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The effectiveness of foreign aid to education What can be learned?



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ABSTRACT

This article reviews what has been learned over many decades of foreign aid to education and discusses what works and what does not work. It shows the positive contribution that aid has made to education in aid-recipient countries, the most tangible outcome of which is the contribution that aid makes to expanding enrolments especially of basic education. But the article also indicates that there is a considerable gap between what aid does and what it could potentially achieve, especially in relation to its contribution to improvements in educational quality. It shows the distortions caused by focusing on enrolments and insufficiently on quality. Sustainable education outcomes will not be achieved merely by reproducing yet more successful, but individual projects. Perversely, development agencies which focus only on demonstrable short-term impact may well be contributing, unwittingly, to an undermining of long-term impact on the education systems and their deepening development, to whose progress they are trying to contribute.

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1. Introduction

The simplicity of the question, 'What do we know about what works in foreign aid to education?' unfortunately, is not matched by the simplicity of a list of effective interventions or the simplicity in the way aid to education is provided. In recent years there have also been many new and different approaches in the provision of aid to education. If that doesn't make an assessment of the effectiveness of aid to education difficult enough, the challenges are compounded by the fact not only that education serves many purposes, but educational outcomes are influenced more by what goes on outside schools than within them-widening further the complexities involved in assessing the effectiveness of foreign aid to education. It is at least as challenging as assessing attempts to reform and improve our own national education systems, without crossing international boundaries. Nonetheless, decades of work and accrued knowledge and experience have yielded lessons of what works best, even if such lessons reflect detailed approaches involving capacity development, mentoring, new accountabilities as well as specific 'inputs'.

The basics of support to education comprise what could be termed 'first order' educational requirements such as classrooms, teachers and instructional materials. However, educational outcomes are profoundly influenced by a range of critical and less easily measurable factors such as the nature of the curriculum, the effectiveness of teacher training, the appropriateness of learning materials, school location, school and teacher amenities, the mentoring, supervision and leadership of heads and teachers, the status and respect afforded them by the local community and its involvement in the school. Foreign aid to education can both focus on and contribute greatly to some of these building blocks to improved learning, but drawing a direct causal connection between the foreign aid provided and learning achievements involves far more than merely counting the number of pupils enrolled in primary school and assessing progress towards universal enrolment, one of the Millennium Development Goals. But even here critical problems often arise. When countries near the goal of universal primary education, many face huge challenges to include the final five or so per cent, as these are the 'hardest-toreach' often including those with a range of disabilities and those from marginalized groups. Achieving anything near to universal access also remains a huge challenge in many fragile states, no less ensuring that the learning provided within the classroom is of a standard and quality to enable those passing through the schools to lead fulfilling and productive lives.

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Against this complex backdrop, most aid agencies take the 'easy' route in providing an account to the public at home of the results of their interventions in the education field-by focussing mostly on reporting on the 'numbers assisted' rather than educating the public, on whose votes they rely, and deepening public awareness of the complicated nature of development effectiveness (and only one of its constituents, aid effectiveness). In some cases, they go even further, claiming in their 'simple sound-bites' achievements for which the evidence is wanting. For instance, the largest multi-donor funded education programme, the Global Partnership for Education (GPE, formerly known as the Fast-Track Initiative or FTI) claims that 'countries receiving support from the GPE perform better in all basic education indicators than countries receiving no Partnership support' implying that 'their' foreign aid has 'worked'. In contrast, having reviewed the best available evidence, the Preliminary Report of the Mid-Term Evaluation of the Education for All (EFA) Fast Track Initiative (Cambridge Education et al., 2009), was only able to conclude that there is 'no robust evidence that FTI-endorsed countries have systematically outperformed un-endorsed ones'2.

