- Campbell Library
- Global Health
- Medline
- Sociological Abstracts

EBSCOhost carries a number of sociological, psychological and educational databases (e.g. ERIC, British Education Index, Applied Social Science Index Abstract and PsychINFO). The platform allows one to use the same search strings for all these databases in one search without having to adjust the search string for each database. While this may be more efficient and saves time, there is a limitation to doing a joint search. One is that the different databases have different metadata schemas with different searchable metadata fields. A joint search means that one cannot control the search vocabulary unique to each database. This is problematic if it means that key pieces of work are missed as a result. As we have also searched widely in other databases, such as Web of Science, JSTOR, Australian Education Index, ProQuest and Sociological Abstracts, etc, the likelihood that we may have missed some studies is minimised. In any case, the key thing is whether including these pieces would have altered the overall results. As the search was wide and also included work from

several other sources, it is not likely that any pieces that we may have missed would have changed the findings.

Studies that were known to us from our previous work and from references in prior systematic reviews uncovered in our searches were also followed up. We approached authors known for their research with the World Bank on improving education outcomes in developing countries. The results are therefore a combination of searches based on the databases and a number of other sources. Nearly 25% of pieces in the review were found or known about via routes other than the database search. This makes the search not directly replicable.

All searches were limited to studies published in the English language. We intentionally did not set any date limits to keep the search open. To avoid publication bias, the search included any material whether published or unpublished.

*Screening*

Once studies were located, they were screened for duplicates and relevance on the basis of their title and abstract, if they related to the study. Inclusion and exclusion criteria are in the table below.

Table 1. Inclusion and exclusion criteria

	<b>Inclusion</b>	<b>Exclusion</b>
Topic	Studies that address the issue of school attendance, enrolment, and retention (staying on in school)	Not about school attendance, enrolment, or retention (staying on in school)
Research design	Empirical research with a comparative or experimental design	Not primary research and opinion pieces, guidance briefs, promotional reports, or anecdotal accounts from schools or policy-makers about successful strategies
Target group	Children in school	Not parents/families or teacher outcomes
Interventions/programmes	School attendance, or school enrolment programme	Not about any interventions/programmes that address school attendance, enrolment or attainment, or about health and behavioural outcomes
Outcomes	Measurable outcomes (e.g. school attendance or school enrolment)	No measurable outcomes

To enhance consistency, all members of the team independently reviewed 10 randomly selected reports at the outset to decide if they agreed on their inclusion or exclusion. Where it was doubtful if the studies should be included or not, they were discussed among team members, and a consensus was reached (one study out of ten). It was agreed that inclusion where there was doubt should be the default decision.

Studies that were deemed relevant to the research questions and that met our inclusion/exclusion criteria were retained for data extraction.

*Data extraction and quality assessment*

The full texts of included studies were read, and the key information, including details on research design, sample size, group allocation, outcome measures, missing data, analyses and the results, was summarised. The four research team members co-operated. Such information assists with judgements about the credibility of the findings. To help ensure that the evidence is robust, each piece of research was appraised in terms of the trustworthiness of its findings, based on the research design, the size of the sample, whether there was any bias or threats to the validity of the study using the appraisal tool (Table 2) known as the ‘sieve’ (Gorard, 2021, p. 94).

*Table 2.* Quality assessment ‘sieve’ for causal studies

<b>Design</b>	<b>Scale</b>	<b>Dropout</b>	<b>Outcomes</b>	<b>Other threats</b>	<b>Rating</b>
Fair design for comparison (e.g. RCT)	Large number of cases per comparison group	Minimal attrition with no evidence that it affects the outcomes	Standardised pre-specified independent outcome	No evidence of diffusion or other threat	4 
Balanced comparison (e.g. regression discontinuity, difference-in-difference)	Medium number of cases per comparison group	Some initial imbalance or attrition	Pre-specified outcome, not standardised or not independent	Indication of diffusion or other threat, unintended variation in delivery	3 
Matched comparison (e.g. propensity score matching)	Small number of cases per comparison group	Initial imbalance or moderate attrition	Not pre-specified, but valid outcome	Evidence of experimenter effect, diffusion or variation in delivery	2 
Comparison with poor or no equivalence (e.g. comparing volunteers with non-volunteers)	Very small number of cases per comparison group	Substantial imbalance or high attrition	Outcomes with issues of validity and appropriateness	Strong indication of diffusion or poorly specified approach	1 
No report of comparator	A trivial scale of study (or N unclear)	Attrition not reported or too high for comparison	Too many outcomes, weak measures or poor reliability	No consideration of threats to validity	0

*Note:* Each study was assigned a padlock rating between 0 and 4 (the most secure in terms of trustworthiness).

This step, often missing in previous reviews, is essential in ensuring that the findings and conclusions made in the review are based on the credible evidence. The ‘sieve’ is read from the top-left corner, starting with the design and moving right along the columns. For example, a large-scale randomised trial for a causal question may start

with a 4, and if there is noticeable attrition (perhaps resulting in observed and unobserved imbalance between the groups), then it may drop to a rating of 3 or even 2. It may then drop further if the test instruments are weak (i.e. they are designed by the programme developer, related to the intervention or based on participants' self-report). Ratings can only go down and not up. The ratings take no account of whether the intervention was deemed successful or not, or whether the report author claimed the intervention was effective. Where key information such as the amount of attrition was not reported, the piece was downgraded accordingly.

Each study was then assigned a padlock rating between 0 and 4  (the most secure in terms of trustworthiness).

### *Synthesis of included studies*

We reported the size of the effects for some studies where these were available, but we did not aggregate or summarise the effect sizes. The latter may give a misleading impression about the efficacy of any programme, since studies with weak designs, such as single group pre-/post-studies and studies with very small samples or non-randomised samples, tend to report very large effect sizes (Slavin, 2020; Slavin & Smith, 2009). This issue is over and above the standard concerns about the incommensurability of results from studies conducted with different sampling strategies, test outcomes, dropout, age ranges and contexts.

Instead, we classified studies in terms of themes, the direction of the effect (positive, unclear, or no change/negative) and the strength of the evidence (i.e. how secure the finding is). The most positive studies with the highest padlock rating will be the most promising. A number of studies reported multiple outcomes. This paper considers only the results for attendance and enrolment. A separate paper considers the results for attainment only (Gorard et al., 2023).

We will almost certainly have missed some studies and have misclassified others. However, the patterns we found were clear enough to be able to claim that they would not be substantially disturbed by the addition of a few further studies. Our concern is with what the overall body of evidence shows.

## **Results**

The search identified a total of 746 potential studies (Figure 1).

A number were the same studies but reported in different outlets as working papers or reports. We retained the best version of each. Those concerning only health and behavioural outcomes, or outcomes pertaining to adults (parents and families) were excluded. Almost all pieces retained were about the use of financial resources, including providing new schools and making schools free. The use of cash directly was the most common form of financial policy. So, we also summarised how cash transfers are most effectively administered (conditional or unconditional) and other ways in which money might be used most effectively.