The purpose of this article is to review what has been learned over many decades of foreign aid to education. It discusses what works and what doesn't and in this discussion will draw attention to the fact that even a simple assessment requires more than providing a uniform check-list of 'inputs'. It goes on to provide some guidance as to how aid effectiveness could be improved to reach more sustainable, education outcomes. This article does not, however, seek to provide prescriptive answers to specific problems, but instead to define a broad set of unresolved issues in the aid architecture for education. Thus, the reader should approach this article as a problem-posing piece, in which questions are raised (not answered), for future research in the field.

The article is organised as follows: Section 2 focuses on what we know about aid's impact on education, going through some of the constituent factors and some of the major studies of aid to education. Section 3 examines each of the more important ways aid has been provided—the different 'aid modalities' project aid, sector-wide approaches (SWAps) including programme-based approaches (PBAs) and budget support. Some of the ways these interventions have changed and been improved over time are also discussed. Section 4 focuses on some of the most important 'wider issues' that are essential to understanding the overall contribution that aid can make to education and what factors continue to impede success. This includes what we know about bringing to scale different aid-supported programmes, and the lessons learned and challenges still facing aid donors in the critical areas of budgetary support, institutional strengthening, the political dimensions of aid-giving, the 'transferability' of aid-supported educational programmes, capacity development via technical cooperation, knowledge transfer, financial support and South-South dialogue. Finally, Section 5 draws together the threads of earlier sections to make some concluding remarks on the effectiveness of aid to education and what has been learned.

2. What works in foreign aid to education?

Educationists have continually pointed out that it is far easier to show the impact of aid-supported health interventions than education ones: improvements in mortality rates are more visible in the short term than increased learning. However, when attempting to assess the contribution of aid to service-delivery, aid to the health sector faces quite similar challenges as does aid to education. This is because attribution is typically multifaceted: providing textbooks and speeding up textbook distribution, like the provision of anti-malarial bednets, will no doubt contribute to overall impact, but determining and especially trying to quantify its specific contribution to broader outcomes is far from easy when set alongside many other contributory factors, only some of which are aid-related. And to identify *sustainable improvements* is even more difficult as it requires attention to the social, political and economic contexts of the reform as well as the inter-linkages with inputs from other sectors.

2.1. Aid to education and aid impact studies

From 1995 to 2010 total aid to education increased in real terms by 360 per cent, from US\$2.9bn (in constant 2010 US\$) to US\$13.3bn in 2010 (see Table 1). Over this same period, total aid to basic education increased by 630 per cent, to secondary education, by 294 per cent and to post-secondary education, by 244,268 per cent³. Whereas the breakdown by sub-sector of aid to education in 1995 comprised 19 per cent to basic, 12 per cent to secondary education and less than 1 per cent to post-secondary education, in 2010, this breakdown was 30 per cent for basic, 10 per cent for secondary education, and with post-secondary education attracting 40 per cent of total aid to education.

Whilst recent studies suggest that aid has contributed to positive educational achievements over the past decades (see Birchler and Michaelowa, 2016), it remains difficult to quantify the impact of aid on education outcomes for a number of reasons. Part of the problem has been the focus of impact on school enrolment and attainment rather than on measurements of education quality. To some extent, this has been rectified by the creation of data on educational achievement indicators such as the Programme for International Student Assessment (PISA), Trends in International Mathematics and Science Study (TIMSS) and Progress in International Reading Literacy Study (PIRLS) as well as from regional learning achievement studies such as the Southern and Eastern African Consortium for Monitoring Educational Quality (SACMEQ) and the Programme on the Analysis of Education Systems of the Conference of Ministers of Education of Francophone Africa (PASEC)⁴. However, the focus of many development agencies has still been on the contribution of aid toward the achievement of the Millennium Development Goals, and therefore on increased enrolments, attainment and gender parity⁵.

Aid has been channelled into a variety of interventions such as school feeding programmes, classroom construction, teacher education, girls' scholarships, programmes to reduce student drop-out, curriculum development, targeting different educational levels and utilizing different aid modalities. Project impact evaluations by development agencies have tended to produce more positive results than the studies of aid impact utilizing panel data from international aid and education statistics. When focused

¹ http://www.globalpartnership.org/results/ comparative-performance-data-gpe-vs-non-gpe-countries/ (accessed 3 January 2012). Five indicators were used: (1) total enrolment; (2) primary school completion rate; (3) gender parity in primary completion; (4) percentage of repeaters; and (5) percentage of total government expenditure devoted to education.

² The Report continues: 'These findings are not surprising, given the short data series available, the likelihood of selection biases, the complexity of underlying processes and the heterogeneity of countries within each group'.

³ These total aid to education figures can be compared with those for total aid to the health sector: for the same period, in real terms, aid to the health sector increased from US\$2.4bn to US\$9.2bn, an increase of 284 per cent, and for aid to basic health, the increase was 397 per cent, from US\$1.4bn to US\$7.1bn (OECD StatExtracts, 2012).

⁴ Programme d'analyse des systèmes éducatifs de la CONFEMEN, where CONFEMEN stands for Conférence des ministres de l'éducation des pays ayant le français en partage

⁵ See for example the UNESCO (2011) Education for All Global Monitoring Report that highlights the achievements in terms of school enrolment, and reduced gender gaps.

Table 1Total and sub-sectoral ODA to education (constant 2010 US\$m) (all donors).

	1995		2000 2005		2005		2010	2010	
	US\$m	% Total	US\$m	% Total	US\$m	% Total	US\$m	% Total	
Total aid	2888.237	100	6376.738	100	8489.961	100	13,298.645	100	
Level unspecified	1408.548	49	1781.985	28	1836.347	22	2739.402	21	
Basic education	542.801	19	2038.808	32	2777.058	33	2961.403	30	
Secondary education	334.729	12	685.815	11	914.248	11	1319.495	10	
Post-secondary education	2.16	<1	1870.129	29	2962.308	35	5278.345	40	

Source: OECD/DAC International Aid Statistics, Creditor Reporting System http://stats.oecd.org/Index.aspx?datasetcode=CRS1 (accessed 5 April 2012).

on the impact of aid to education on outcomes such as access to education or years of completed education, studies have found very small impact. For instance, Michaelowa and Weber (2006) found an increase in the primary completion rate of 2.5 points for an increase in aid to education of 1 per cent of GDP. Their study utilized sectoral aid data drawn from OECD DAC statistics from the early 1970s to 2000 and education statistics drawn from the UNESCO Institute of Statistics data base for 2006 encompassing 120 low and lower-middle-income countries. Michaelowa and Weber (2007) followed up this work by disaggregating sectoral aid by education level but found no greater impact than in their earlier work.

Another longitudinal study (Dreher et al., 2008) analyses the overall impact of aid over several decades using a production function approach covering 96 low and middle-income countries from 1970 to 2004. Their results indicate an impact of aid approximately two to three times higher than the estimates of Michaelowa and Weber: on average increasing aid to education by 1 per cent of GDP produces an increase in primary enrolment of 2.5–5 per cent. They do not find that government expenditure on education increases enrolment significantly, nor democracy.

One of Hanushek's (1981) earliest studies on the relationship between educational expenditure and student outcomes found a weak association, an issue that was subsequently examined by Hedges et al. (1994a) in an exchange with Hanushek not limited to different modelling approaches⁶. Whilst this earlier work was not focused on aid to education, the lack of relationship found between education expenditure and educational outcomes is important in order to understand the inefficiencies that dog the use of aid for raising educational achievement. Hanushek and Woessman (2007), looking at the impact of education quality, rather than education expenditure on economic growth, present strong evidence of a relationship between cognitive skills and economic growth. However, this does not take us any closer to the impact of aid – and its use – on educational outcomes, including improving educational quality, in spite of its more relevant focus⁷.

Indeed, identifying the contribution that aid makes to learning outcomes, in contrast to the focus solely on quantitative expansion of educational systems is a growing feature of the literature on impact and reflects decades of school effectiveness research which has tried to identify the impact on learning outcomes of particular interventions⁸.