*Improving attendance and enrolment at school for children living in poverty*

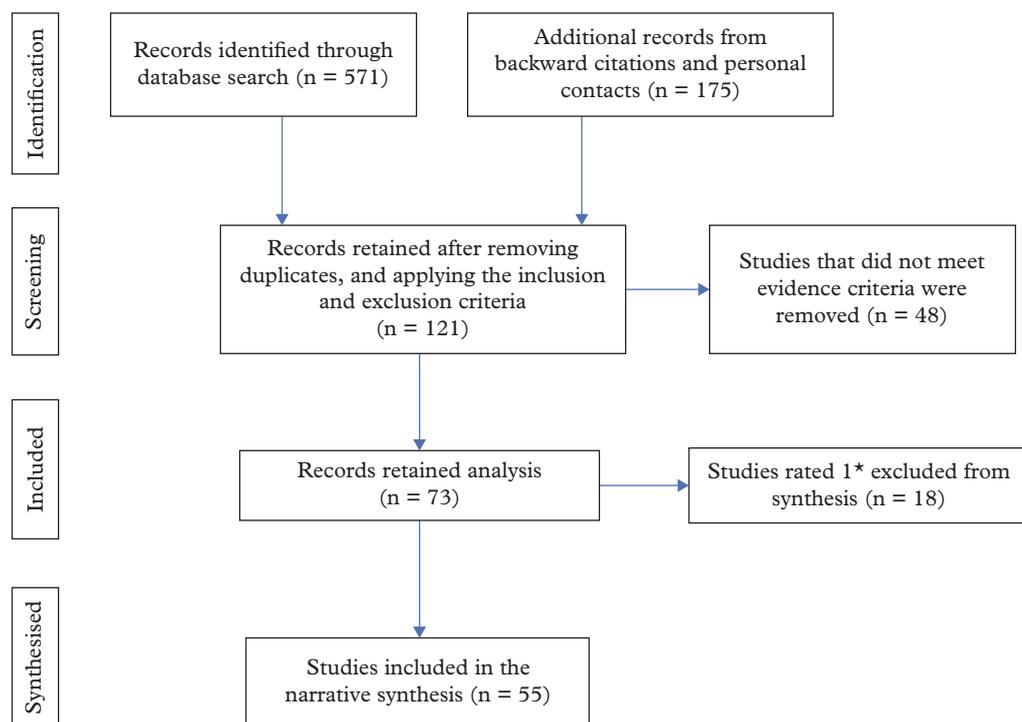


Figure 1. Prisma flowchart showing records of studies at each stage of the review

Studies that were very weak in terms of evidence were rated 0  (n = 48), and are not discussed in this paper as they do not add to the evidence. This left a total of 73 studies. Of these, 18 were rated 1  and, for reasons of space, these studies are not discussed further. Including them would not change the substantive findings from the other 55. The remaining 55 studies are summarised in Table 3.

Table 3. Studies to improve school attendance/enrolment via finance or related means – summary of evidence and impact

Strength of evidence	Positive	Unclear/mixed	Negative/neutral
4 	2	1	–
3 	16	2	1
2 	20	8	5

Most of the stronger studies on the use of finance report positive effects, which suggests that the use of financial resources is most promising in improving school attendance and enrolment for poor children. This is unusual, as often weaker studies are

more likely to show positive results and stronger studies tend to be more balanced in outcomes. Below we summarise some of these approaches.

Table 4 summarises the studies on the first two themes, of either adding new school places or making schooling free or both. The results are clearly positive overall, including for all of the higher quality studies.

Table 4. Studies to improve school attendance/enrolment through expanding schools or making schools free – summary of evidence and impact

Strength of evidence	Positive	Unclear/mixed	Negative/neutral
4	1	–	–
3	4	–	–
2	6	2	–

*Providing new schools*

One initiative that has shown promise is funding and creating new schools. The strongest studies are rated 3 . These are summarised below.

3 studies

One such programme is the Sindh Education Sector Reform Programme in Pakistan, designed to improve the enrolment and learning of primary school pupils by providing new private schools (World Bank, 2018). In Pakistan, there is no universal access to government schools in remote areas. In a public-private programme, the government encouraged entrepreneurs to establish and operate free, co-educational primary schools in villages in remote areas by giving them a cash subsidy per pupil. The Sindh Education Foundation, together with a World Bank team, also provided free textbooks, teacher training and regular visits from foundation staff to advise on how to improve teaching and learning. Schools had to meet minimum facility standards, exempt all pupils from paying tuition fees and hire teachers with at least eight years of schooling themselves. Villages with poor school access were randomised to a subsidy of 350 rupees per pupil regardless of gender (82 villages), the same but with an additional 100 rupees for each female pupil (79 villages), or no subsidy (38). Enrolment in the treatment groups increased for boys and girls aged 6 to 17. Children in treatment schools continued in school longer and did better on attainment tests, especially those who enrolled due to the programme. The additional subsidy for girls had no impact on enrolment or test scores. This study was unclearly reported, and it is unclear whether the testing was independent of the developer.

In Afghanistan, 13 villages were randomly assigned to receive community-based schooling a year before it was provided for the entire sample of 31 villages (Burde & Linden, 2009). Outcomes were attendance and scores in maths and the local

language. The presence of a community-based school increased enrolment by 42 percentage points and test scores by half a standard deviation, and the results were better for girls. Enrolment rates and test scores were lower by 15 percentage points for every mile a child had to walk to school, again especially for girls.

Levy et al. (2009) examined the BRIGHT Programme in Burkina Faso, which built 132 primary schools and improved school canteens, take-home rations, school kits and textbooks with the aim of increasing girls' enrolment rates. A regression discontinuity analysis was based on 293 villages that applied for BRIGHT, including 132 that were successful. A total of 21,730 children took tests in maths and French. The programme increased enrolment of girls by 20 percentage points.

## 2 studies

Barrera-Osorio et al. (2017) evaluated the impact of private schools created as public–private partnerships in rural Pakistan to increase schooling in marginalised areas, reduce the gender gap in enrolment and encourage learning. A subsidy per pupil was paid to establish new private tuition-free primary schools. One hundred schools were assigned a flat subsidy per pupil. A further 100 schools were assigned a higher subsidy for girls. Both groups also had free school leadership and teacher training, textbooks, other teaching and learning materials, stationery and book bags. Around 50 schools formed a control group. The attrition level is not clear. The programme increased enrolment by 29% according to a verified head count. The effect was similar across the two treatment groups and there was no obvious gender difference.

Kim et al. (1999) evaluated a programme of new schools designed to stimulate girls' schooling through the creation of private girls' schools in poor urban neighbourhoods in Pakistan. Enrolment in these randomly selected neighbourhoods was compared to otherwise similar neighbourhoods that were randomly assigned to a control group. The programme increased girls' enrolment by around 33 percentage points. Boys' enrolment rose as well, partly because boys were allowed to attend the new schools and partly because parents would not send their daughters to school without also educating their sons.

In Uruguay, the government built 414 classrooms in 1995 and 370 classrooms between 1999 and 2002, and recruited more preschool teachers (Berlinski et al., 2008). The *Encuesta Continua de Hogares* collected retrospective information from 18,000 households each year on the number of preschool years attended during the years 2001–2005. The sample was restricted to children aged between 7 and 15 living in two-parent families. By the age of eight, children who attended preschool had accumulated 0.17 more years of subsequent school education in comparison to children who did not attend preschool, while by the age of 15 they had accumulated 1.03 extra years of education. Larger gains were found for disadvantaged children.

In summary, there is evidence from a number of settings that providing more schools or preschools in poor areas will increase enrolment and attendance.

#### *Making existing schools free*

In many countries existing school places are not free at the point of delivery and in even more countries, preschools are not free. Some countries have tried abolishing such fees, at least in part, or offered fee waivers to some families. This theme of reducing or eliminating the cost of attending school includes the first 4  study.

#### 4 studies

Duflo et al. (2021) estimated the effects of free secondary education in Ghana using randomised assignment of secondary school scholarships to 682 young people, from a cohort of 2,064 youths who had secured places at high school but could not afford the fees. The students were followed up for 12 years until the age of 29, with relatively low attrition (6%). Scholarship recipients were 60% more likely than non-recipients to obtain secondary education and more likely to enrol in tertiary education, especially women, who were also less likely to become pregnant.

#### 3 studies

An evaluation of public-private partnerships in Uganda, which allowed all students with an overall grade of 28 or higher on the primary leaving examination to attend participating private secondary and vocational schools for free (Barrera-Osorio et al., 2016). One hundred schools were randomised, either to implement the programme in 2011 or to a waiting-list control. Enrolment in participating schools increased considerably (by 58% in Grade 2). Total enrolment increased by approximately 25% between 2007 and 2012.

#### 2 studies

Wong et al. (2013) focused on the impact on attendance of offering free preschools and cash transfers in a poor rural area of China. A group of 141 four-year-old children were randomised to receive the help or not. The payment voucher to the parent(s) was conditional on at least 80% verified attendance by the child. Study attrition was 7%. Attendance was higher in the treatment group (74%) compared to the control group (55%). School readiness was higher in the control group (reported effect size  $-0.07$ ), perhaps because of poor quality preschool education in rural China.