2.2. School effectiveness research

School effectiveness research was first undertaken within the industrialized world, and hence by donor countries themselves,

and subsequently used within developing countries, primarily by industrialized country researchers, focused on production functions that were termed 'determinants of achievement', isolating individual inputs and trying to assess which would give the most 'bang' for each aid 'buck' contributed to an education system (see e.g. Lockheed and Verspoor, 1991). Though the research in aid-recipient countries mirrored that carried out in industrialized countries, surprisingly, the early conventional wisdom from this work made out that developing countries were different from industrialized countries because the school rather than family background factors mattered more in influencing learning achievement differences-reinforcing the view that providing aid to schools was an effective way of using aid resources. However, the veracity (and simplicity) of these early conclusions have been challenged by other work (see Riddell, 1989). School effectiveness research continues especially with the increasing attention being paid to the production of more direct measures of educational quality through learning assessments (see Wagner, 2011).

2.3. Randomized control trials

In recent years, donors have given less attention to aid inputs and tried to focus more on results and impacts and outcomes of the aid provided. Interestingly, as increased emphasis has been placed on showing impact and results for aid expenditure, a lot of aid-supported research has reverted to studying specific inputs or pilot projects, rather than education policies and systems, through randomized controlled trials (RCTs). Table A1 in Appendix A provides a summary of the key impact results of RCTs of such interventions over the past decade. The academic literature is increasing rapidly, as RCTs have emerged as a 'gold standard' of impact analysis, though serving a donor's interest far more than that of a recipient country, which will always have to focus on the education system as a whole, and not merely the individual interventions, which like the research, typically, are financed and directed externally.

The work presented in Table A1 encompasses the findings from studies of several different types of interventions. For example, conditional cash transfers (CCTs) given to poor female students in rural Cambodia have had positive effects on their attendance, though not on their learning (Ferreira et al., 2009). Eighteen months into the programme, recipient children did no better in maths and vocabulary tests than the control group. A more complex scholarship programme devised in Bogota, Colombia impacted positively on attendance rates, pass rates, enrolment, graduation and matriculation (Barrera-Osorio, 2008) with the largest impact on children who were paid only if they matriculated high school. The evidence from research into CCTs in education by the World Bank (Fiszbein and Schady, 2009) predominantly underlines the impact of such interventions on enrolment and attendance rather than on learning achievement. Similarly, the impact of deworming treatment in Kenyan schools studied by Kremer and Miguel (2004) is shown in increased school

⁶ See (Hedges et al., 1994a,b) and (Hanushek, 1994).

⁷ Indeed, it is ironic that the MDGs focused on the quantitative indicator, primary school completion, as a proxy for the quality of education, i.e. the number of years thought to be sufficient for the retention and sustainability of the capacities acquired.

⁸ a systematic review on the impact of education policies on school learning, see Masino and Niño-Zarazúa (2016).

participation rates, but not in relation to greater learning achievement.

Other types of interventions studied through RCTs include different approaches to accountability in schools, increasing the information available to parents and local communities on school and student performance; increasing teacher accountability, through performance incentives and monitoring, as well as the employment of non-civil service 'contract' teachers; and school-based management. The World Bank reviewed some of the available evidence on these interventions in (Bruns et al., 2011) and found more mixed impact on learning achievement, as opposed to attendance. Masino and Niño-Zarazúa (2016) in this Issue conducted a systematic review on experimental and quasi-experimental evidence of what works to improve education quality in developing countries and found that education policies are more successful when implemented with a combination of multiple interventions.

It is evident that much has been uncovered with respect to the specific effects of individual inputs or approaches in providing aid to education. However, 'the' lesson of what works in aid to education has become clearer and it is this: that providing effective aid to education which seeks not merely to increase 'numbers' - of children in school, textbooks, schools and teachers - but to make a lasting improvement to learning and thus has quality at its core, is both complex and difficult. There is no 'set' and established blueprint of what to do that can be applied generally to all countries. What is needed will be informed not only by the educational system as a whole but by the political economy and sociology of education systems, and by the goals and purpose of formal and non-formal education systems. It will include the obvious basic inputs of teachers, classrooms and instructional materials, but will also need to include or take stock of the status, salary scales and deployment of teachers who, themselves have been educated, the curricula and design and use of examinations, the mentoring, supervision and support of teachers, the policy analysis and targeting of resource allocation to embrace systemic and specific needs, including meeting ethnic, locational and gender requirements, and advancing increased access for those with disabilities with sufficient attention paid to quality improvement so as not to create a second-class system provided for those without alternative choices.

Whether through school effectiveness research utilizing production functions or RCTs of particular interventions, neither approach is capable on its own of providing an holistic template of education reform. Thus, as aid to education has financed many different interventions, which subsequently, have been studied with such models, perhaps it should not be surprising that such a blue-print hasn't emerged. As Glewwe and Kremer (2005) found in their review of research into the impact on education outcomes in developing countries, 'providing additional resources. may have little impact on learning.'

2.4. Planning, and judging success

Good planning can shed light on some of the inter-linkages between aid's specific contribution and its overall impact, foreseeing the consequences of particular aid interventions. This is often in spite of even aid to the education sector as a whole typically being ring-fenced by ministries or NGOs as well as by the sectoral departments of development agencies themselves. Indeed, planning and the surrounding education management information systems (EMIS) feeding such plans have constituted a major area of aid to education: helping countries to create reliable and robust data on issues such as enrolments, transition rates and to plan the expansion of school systems and assess teacher training needs. Nonetheless, without some national data collection yielding the

gaps in educational provision – for example, of classrooms, textbooks, teachers or latrines – or the black spots of poor outcomes – whether of access, completion or learning achievement – it remains hard to determine where to target aid-supported interventions no less independent, national reforms. Such mapping of needs has extended into research typically funded by aid to determine the effectiveness of different inputs to educational reform. For example, girls' scholarships have been an intervention used in many countries to address gender disparities in school access and completion, based on the accumulated data of EMIS as well as household surveys.

As well as focusing on the impact of a particular policy intervention such as girls' scholarships, hiring contract teachers or deworming students, if aid is directed at planning and data collection such as with EMIS, how should 'impact' be judged for contributing to such basic capabilities necessary for addressing education development and identifying the areas requiring prioritization and the policy interventions to address them? Largely because such basic capabilities are prerequisites of the greater alignment of aid to education with a country's own objectives, and because donor countries and their agencies have committed themselves to the Organization for Economic Cooperation and Development (2005), 'success' has been judged by the production of the 'plan' or the 'EMIS' or whatever particular output has comprised the objective of the aid. Indeed, aid to planning and EMIS has typically been a precursor to most educational investment using the new aid modalities, rather than particular projects.

The success of aid to educational planning, however, needs to be judged not only by the products or outputs produced, such as an educational plan or an annual educational data census, but, also (and far more importantly) by the successful use of such outputs, that is by the contribution they make to furthering better educational outcomes⁹. Providing more textbooks and raising primary school completion, for instance, have often been taken as 'proxies of learning' and other, qualitative, sustainable outcomes, but there is, of course, no guarantee that they do contribute to better learning. In the case of educational planning, it is the use of such plans and EMIS data for identifying resource needs, targeting allocations and determining appropriate policies which comprise the qualitative outcomes and which illustrate that processes of systemic change are taking place. 'Successful' planning is linked to ownership, leadership, capacity development, public sector reform and the institutional and organizational capacity development that underwrites individual skill acquisition (Bray and Varghese, 2011; Riddell, 2009).