Between 2001 and 2006, three reforms were implemented in China to counter the high dropout rate due to the costs of education. Chyi and Zhou (2014) used the variation in timing of the reforms in different counties to estimate their effects. They used a difference-in-difference approach to estimate the effects of tuition control (regulation of fees), a tuition fee waiver (no fees) and two waivers/one subsidy

(waiver, free books and a family stipend) on the school enrolment of poor children aged 6–16 in rural areas. The survey had high levels of attrition, and included children in some waves and not others (the number of cases varied between 162 and 1,071). Only the fee waiver with a stipend for living expenses was effective in improving the enrolment of girls from poor rural families, but not for boys. Results are thus mixed.

In South Africa, school fees were abolished in phases – first for schools located in high poverty neighbourhoods – thus permitting a kind of natural experiment (Garlick, 2013). The impact of the policy was estimated using both difference-in-difference and regression discontinuity methods. Fee elimination had only a very small effect on enrolment, probably due to low returns on education for marginal students and high labour market opportunity costs. School dropout rates fell marginally from 2.8% to 2.1%.

Borkum (2012) also reported a national fee-elimination initiative in South Africa, which raised enrolment by about 2 percentage points in treated secondary schools but had little effect in primary schools. Schools may have exaggerated the number of enrolled students to increase their payments.

A scheme in Gambia, which removed all public school fees for girls in Grades 7 to 9 and provided costs for books, uniforms, bags and supplementary mentoring, saw female enrolments in schools increase by about 14% (Giordano & Pugatch, 2017). Students were selected based on their needs (disadvantaged families, orphans, special needs, HIV/AIDS).

In summary, fee waivers work in increasing attendance, especially for poorer families and for girls, but only if they are complete waivers. Simply reducing fees is not effective. There are also other costs of going to school that need to be considered, such as books and uniforms, and opportunity costs for not doing paid work. However, fee waivers are not so clearly effective for increasing enrolment.

### *Conditional cash transfers*

Table 5 summarises studies on the theme of conditional cash transfers.

*Table 5.* Studies to improve school attendance/enrolment via cash transfers – summary of evidence and impact

<b>Strength of evidence</b>	<b>Positive</b>	<b>Unclear/mixed</b>	<b>Negative/neutral</b>
4 	1	1	–
3 	7	2	–
2 	10	5	2

There is a large body of work on cash transfers from developing countries around the world (De Janvry et al., 2006). Some of the strongest overall evidence on financial incentives comes from the *Programa de Educación, Salud y Alimentación* (PROGRESA)

conditional cash transfer scheme in Mexico. This was a large-scale anti-poverty programme that began in 1997 and provided aid to about 10 million poor families. One component provided transfer payments to families (on average, USD 55 per month), contingent on children's regular attendance at school and varying according to the child's grade level and gender. The amount was intended to offset the opportunity costs of sending children to school. PROGRESA was replaced by the *Oportunidades* programme.

#### 4 studies

Buddelmeyer and Skoufias (2004) used a regression discontinuity design to look at the impact of PROGRESA in 506 localities (320 assigned to the treatment group and 186 to the control group). Eligible households were those below the poverty line. The fact that the scheme was introduced in phases due to monetary constraints has rendered the study similar to an experiment. The programme increased boys' attendance by 5% and girls' attendance by 7%.

In another study, Edmonds and Shrestha (2014) examined the impact of two types of scholarship programmes in Nepal on the school attendance of 660 children aged 10 to 16 identified as vulnerable. The children were randomly allocated to one of the treatments or a control. One treatment was a scholarship for school-related expenses, and the second provided the same scholarship and an in-kind stipend conditional on school attendance. The aim was to promote schooling and deter child labour in the local carpet-weaving industry. There was little difference in attendance between the control and the scholarship groups. The conditional stipend was more effective. It was most effective for girls, increasing attendance and reducing child labour by 64%. There was no lasting impact on future school enrolment after the support ended.

#### 3 studies

Parker et al. (2006) evaluated the *Oportunidades* programme in Mexico, which offered cash to poor families on the condition that they send their children to school (85% attendance). *Oportunidades* is based on the previous PROGRESA programme. The 2002–2004 Urban Evaluation Survey was used to create three groups of children from Grades 9 to 12; these were eligible households that lived in intervention areas, households that missed the cut-off point for eligibility and lived in intervention areas, and households that satisfied the eligibility criteria but did not live in intervention areas. Data were collected at baseline and one and two years later. A child who participated in the programme from age 6–17 would, on average, complete half an additional year of schooling compared to one who was not in the programme.

Another study in Punjab, Pakistan (Chaudhury & Parajuli, 2007) offered girls in 15 of the lowest literacy districts a grant on condition that they enrolled in a public school (Grade 6 to 8) and attended 80% of classes. Difference-in-difference used three control groups – girls' schools in districts not receiving the programme, boys'

schools in districts receiving the programme, and districts not receiving the programme. The programme saw a 9% increase in female enrolment, highest in Grade 6.

A cash transfer programme in Jamaica offered health and education grants to around 180,000 eligible poor children aged 6 to 17, conditional on 85% school attendance. According to a regression discontinuity analysis, the treatment group had 0.5 days per month higher school attendance (Levy & Ohls, 2010). The response rate was similar for both groups, with 91% at baseline and 82% at follow-up.

The Family Allowances Programme in Honduras involved a conditional cash transfer for children in Grades 1–4 in 40 poor municipalities, who were short for their age. Municipalities were randomised to four groups – control, cash transfer for health and education, cash transfer and direct investments in health and education, or just direct investments (Galiani & McEwan, 2013). The cash transfer was given to the children’s families and schools also received payments proportionate to the number of relevant pupils. The cash transfer groups increased enrolment by 8 percentage points.

Ferreira et al. (2009) used a regression discontinuity design to look at the impact on middle school enrolment of the CESSP Scholarship Program, a cash transfer programme in Cambodia. Based on 100 schools, 3,800 scholarships were offered and disbursed three times per year without further conditions. Recipients were about 20 percentage points more likely to be enrolled in school and 10 percentage points less likely to be in paid work, without any negative impact on the enrolment of their siblings. The effects were clear for both boys and girls.

In Ecuador, mothers in poor families were individually randomised to receive a cash transfer equivalent to 7% of monthly expenditures, or not (Edmonds & Schady, 2012). The initial sample included 2,153 children aged 10 and above. Attrition was 6%. The cash transfer had a positive impact on reducing child labour and the impact was largest among the poorest children, but there was no effect on those who were in paid employment at baseline (likely to be older children). School enrolment also improved, despite the payments being unconditional.

In the Philippines, Chaudhury et al. (2013) looked at a conditional cash transfer based on 85% attendance of children up to age 14. This was a waiting-list design, with eligible households in treatment localities (1,418 children) compared to eligible households in control localities. The programme increased the enrolment of young children (3–11), but not of older children. There was no effect on the overall number of years of schooling. The programme did not have a sustained effect. After the grant ended, when the children were aged 15, the dropout rate among children who had participated in the programme was higher than those in the control areas.

A conditional cash transfer programme in Pakistan showed positive and stable effects on girls’ secondary school enrolment – an increase of 30 to 50 girls per school (Chhabra et al., 2019). The scheme offered cash benefits to households on condition that girls in Grades 6 to 10 attended government schools regularly. The study used a regression discontinuity design to evaluate the impact of the programme, with 16 low adult-literacy districts in the treatment and 20 in the control.

De Brauw and Gilligan (2011) assessed the *Comunidades Solidarias Rurales* in El Salvador, a poverty alleviation programme targeting households with children aged 6 to 15 who had not completed primary education. The cash transfer depended on 80% attendance at school. Children of all ages were more likely to enrol in schools.

## 2 studies

Another evaluation of PROGRESA showed a positive impact on enrolment for older children but not for those under 11 in the first two years (Behrman et al., 2005). The rate of transition to secondary school was higher for the treatment group, especially for girls, while the dropout rate was lower.

The second phase of PROGRESA was implemented as a trial in which 506 rural villages were randomly assigned to either participate in the programme (2,162 households) or serve as controls (1,531). Attrition was over 10% (Todd & Wolpin, 2003). The treatment had no substantial effect on school attendance for 6–11-year olds in the short run, when attendance is high anyway. However, it did affect school attendance for older children of 12–15 years of age.