2.5. New aid modalities

More sophisticated aid approaches were initiated from the mid-1990s to try to address the complexity of education systems. These included budget support, from which funds could be utilized for the education sector, as well as 'sector-wide approaches' or SWAps. These new aid modalities emerged from critiques of the weaknesses of project aid. The problem with projects is not that they do not 'work', but that they tend to create islands of excellence amidst seas of disadvantage and so do not provide lasting solutions to a country's educational problems or they isolate individual variables for support. What is needed is a more systemic approach and it is this which the new aid modalities seek to provide. The Paris Declaration was, in fact, the culmination of much of the work piloted in many parts of the world in aid to the social sectors. The share of project aid, however, remains large in comparison with

⁹ See the discussion of aid-funded use of data for planning purposes in (Riddell, 1997) covering Namibia, Botswana and Zimbabwe.

these other forms of aid, still comprising nearly half (48 per cent) of all ODA to education in 2010 or almost US\$6.4bn out of US\$13.3bn¹⁰.

2.6. SWAps and PBAs

Sector-wide approaches as a means of providing aid to education emerged from the accumulation of evidence of the disappointing lack of sustainability of aid projects in the mid-1990s, with the health and education sectors as the first testing grounds for these new approaches, primarily in Africa. The term 'programme-based approach' came into being largely so that development agencies that were less keen either on channelling their resources primarily through government, who wanted to include NGOs and CSOs more directly in their programmes, or who were still wedded to projects but who also wanted to be included with the 'SWAp' donors, could 'feel part' of these new aid initiatives (UNESCO, 2007). Irrespective of the terms used, the idea of both SWAps and PBAs is to align the aid being given more closely to an education sector plan, and the Paris Declaration commitments on aid effectiveness provide the broader context for such sector development.

How important are SWAps and PBAs to education aid? As originally conceived, SWAps were meant both to address the weaknesses of stand-alone project aid and to try to capture the significant potential benefits of donors working more co-operatively in a joint enterprise with recipient countries. As they began to be set up across a growing number of countries, SWAps encompassed different aid modalities which could include some project aid, provided these projects were consistent with and helped contribute to wider educational goals, and build local capacities. Thus SWAps are best (and more accurately) defined more as an approach, rather than a wholesale move away from projectized funding.

Because the terms 'SWAp' and 'PBA' both denote 'approaches' and are not aid modalities as such, definitional differences obscure precise figures (OECD, 2006b). Data from the 2009 EFA Global Monitoring Report suggest SWAps are of growing significance: the share of aid delivered through sector programmes in education increased from 31 per cent in 1999-2000 to 54 per cent in 2005-2006. However, if one were to use the categorization of types of aid in the OECD/DAC statistical database, then in 2010 only 5 per cent of total aid to education comprised sector budget support, with an additional 3 per cent in the form of pooled or basket funds (see Table 2). This does not mean, confusingly, that development agencies utilizing project aid are not contributing to SWAps, however. 11 Notwithstanding the trend reported in the EFA GMR for an increasing share of aid to education going through SWAps, under the EFA Fast Track Initiative (FTI) (now called the Global Partnership in Education (GPE), (FTI, 2009), from 2002 to the end of 2009, the project modality of providing education aid was used in 28 countries, pooled funds in 6 countries, and sector budget support in only 4 countries¹². Yet of the 28 FTI-endorsed low-income countries up to 2010, 21 of these had SWAps in place or under preparation (FTI Secretariat). It would seem that some development agencies are contributing and engaging with education SWAps but remaining risk-averse in terms of using either sector budget support or a pooled fund for its aid.

Table 2ODA to education sector by type of aid, 2010 (US\$m).

Type of aid	US\$m	% Total aid to education
Sector budget support	723,259	5
Pooled/basket fund	365.344	3
Project support	6350.183	48
Experts/TA	1445.079	11
Scholarships/student costs in donor countries	3473.006	26
Multilateral and international NGO support	730.579	5
Support to NGOs, private bodies, PPPs,	203.624	2
research institutes		
Other	7.571	<1
Total	13,298.645	100

Source: OECD/DAC International Aid Statistics, Creditor Reporting System http://stats.oecd.org/Index.aspx?datasetcode=CRS1 (accessed 5 April 2012).