The CESSP Scholarship Program in Cambodia gave cash transfers to families of poor children for the three years of lower secondary school, conditional on school enrolment, regular attendance and satisfactory grade progress (Filmer & Schady, 2009). Students with the highest dropout risk in 100 high poverty schools were selected. Two-thirds of the scholarship recipients were girls because they were deemed more likely to drop out of school than boys. Regression discontinuity shows that the scholarship group was 25 percentage points more likely to be enrolled in school, and more likely to attend school.

The *Bolsa Família* programme in Brazil was a cash transfer to families with youths aged 16 to 17 years, conditional on school attendance (Chitolina et al., 2016). The dataset does not identify households receiving payments, but since the target is the poorest 20% of the households with young people aged 16, these households are identified as beneficiaries using intention-to-treat. The control is made up of the 20% poorest households with 15-year-olds. The programme appeared to increase school attendance for 16-year-olds by 5 percentage points compared to 15-year-olds, especially in rural areas. The report is not clear about the number of cases, or the attrition.

Schady and Araujo (2006) evaluated a cash transfer scheme (*Bono de Desarrollo Humano*) to increase school enrolment and reduce child labour in low-income households in Ecuador. The transfer of USD 15 per month, approximately 7% of mean household expenditure in the study, was paid to the woman of the house. This payment was not explicitly conditional on changes in behaviour, although many families reported believing that payment was conditional on school attendance. A sample of 1,391 households (3,072 children) was used and attrition was 6%. Because the budget was insufficient to cover all households, half were randomised to immediate treatment. The treatment increased school enrolment and reduced child labour compared

to the waiting list. Households that believed that the payment was conditional had an even higher rate of enrolment and less likelihood of a child engaged in work.

A study in South Africa (Eyal et al., 2014) used the South African National Income Dynamics Survey to examine the link between the receipt of the Child Support Grant and school enrolment (no data available on attendance). The 1998 grant was aimed at removing racial and gender inequality, targeting poor teenagers regardless of household status. It was extended in 2000 to children below the age of 7, and then up to the age of 18 by 2012. The study took advantage of the phased roll-out of the evaluation. Take-up was low because information about how to apply was not widely known and the two groups were not randomised. Grant recipients had higher enrolment rates than non-beneficiaries for older teens.

Glewwe et al. (2003) evaluated the *Programa de Asignacion Familiar*, a government social welfare programme in Honduras. Twenty municipalities were randomised to receive a cash transfer conditional on school attendance and health clinic visits, 10 municipalities had improved schooling and health services, 20 had both of these and 20 acted as a control. The total baseline sample was 5,784 households with 30,588 members. Attrition was 16%. The cash transfer was linked to a very small increase in attendance.

The Social Safety Net programme, a cash transfer programme in Nicaragua where women heads of households received cash on condition that their children attended school and visited health clinics regularly, did not seem to have any effect (Gitter & Barham, 2008). Households with children aged 7–13 who had not completed fourth grade were eligible, and 21 communities were randomised to treatment and 21 to control. The number of households appeared to vary considerably between analyses. The results showed that giving funding to women can improve school enrolment conditional on school attendance.

The *Red de Protección Social* is a six-year social safety net government project for poor households in rural Nicaragua, covering over 30,000 families (Barham et al., 2013). Cash transfers are paid to designated women caregivers in beneficiary households, conditional on children's school attendance. One thousand, three hundred and thirty households were randomised to receive the treatment from 2000 to 2003, and 1,379 from 2003 to 2005. The attrition rate was 12%. By 2002, the first group had an 18% increase in the enrolment rate and a 62% reduction in the number of schools days missed in the previous month.

The Punjab Female School Stipend Program was a conditional cash transfer programme in Pakistan targeted at female students. Alam et al. (2011) showed that the enrolment of eligible girls in middle school increased in the short term by nearly 9 percentage points and was maintained five years later. Beneficiary adolescent girls were more likely to complete middle school and have less paid work. There is evidence that participating girls delayed marriage and had fewer births by the time they were 19.

Evans et al. (2014) analysed the impact of the Tanzania Social Action Fund, a community-based programme where payments were conditional on school-aged children (7–15) having 80% attendance at school. A total of 1,764 very poor

households in 80 villages were randomised to treatment, or not. School attendance, based on reports from the communities, suggested positive results, but school reports showed little improvement, largely because school attendance was already high at the outset. Children aged 15–18, especially girls, in treatment villages were more likely to complete school (a 15 percentage point difference).

The New Cooperative Medical System in rural China was offered to 49% of the 5.9 million population in eight low-income rural counties from 2006 (Chen et al., 2010). It covered medical expenses and the cost of books, meals and educational activities for school children. Average take-up was 87% in 2007, rising to 93% in 2009. An evaluation involving 1.4 million school-age children across 3,977 villages found a slight difference in school enrolment, but the two groups were different at the outset anyway. A propensity score analysis suggested that the programme had zero effect on the average population.

Angrist and Lavy (2009) considered an incentive scheme in Israel offering cash to low-achieving high school students for progressing from tenth to eleventh grade, eleventh to twelfth grade and passing the high school matriculation exam. Forty of the lowest-scoring schools were randomised to treatment, or not (20:20). One school closed and three were non-compliant. There was an increase in progression for girls but not boys and no impact on post-secondary enrolment. The mean scores of the outcomes were not reported.

Rodriguez-Planas (2012) evaluated the US Quantum Opportunity Program, a five-year after-school programme combining mentoring, educational services and financial incentives throughout high school. This was offered to disadvantaged high school students to improve graduation and post-secondary school enrolment. It appeared to be effective in the short term, increasing the likelihood of high school completion and college enrolment by 18% and 23% respectively, especially for female students. But the impact was short-lived and the programme may have reduced intrinsic motivation.

In Kenya, the chance of sponsorships for free school uniforms was provided to a randomised group of 550 students in 12 schools for three years, while 602 students formed the control (Evans & Ngatia, 2018). Attrition after eight years was about 5%. Those who received a uniform had 37% fewer absences. There were no differences after eight years. Those not in school at the outset did not receive a uniform, which created a bias.

Ravallion and Wodon (2000) evaluated the impact of an educational subsidy programme, Food for Education, in Bangladesh that provided monthly food rations to families that sent their children to primary school for 95% of classes. The subsidy reduced the incidence of child labour but did not increase school enrolment.

Dean and Jayachandran (2019) examined a scheme in India which offered scholarships to children aged 3 to 4, to encourage attendance in a private kindergarten. The premise was that attending kindergarten improves children's cognitive development. Scholarships were randomly allocated to half of the 808 eligible children (who did not attend preschool) in 71 villages, if the parents agreed to enrol their children in the private kindergarten. The scholarship had no effect on primary school enrolment.

Taken as a whole, these studies suggest that cash transfers can increase attendance at school, especially for girls and older students (for whom school dropout is more likely). Long-term studies suggest that the gains can remain even years later (Araujo & Macours, 2021). However, transfers must be conditional on attendance and those conditions must be enforced.

### *How should cash transfers be paid?*

It is not simply the transfer of cash to vulnerable groups, but how the money is paid and to whom that can make a difference. The stronger study (rated 3 ) on this suggests that cash transfers are more effective if they are conditional.

### 3 studies

Baird et al. (2011) compared the effects of conditional and unconditional cash transfers in a three-armed cluster randomised control trial where enumeration areas were randomly assigned to conditional (based on at least 80% attendance) or unconditional payments, or a control. The study evaluated the conditional cash transfer programme targeted at adolescent girls in Malawi. The final sample was 2,284 girls in 161 treatment areas, who were at school at the outset (which weakens the study). The conditional group generally scored better than the other two on all measures. Their self-reported enrolment was higher and remained so after the funding ceased. Attendance was also higher (by 8 percentage points). However, pregnancy and marriage rates were substantially higher than in the unconditional arm, perhaps because the attendance requirement was too onerous.

### 2 studies

Barrera-Osorio et al. (2008) looked at three kinds of conditional payments in poor areas of Colombia. In one, the child received the incentive paid into the bank on condition that they attended at least 80% of secondary school days per month. In the second, two thirds of the incentive was for attendance and the rest was paid when students re-enrolled for the next school year. A third group had incentives paid on condition of graduation and tertiary enrolment rather than secondary attendance. Postponing payment to a larger lump sum at the time of a re-enrolment decision increased enrolment at secondary and tertiary levels without reducing daily attendance. Incentivising for graduation and matriculation was more effective than just for attendance, increasing attendance and enrolment at secondary and tertiary levels. However, there was a side effect in that sisters of treated students attended school less than students who received no incentives.

In the UK, the Education Maintenance Allowance (EMA), a government cash transfer scheme paid directly to young people aged 16–18 in the first two years of post-compulsory full-time education, is shown to have increased the probability of education of young people by 13 percentage points from a base of 43% and reduced

teenagers’ labour supply by three hours per week (Holford, 2015). The study used data from the Longitudinal Study of Young People in England. It found that giving the money directly to the young person was more effective than giving it to parents because if the parents were given the money they would use it partly on other things and it would not have the effect of reducing young people’s working time.

A two-year randomised trial in rural Burkina Faso assessed four cash transfer delivery mechanisms, either a conditional or an unconditional cash transfer given to either fathers or mothers (Akresh et al., 2013). The condition was that children aged 7–15 were enrolled in school and attended classes regularly (90%). By the second year, there was a positive impact on school enrolment and attendance for the conditional group only, which was more marked for girls, younger children and lower ability groups, all of whom are traditionally less likely to enrol.

In another study, Benhassine et al. (2015) randomly assigned 320 primary school sectors in Morocco to either a conditional or unconditional cash transfer given to either fathers or mothers. School participation for over 44,000 children was recorded through surprise school visits by the research team and a survey of 4,000 households, including households where the children were not in school. Because the programme was run from the school, households with no contact with the school system were excluded, which is an important limitation. The results indicated that there were no differences in school attendance between conditional and unconditional cash transfers. Nor was there any difference in relation to whether cash was given to fathers or mothers.

On balance, the evidence suggests that payments should be conditional, but the picture is quite mixed. It does not seem to matter if the payment is given to the father or the mother. For older students, it might be better to give them the cash directly and withhold at least part of it until they reach a target such as re-enrolment or matriculation. Otherwise, the evidence is that cash payments are less effective for maintaining subsequent enrolment than for current attendance.

*Use of monetary incentives in other ways*

Besides cash transfers, there are also other ways funding has been used to improve school attendance/enrolment. Health or nutritional interventions, the use of EdTech and the training of teachers are examples of other uses of funding. The strongest study under this theme is 3  (n = 6). Table 6 summarises the results of these other interventions.

Table 6. Studies on other uses of funds to promote attendance – summary of evidence and impact

Strength of evidence	Positive	Unclear/mixed	Negative/neutral
4 	–	–	–
3 	5	–	1
2 	4	1	3

### **3** studies

Tan et al. (1999) evaluated the Dropout Intervention Programme in the Philippines. Five groups consisting of 10 schools each were compared: one group in which all pupils in the beneficiary schools received a free school meal, another group where all of the teachers received pedagogical materials and attended a training course on their use with pupils of differing abilities, and two groups which were the same but included parent meetings at school and parental involvement. There was also a control group. Pupil dropout declined in general, but most clearly in the groups that received teaching materials. Free school meals alone made little difference.

In Burkina Faso, 46 village schools for girls aged 5 to 15 in areas affected by severe food shortages were randomly assigned to three groups (school meals, take-home rations of 10 kg of cereal flour, or a control group) (Kazianga et al., 2008). Both treatments, conditional on 90% school attendance, increased girls' attendance rate by 6 percentage points after one year. Girls also shifted from farm labour to more domestic tasks that were more compatible with the school schedule.

Montgomery et al. (2016) used a cluster quasi-randomised control trial to examine the attendance of girls in Uganda. Eight schools (including 1,124 girls in Grades 3 to 5) were allocated to groups which received puberty education, free reusable sanitary pads, puberty education and pads, or a control group. Over two years, there was a very high dropout rate, especially in the intervention groups. School attendance declined in all groups but remained highest in the control group, suggesting a negative impact.

Martinez et al. (2017) examined a community-based preschool programme in Mozambique. Thirty communities were randomised in the programme and 46 remained as the control. Tests of vocabulary and development were used at the baseline and after treatment. Children who attended preschool were more likely to enrol in primary school and start at the standard age, especially those from the most vulnerable households.

Banerjee et al. (2010) looked at three schemes to improve attendance and participation in India. One intervention to improve attendance and participation in India involved small group discussions to share information about the structure and organisation of local services. Headteachers, teachers, parents and Village Education Committee members were invited to attend meetings. A second intervention added training sessions in which villagers were taught to evaluate their children using a simple test. A third supplemented the previous two by introducing the villagers to a teaching technique (Read India), and they received seven visits from NGO staff who offered extra support. Each group consisted of 65 villages, with 85 in a control group, totalling 17,533 children aged 7 to 14. Attrition was 4%. The proportion of pupils who were absent from school actually increased for all treatments.

Skoufias and Shapiro (2006) looked at the Quality Schools Programme in Mexico, intended to expand autonomy and improve learning in pre, primary and secondary

schools. Staff and parents planned the steps for improving school quality, and principals were given training and a five-year grant to carry this out. The researchers constructed a panel of 1,767 schools in the treatment group and 65,457 in the comparator, based on matching. The dropout rate after three years was slightly lower in the treatment schools (effect size -0.04).

## 2 studies

In the Bangladesh Food for Education programme, households (including 3,369 pupils) received wheat or rice on condition that their children enrolled in primary school and attended at least 85% of classes (Meng & Ryan, 2003). Enrolment in treatment schools increased, as did calorie and protein consumption in beneficiary households.

The School Feeding Programme in Ethiopia provided a daily hot lunch of wheat, corn or beans (Zenebe et al., 2018). Its purpose, other than feeding, was to encourage school attendance. A small trial, involving 390 pupils aged 10–14, compared three schools that participated in the programme with three others matched from the same district. However, two groups were different at the outset in terms of wealth, household food insecurity, parental education and occupation, and child age. Diet was improved and absences were lower in the treatment schools.

Jacoby et al. (1996) looked at the impact of a 30-day school breakfast programme on the diet and attendance of pupils in Grades 4 and 5 in an Andean region of Peru. Ten schools were randomised for treatment or put in a waiting-list control. The programme was successful in raising dietary intakes and improving school attendance rates.

A study similar to that of Montgomery et al. (2016) involved giving menstrual cups to girls in Grades 7 and 8 ( $n = 60$  girls) in four schools in Nepal (Oster & Thornton, 2009). Girls were randomised to receive a menstrual cup during their monthly period or to the control group. The intervention had only a negligible impact on girls' attendance during their period or at other times.

Simwaka et al. (2009) assessed the impact of a five-year school-based malaria treatment programme in Malawian primary schools, involving 63 treatment and 30 comparison schools. Teachers were trained on when and how to utilise malaria treatment kits, including persuading children to come to school when sick and get treated. Free tablets were provided. The high pupil attrition from the study (30%) reduced the strength of evidence to 2 . The results showed that the treatment schools had fewer deaths, fewer sick days (effect size 0.23) and slightly less general absenteeism (effect size 0.03).

In one study, children as young as 6 weeks of age were given educational games and activities in a year-round child-care facility (Campbell et al., 2012). The study included 103 families in North Carolina with children deemed at educational risk because of poverty. Families were randomised to a programme lasting from infancy to kindergarten (57 children) or to a control condition (54 children). The results showed that children in the experimental group attended more years of education (effect size 0.62) and were more likely to attend university than their counterparts by the age of 21. They were also more likely to work full-time by the age of 30.

Funding to support teacher training has also shown positive effects on children's school attendance. Baker-Henningham et al. (2012) assessed a preschool-based intervention called the Incredible Years Teacher Training Programme in Jamaica. It involved training teachers and principals in the use of collaborative and experiential learning, individual goal setting and self-monitoring, building teachers' self-efficacy, and focusing on teachers' cognition, behaviour and emotions. In a cluster randomised design, 24 community schools were assigned to receive the treatment or to a control. Three children from each class with the highest levels of teacher-reported conduct problems were selected for evaluation. This included a total of 225 children aged 3–6 years. Children in the treatment group showed an increase in school attendance (effect size 0.30).