2.7. Budget support

Channelling aid through national budgets has been a feature of aid in recent years, either as general or sectoral budget support, in spite of the proportion of aid channelled through these aid modalities still being quite small. As discussed earlier, sector budget support comprised 5 per cent of aid to education in 2010 and general budget support just 2.6 per cent of all aid to all sectors. Despite the small overall proportion of aid channelled through budget support, in some countries, however, it has comprised as much as 20-30 per cent of their official aid. This was the case, for instance, in the early 2000s in Ethiopia. Tanzania, Uganda and Burkina Faso (Advisory Board for Irish Aid. 2008). Both forms of budget support have relevance to the discussion of aid to education. An understanding of the considerable experience with budget support - both general and education sector-specific - will add to our discussion of what works in aid to education, especially as experiences with SWAps across different countries have embraced a variety of aid modalities.

2.8. Institutional reform of education and political economic insights

The new aid modalities provide a more holistic perspective on the role of aid to education, prioritizing the aid recipient's objectives in their education plans. Having to balance policy options for a whole education system takes one along a different path from determinants of achievement research, and also from the more narrowed focus of RCTs. They comprise a more complicated interface of aid impacting educational systems rather than merely individual, identifiable outcomes. This raises the issue of institutional reform, together with all the interlinkages between different institutions rather than any individual education policy per se. Thus, for instance, public sector reform might have a greater impact on classroom teaching than any particular teaching intervention. Hanushek and Woessman (2007: 79) point out that 'For educational investments to translate into student learning, all the people involved in the education process have to face the right incentives that make them act in ways that advance student performance'.

Grindle (2010: 21) raises another important, related political economy issue. She points out that 'In practice, whatever the ideas behind social policy interventions, there tends to be a political bias in favour of more services rather than higher quality ones'. Political trade-offs often fly in the face of evidence of impact of discrete interventions. The prominence of investment in building schools or enabling increasing access to them biases politicians toward such investments: they are better vote-catchers than improving the quality of education which is both much more difficult to achieve

 $^{^{10}\,}$ See Table 2 and Section 3 on SWAps and Budget Support.

¹¹ It is currently difficult to create a time series of ODA by aid type as these classifications are being mapped historically by OECD/DAC Statistics.

¹² See Tables I.42 and I.44 in Appendix I of Volume 3 of Cambridge Education et al. (2010).

and less rapidly observable. With the failure to impact educational quality, one result of continuing investment in quantitative improvement is that the middle-class exit the public system, leaving the poorer families who are harder to organize and to give voice to their concerns about the quality of education their children are receiving.

Likewise, Booth (2011) points to the need not only to identify the 'right' institutional reforms, just like the policy interventions with the greatest impact, but those that are feasible, where there is room to manoeuvre. How many policies are enacted on the basis of a donor's pilot impact evaluation when the necessary funding is provided by the donor? How many continue after the funds are no longer provided? This is why a longer-term as well as more complex understanding of assessing success is so critical.

2.9. Lessons of aid's impact on education

RCTs can test individual policy interventions in situ and therefore, are contextualized for the country - or at least the locality - where they are being tested. The impact results can contribute to the evidence base for a palette of reforms at any one particular time, but unless followed up, there is no knowing whether their impact will be successfully scaled up and be sustainable. The developing world is replete with examples of innovative projects together with the research and evaluations which illustrate their effectiveness, but which subsequently are not brought to scale. Glewwe and Kremer (2005) underscore the importance of contextualizing interventions within wider 'processes': 'Rather than an engineering process of replicating 'best practices' and assuming costs, development is about evolution, growth, and continuous improvement. Pritchett (2008) also argues that the role of the state vis-à-vis parents and communities is bolstered in three ways: first, by legitimizing schooling as a public good rather than acknowledging its properties as a private good; second, by engaging in research for policy makers who do not subsequently disseminate the results of such research; and third, by perpetuating 'false notions' about how innovations will be brought to scale.

The remainder of this section reviews some of the lessons that have been drawn from some of the development agencies' syntheses of their aid to education. In searching for the impact of education aid on education outcomes, especially of educational quality, we have used several sources, none of which has been decisive in describing 'what works' sustainably.