Providing children with a play area also has little effect on school attendance. Leos-Urbel and Sanchez (2015) evaluated Playworks, a US programme that provided children in low-income elementary schools with a safe play area, inclusive play and coaching in recess time. The sample included 17 treatment schools and 12 comparison schools. The children were in Grades 1 to 5.

Addressing children's anxiety and relationships may also improve school attendance. Wang et al. (2016) conducted a cluster randomised trial of a social emotional learning programme to address these issues. The children involved were Grade 7 and 8 students in public junior high schools in China. Seventy-five paired schools were randomised to treatment (3,694 students) and control (3,801). Social-emotional skills were taught mainly through activities and games. Midway through, the treatment group had a lower dropout rate (effect size -0.07) and less learning anxiety. However, by the final survey, there was no impact on dropout rates. Attrition was around 20%.

Lee et al. (2020) looked at a US family truancy intervention programme for primary schools. Instead of referring the parents of truant primary school pupils to child protection services or juvenile courts, parents were educated about the importance of school attendance and entered into an attendance contract that included social service referrals. If breached, this could lead to filing a petition for educational neglect with the juvenile court. There were 1,197 pupils in the treatment group and 2,615 matched control pupils. The programme effect was close to zero in terms of pupil attendance. Attrition was over 20%.

Overall, the evidence for alternative use of funding is not as clear as for direct cash transfers. But interventions that provide food in or outside school appear to be promising in getting the poorest children to attend school. Health interventions, especially for girls, are also promising. A small body of evidence suggests that preschool experience is linked to improved enrolment and attendance at school. Other approaches to improving attendance are mostly either not very promising or have not been robustly evaluated, or both. Involving local communities may actually reduce local attendance. Involving parents more makes no apparent difference, and increasing the autonomy of schools, adding play areas or addressing socio-emotional intelligence have only

marginal benefits for attendance. It is likely that there may be more studies on the wider use of funding (not direct transfers) that were not revealed by the search.

## **Discussion**

This review is necessarily limited to summarising the evidence from research that has been completed and found in the search. Much of what we found was rather weak for the purposes of making causal claims. However, across the whole review, enough robust work has been done in this area to draw some implications.

The evidence from the international research clearly suggests (not surprisingly) that to improve attendance and enrolment for disadvantaged children, especially those in nations where attendance and enrolment are not compulsory or enforced, a key first step would be to make schools accessible for all, however rural or remote the area. Access might mean providing transport to and from school. The distance between home and school seems to matter, especially for girls for whom there are also some safety concerns.

A key second step would be to ensure that schooling is free at the point of delivery. However, offering free schooling alone is not enough of an incentive to send all children to school. In regions where attending school incurs an opportunity cost, such as income foregone from child labour, money can be used as an incentive to encourage participation in education to make it more attractive than other alternatives, such as paid labour. Cash transfers when used with conditions attached are shown to be the most effective interventions. Research evidence in this area is generally strong. But it is not just about offering cash. The mode of delivery and the recipient of the money offered can make a difference. The evidence suggests that such cash transfers are most effective for young children if given to parent(s), but for older students, cash is best given directly to the student.

However, in most cases, such positive effects are not sustained once funding from sponsors, such as the World Bank, stops. It is then left to the governments to provide free school places for all and perhaps pay some students for attendance. In low and middle income countries, this may not be sustainable. So it is worth considering how access to free education could be supported without funding from external agencies. For example, community schools might use technology, such as digital education, where children in remote communities can have access to learning without the need to travel long distances, as an alternative.

We also need to consider cultural changes in how education is perceived so that the motivation to get an education need not be extrinsically incentivised. It may take a generation or more for such changes to happen. Perhaps as societies advance with more widespread use of technological innovations, the kinds of jobs that children in poor countries are often expected to do now may become less relevant and less in demand. This may have implications for how education is perceived, encouraging schooling and making early employment of children less feasible.

## **Author biographies**

**Prof Stephen Gorard** is Director of the Evidence Centre for Education, at Durham University, and Fellow of the Academy of Social Sciences. His work concerns the robust evaluation of education, focused on issues of equity and improvement. He is the most published/cited UK education author in the Web of Science over the past 50 years with around 30 books and over 1,000 other publications. He is currently funded by the ESRC to compare teacher supply across the world, and to investigate the impact of the ethnic diversity of the teaching workforce, and by the DfE to evaluate the impact of Glasses in Classes in Opportunity Areas.

**Prof Beng Huat See's** (FACSS, FRSA) expertise is in the use of multiple designs: synthesis of evidence in education, evaluation of large-scale RCTs and re-analysis of secondary data to understand issues relating to teacher and student outcomes. She has published widely on education programme evaluations and the use of evidence in policy and practice. She is an introducer and reviewer on a number of grant assessment panels and funding bodies and serves on advisory boards of government and academic organisations.

**Prof Nadia Siddiqui's** expertise is in education research and equity in education. She has led important education research projects contributing evidence for education policy. Her research interests are to explore the stubborn patterns of poverty and inequalities through population datasets and large-scale surveys. She has a considerable track-record of active citizenship, serving on grant assessment panels, other funding panels, and advisory boards for policy and practice. She is listed among the 75 notable British Pakistani Academics. She is a fellow of the Academy of Social Sciences.

**Dr Nada El Soufi** is an academic working as an English lecturer at the Lebanese American University. She also holds a researcher assistant position at the Durham University Evidence Centre for Education, Durham University. Her research expertise is in systematic reviews of evidence, and her research interests are broadly around critical thinking and English as a second language.

**Dr Loraine Hitt** is a research assistant focusing on balanced evaluation of educational policies and practices. Her thesis investigated the effects of metacognitive and self-regulated learning programmes on mathematics achievement, and her current projects include a systematic review of factors supporting minority teacher participation. Loraine is interested in building an evidence base, communicating effectively with stakeholders, and improving educational outcomes globally.

**Dr Binwei Lu** is an assistant professor at Zhejiang University, China. Her research interests include: social equity, school effectiveness evaluation, academic selection,

access and participation in higher education access, and students' higher education experience. Binwei's expertise is in the use of large-scale administrative data and complex design. Her research output had wide media interests in the UK media. Binwei was awarded the judges commendation in the 2021 BERA Doctoral Thesis Award, and is also the winner of the 2021 Review of Education Early Career Researchers Award.

## References

- Akresh, R., De Walque, D., & Kazianga, H. (2013). *Cash transfers and child schooling: Evidence from a randomized evaluation of the role of conditionality* (Policy research working paper no. 6340). The World Bank.
- Alam, A., Baez, J. E., & Del Carpio, X. V. (2011). *Does cash for school influence young women's behavior in the longer term? Evidence from Pakistan*. Institute for the Study of Labor, Bonn. <https://docs.iza.org/dp5703.pdf>
- Amury, Z., & Komba, A. (2010). *Coping strategies used by street children in the event of illness*. REPOA. [https://media.africaportal.org/documents/Coping\\_Strategies\\_by\\_Street\\_Children.pdf](https://media.africaportal.org/documents/Coping_Strategies_by_Street_Children.pdf)
- Angrist, J., & Lavy, V. (2009). The effects of high stakes high school achievement awards: Evidence from a randomized trial. *American Economic Review*, 99(4), 1384–1414.
- Araujo, M. C., & Macours, K. (2021). *Education, income and mobility: Experimental impacts of childhood exposure to PROGRESA after 20 years*. Inter-American Development Bank. <http://dx.doi.org/10.18235/0003808>
- Baird, S., McIntosh, C., & Özler, B. (2011). Cash or condition? Evidence from a cash transfer experiment. *The Quarterly Journal of Economics*, 126(4), 1709–1753.
- Baker-Henningham, H., Scott, S., Jones, K., & Walker, S. (2012). Reducing child conduct problems and promoting social skills in a middle-income country: Cluster randomised controlled trial. *The British Journal of Psychiatry*, 201(2), 101–108.
- Banerjee, A., Banerji, R., Duflo, E., Glennerster, R., & Khemani, S. (2010). Pitfalls of participatory programs: Evidence from a randomized evaluation in education in India. *American Economic Journal: Economic Policy*, 2(1), 1–30.
- Barham, T., Macours, K., & Maluccio, J. (2013). *More schooling and more learning?: Effects of a three-year conditional cash transfer program in Nicaragua after 10 years*. Inter-American Development Bank.
- Barrera-Osorio, F., Bertrand, M., Linden, L., & Perez-Calle, F. (2008). *Conditional cash transfers in education design features, peer and sibling effects* (Working paper 13890). National Bureau of Economic Research.
- Barrera-Osorio, F., Blakeslee, D., Hoover, M., Linden, L., Raju, D., & Ryan, S. (2017). *Delivering education to the underserved through a public-private partnership program in Pakistan*. The World Bank.
- Barrera-Osorio, F., De Galbert, P., Habyarimana, J., & Sabarwal, S. (2016). Impact of public-private partnerships on private school performance: Evidence from a randomized controlled trial in Uganda. *Economic Development and Cultural Change*, 68(2).
- Behrman, J. R., Sengupta, P., & Todd, P. (2005). Progressing through PROGRESA: An impact assessment of a school subsidy experiment in rural Mexico. *Economic development and cultural change*, 54(1), 237–275.
- Benhassine, N., Devoto, F., Duflo, E., Dupas, P., & Pouliquen, V. (2015). Turning a shove into a nudge? A “labeled cash transfer” for education. *American Economic Journal: Economic Policy*, 7(3), 86–125.
- Berlinski, S., & Galiani, S. (2007). The effect of a large expansion of pre-primary school facilities on preschool attendance and maternal employment. *Labour Economics*, 14 (3), 665–680.
- Berlinski, S., Galiani, S., & Manacorda, M. (2008). Giving children a better start: Preschool attendance and school-age profiles. *Journal of Public Economics*, 92(5–6), 1416–1440.
- Birchall, J. (2018). *Early marriage, pregnancy and girl child school dropout*. Institute of Development Studies. <https://healtheducationresources.unesco.org/library/documents/early-marriage-pregnancy-and-girl-child-school-dropout>
- Black, M., Walker, S., Fernald, L., Andersen, C. T., DiGirolamo, A. M., Lu, C., McCoy, D. C., Fink, G., Shawar, Y. R., Shiffman, J., Devercelli, A. E., Wodon, Q. T., Vargas-Barón, E., Grantham-McGregor, S., & Lancet Early Childhood Development Series Steering Committee (2017). Early childhood development coming of age: Science through the life course. *The Lancet*, 389(10064), 77–90.

## *Improving attendance and enrolment at school for children living in poverty*

- Borkum, E. (2012). Can eliminating school fees in poor districts boost enrollment? Evidence from South Africa. *Economic Development and Cultural Change*, 60(2), 359–398.
- Buddelmeyer, H., & Skoufias, E. (2004). *An evaluation of the performance of regression discontinuity design on PROGRESA* (Policy research working paper no. 3386). The World Bank.
- Burde, D., & Linden, L. (2009). *The effect of proximity on school enrollment: Evidence from a randomized controlled trial in Afghanistan* (Unpublished working paper). <http://sticerd.lse.ac.uk/seminarpapers/dg11052009.pdf>
- Burger, K. (2010). How does early childhood care and education affect cognitive development? An international review of the effects of early interventions for children from different social backgrounds. *Early Childhood Research Quarterly*, 25(2), 140–165.
- Campbell, F., Pungello, E., Burchinal, M., Kainz, K., Pan, Y., Wasik, B., Barbarin, O., Sparling, J., & Ramey, C. (2012). Adult outcomes as a function of an early childhood educational program: An Abecedarian Project follow-up. *Developmental Psychology*, 48(4), 1033.
- Chaudhury, N., & Parajuli, D. (2007). *Conditional cash transfers and female schooling: The impact of the female school stipend program on public school enrollments in Punjab, Pakistan* (Policy research working paper no. 4102). The World Bank.
- Chaudhury, N., Friedman, J., & Onishi, J. (2013). *Philippines conditional cash transfer program impact evaluation* (Report 75533-PH). The World Bank.
- Chen, Y., Jin, G., & National Bureau of Economic Research. (2010). *Does health insurance coverage lead to better health and educational outcomes? Evidence from Rural China* (Working paper no. 16417). National Bureau of Economic Research.
- Chhabra, E., Najeeb, F., & Raju, D. (2019). *Effects over the life of a program: Evidence from an education conditional cash transfer program for girls* (Group policy research working paper no. 9094). The World Bank.
- Chitolina, L., Foguel, M., & Menezes-Filho, N. (2016). The impact of the expansion of the *Bolsa Familia* Program on the time allocation of youths and their parents. *Revista Brasileira de Economia*, 70(2), 183–202.
- Chyi, H., & Zhou, B. (2014). The effects of tuition reforms on school enrollment in rural China. *Economics of Education Review*, 38, 104–123.
- Dahl, G., & Lochner, L. (2012). The impact of family income on child achievement: Evidence from the earned income tax credit. *American Economic Review*, 102(5), 1927–1956.
- De Brauw, A., & Gilligan, D. (2011). *Using the regression discontinuity design with implicit partitions: The impacts of Comunidades Solidarias Rurales on schooling in El Salvador*. International Food Policy Research Institute.
- De Janvry, A., Finan, F., Sadoulet, E., & Vakis, R. (2006). Can conditional cash transfer programs serve as safety nets in keeping children at school and from working when exposed to shocks? *Journal of Development Economics*, 79(2), 349–373.
- Dean, J. T., & Jayachandran, S. (2019). *Attending kindergarten improves cognitive but not socioemotional development in India*. Poverty Action Lab.
- Dufflo, E., Dupas, P., & Kremer, M. (2021). *The impact of free secondary education: Experimental evidence from Ghana*. National Bureau of Economic Research.
- Edmonds, E., & Schady, N. (2012). Poverty alleviation and child labor. *American Economic Journal: Economic Policy*, 4(4), 100–124.
- Edmonds, E., & Shrestha, M. (2014). You get what you pay for: Schooling incentives and child labor. *Journal of Development Economics*, 111, 196–211.
- Evans, D., & Ngatia, I. (2018). *School costs, short-run participation, and long-run outcomes: Evidence from Kenya* (Policy research working paper 8421). The World Bank.
- Evans, D., Hausladen, S., Kossec, K., & Reese, N. (2014). *Community-based conditional cash transfers in Tanzania: Results from a randomized trial*. World Bank Publications.
- Eyal, K., Woolard, I., & Burns, J. (2014). *Cash transfers and teen education: Evidence from South Africa* (Working paper). <http://hdl.handle.net/11090/689>
- Ferreira, F., Filmer, D., & Schady, N. (2009). *Own and sibling effects of conditional cash transfer programs: Theory and evidence from Cambodia*. The World Bank.
- Filmer, D., & Schady, N. (2009). *School enrollment, selection and test scores* (Policy research working paper no. 4998). The World Bank.
- Galiani, S., & McEwan, P. (2013). The heterogeneous impact of conditional cash transfers. *Journal of Public Economics*, 103, 85–96.

- Garlick, R. (2013). *How price sensitive is primary and secondary school enrollment? Evidence from nationwide tuition fee reforms in South Africa* (Unpublished working paper). The World Bank. <http://pubdocs.worldbank.org/en/3241466186067633/garlickschoolfees.pdf>
- Gaviria, J. (2022). Education: A compulsory right? *British Journal of Educational Studies*. <https://doi.org/10.1080/00071005.2021.2024136>
- Giordono, L., & Pugatch, T. (2017). Non-tuition costs, school access and student performance: Evidence from the Gambia. *Journal of African Economies*, 26(2), 140.
- Gitter, S., & Barham, B. (2008). Women's power, conditional cash transfers, and schooling in Nicaragua. *The World Bank Economic Review*, 22(2), 271–290.
- Glewwe, P., Olinto, P., & de Souza, P. Z. (2003). *Evaluating the impact of conditional cash transfers on schooling: An experimental analysis of Honduras' PRAF program* (Unpublished manuscript). University of Minnesota.
- Gorard, S. (2021). *How to make sense of statistics: Everything you need to know about using numbers in social science*. Sage.
- Gorard, S., See, B. H., & Siddiqui, N. (2022). *Making schools better for disadvantaged students*. Routledge.
- Gorard, S., See, B. H., & Siddiqui, N. (2023). Review of evidence on finance-based interventions to improve attainment at school [Submitted for publication]. *Review of Education*.
- Heckman, J. (2006). Skill formation and the economics of investing in disadvantaged children. *Science*, 312, 1900–1902.
- Hermanussen, M., Bilogub, M., Lindl, A., Harper, D., Mansukoski, L., & Scheffler, C. (2018). Weight and height growth of malnourished school-age children during re-feeding: Three historic studies published shortly after World War I. *European Journal of Clinical Nutrition*, 72(12), 1603–1619.
- Jacoby, E., Cueto, S., & Pollitt, E. (1996). Benefits of a school breakfast programme among Andean children in Huaraz, Peru. *Food and Nutrition Bulletin*, 17(1), 1–11.
- Kazianga, H., De Walque, D., Alderman, H., & Faso, C. (2008). *Educational and health impact of two school feeding schemes. Evidence from a randomized trial in rural Burkina Faso* (Policy research working paper no. 4976). The World Bank.
- Kim, J., Alderman, H., & Orazem, P. (1999). Can private school subsidies increase enrollment for the poor? *The World Bank Economic Review*, 13(3), 443–465.
- Lee, W., McNeely, C., Rosenbaum, J., Alemu, B., & Renner, L. (2020). Can court diversion improve school attendance among elementary students? Evidence from five school districts. *Journal of Research on Educational Effectiveness*, 13(4), 625–651.
- Leos-Urbel, J., & Sanchez, M. (2015). *The relationship between Playworks participation and student attendance in two school districts*. John W. Gardner Center for Youth and Their Communities.
- Levy, D., & Ohls, J. (2010). Evaluation of Jamaica's PATH conditional cash transfer programme. *Journal of Development Effectiveness*, 2(4), 421–441.
- Levy, D., Sloan, M., Linden, L., & Kazianga, H. (2009). *Impact evaluation of Burkina Faso's BRIGHT Program* (Final report). Mathematica Policy Research.
- Martinez, S., Naudeau, S., & Pereira, V. A. (2017). *Preschool and child development under extreme poverty: evidence from a randomized experiment in rural Mozambique* (Policy research working paper no. 8290). World Bank.
- Meng, X., & Ryan, J. (2003). *Evaluating the Food for Education program in Bangladesh* (FMRSP working paper no. 35). International Food Policy Research Institute.
- Montgomery, P., Hennegan, J., Dolan, C., Wu, M., Steinfield, L., & Scott, L. (2016). Menstruation and the cycle of poverty: A cluster quasi-randomised control trial of sanitary pad and puberty education provision in Uganda. *Plos One*, 11(12).
- Morrissey, T. (2017). Child care and parent labor force participation: A review of the research literature. *Review of Economics of the Household*, 15(1), 1–24.
- Noble, K., Houston, S., Brito, N., Bartsch, H., Kan, E., Kuperman, J., Akshoomoff, N., Amaral, D. G., Bloss, C. S., Libiger, O., Schork, N. J., Murray, S. S., Casey, B. J., Chang, L., Ernst, T. M., Frazier, J. A., Gruen, J. R., Kennedy, D. N., Zijl, P. V., ... Sowell, E. (2015). Family income, parental education and brain structure in children and adolescents. *Nature Neuroscience*, 18(5), 773–778.
- Oster, E., & Thornton, R. (2009). *Menstruation and education in Nepal* (Working paper no. 14853). National Bureau of Economic Research.
- Parker, S., Todd, P., & Wolpin, K. (2006). *Within-family program effect estimators: The impact of Oportunidades on schooling in Mexico*. University of Pennsylvania.

## *Improving attendance and enrolment at school for children living in poverty*

- Raudenbush, S., & Eschmann, R. (2015). Does schooling increase or reduce social inequality? *Annual Review of Sociology*, 41, 443–470.
- Ravallion, M., & Wodon, Q. (2000). Does child labour displace schooling? Evidence on behavioural responses to an enrollment subsidy. *The Economic Journal*, 110(462), 158–175.
- Rodriguez-Planas, N. (2012). Longer-term impacts of mentoring, educational services, and learning incentives: Evidence from a randomized trial in the United States. *American Economic Journal: Applied Economics*, 4(4), 121–39.
- Schady, N., & Araujo, M. (2006). *Cash transfers, conditions, school enrollment, and child work: Evidence from a randomised experiment in Ecuador*. The World Bank.
- Sharp, C. (2002). *School starting age: European policy and recent research*. National Foundation for Educational Research.
- Simwaka, B., Simwaka, K., & Bello, G. (2009). Retrospective analysis of a school-based malaria treatment programme demonstrates a positive impact on health and education outcomes in Mangochi district, Malawi. *Journal of Development Effectiveness*, 1(4), 492–506.
- Skoufias, E., & Shapiro, J. (2006). *Evaluating the impact of Mexico's quality schools programme: The pitfalls of using nonexperimental data*. The World Bank.
- Slavin, R., & Smith, D. (2009). The relationship between sample sizes and effect sizes in systematic reviews in education. *Educational Evaluation and Policy Analysis*, 31(4), 500–506.
- Slavin, R. (2020, April 16). Cherry picking or making better trees? <https://robertslavinsblog.wordpress.com/2020/04/16/cherry-picking-or-making-better-trees/>
- Taggart, B. (2010). Vulnerable children: Identifying children 'at risk'. In K. Sylva, E. Melhuish, P. Sammons, I. Siraj Blatchford, & B. Taggart (Eds.), *Early childhood matters* (pp. 182–207). Routledge.
- Tan, J., Lane, J., & Lassibille, G. (1999). Student outcomes in Philippine elementary schools: An evaluation of four experiments. *The World Bank Economic Review*, 13(3), 493–508.
- Thomson, D. (2019). *Some thoughts on 'the children leaving school with nothing'*. Family Fisher Trust. <https://ffeducationdatalab.org.uk/2019/09/some-thoughts-on-the-children-leaving-school-with-nothing/>
- Todd, P., & Wolpin, K. (2003). Using a social experiment to validate a dynamic behavioural model of child schooling and fertility: Assessing the impact of a school subsidy programme in Mexico. *American Economic Review*, 96(5), 1384–1417.
- Tsai, W., Liu, J., Chou, S., & Thornton, R. (2009). Does educational expansion encourage female workforce participation? A study of the 1968 reform in Taiwan. *Economics of Education Review*, 28(6), 750–758.
- UNICEF. (2018). *Out-of-school children in the Balochistan, Khyber Pakhtunkhwa, Punjab and Sindh Provinces of Pakistan*. [https://www.itacec.org/document/sector\\_plans/UNICEF UIS\\_pakistan\\_oosc\\_report\\_2013\\_en.pdf](https://www.itacec.org/document/sector_plans/UNICEF UIS_pakistan_oosc_report_2013_en.pdf)
- Wang, H., Chu, J., Loyalka, P., Xin, T., Shi, Y., Qu, Q., & Yang, C. (2016). Can social–emotional learning reduce school dropout in developing countries? *Journal of Policy Analysis and Management*, 35(4), 818–847.
- Wong, H., Luo, R., Zhang, L., & Rozelle, S. (2013). The impact of vouchers on preschool attendance and elementary school readiness: A randomized controlled trial in rural China. *Economics of Education Review*, 35, 53–65.
- The World Bank. (2018). *Pakistan: Can private schools catering to the poor increase access and improve learning? From evidence to policy*. <http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=ED589943&site=ehost-live>
- Zenebe, M., Gebremedhin, S., Henry, C., & Regassa, N. (2018). School feeding programme has resulted in improved dietary diversity, nutritional status and class attendance of school children. *Italian Journal of Pediatrics*, 44(1), 16–16.