The European Commission (2010) analysed the lessons from its experience of support to education in developing countries. One lesson outlined is the importance of working on a whole sector approach which not only includes the continuum from early childhood education through to lifelong learning, but which also reinforces the linkages between education and the world of work. Related to this lesson is a second one which underlines the linkages between education and other sectors that impact access, quality and inclusion in education. For instance, the intersectoral linkage between teachers' compensation and public sector reform that requires looking beyond the education sector for solutions or alternative approaches. The decentralization of education management has been implemented in many countries with the support of aid. However, as education administrations are decentralized, they often suffer the fate of being poorly resourced. It used to be the case that development agencies would not allocate funding for teachers' or administrators' salaries, seeing such recurrent expenditure as a national responsibility. This has changed with the introduction of sector-wide support.

Another lesson relates to the need to include a division of labour amongst development agencies engaged in the sector, so as not to crowd in work on the same sub-sector or issue. Also included is complementarity, to ensure appropriate and sufficient coverage of different educational areas, for instance, to avoid all the Member States funding teacher education.

This is important as countries with more balanced investments across the different educational sub-sectors have grown fastest. Yet, in spite of the consensus on the need for such a comprehensive and balanced approach, uneven development has characterized the education trajectories of so many countries, a contribution to which have been the different preferences of development agencies for particular education sub-sectors over the past decades. Table 1 shows that whereas in 1995 less than 1 per cent of aid to education went to post-secondary education, in 2010 it comprised 40 per cent of all aid. Whilst aid to basic education has grown from 19 per cent in 1995 to 33 per cent in 2005, in 2010, its share diminished to 30 per cent of total aid. The share of aid going to secondary education, meanwhile, has been quite steady over this period, ranging from 12 per cent in 1995 to 10 per cent in 2010. Yet it is this sub-sector which is meant to feed post-secondary education, especially in countries in which universal primary education has been or has nearly been attained.

If one looks at what is emphasized in the publicity surrounding MDG 2 after ten years, the positive achievements noted are the surges in enrolments following the abolition of primary school tuition fees in many countries (viz. Burundi, Ethiopia, Ghana, Kenya, Mozambique, Malawi, Nepal, and Tanzania), the additional classrooms, teaching materials and teachers hired, and the focus on attracting and retaining in school girls, ethnic minorities, and the hard to reach (UN 2010). No mention is made of learning, in spite of the investments made and aid channelled into important building blocks for increasing enrolments, numbers of teachers, infrastructure, promoting girls' education and expanding access.

The Chapman and Quijada (2009) review of USAID education project evaluations notes the prevalence of student learning achievement as the most important indicator of education quality – in 28 of the 33 projects reviewed – though with only 9 evaluations methodologically able to draw valid conclusions. Of these, in only 5 interventions were significant learning gains recorded, with mixed results reported for the impact on learning achievement, across the different evaluations. Like Kenny (2010), who draws out the comparison between 'schooling' and 'learning', in spite of the investments made with aid funding, there are often relatively small learning gains, even in those projects recording positive impact.

A study of the relationships between learning scores and other measures of school quantity and quality (Education Policy and Data Center, 2008), utilizing learning assessment and examination data for 25 developing countries, found no strong nor consistent relationship between learning scores and 'entry rate, primary net attendance rate, survival rate', nor 'the pupil teacher ratio'. Thus, the evidence suggests that many of the so-called achievements or successes of aid to education would seem to have a pyrrhic quality.

USAID commissioned an in-depth evaluation of its support to education (Gillies, 2010) over two decades. A key finding was related to the lack of sustainability of the interventions assessed, in spite of the success of most projects. The study also points to factors that go beyond financial sustainability including: (i) the need to integrate interventions within the context of long-term goals for the education system—whether the interventions involve decentralization, service delivery, policy dialogue, information and analysis, teacher training, workshops, textbooks or

testing; (ii) the importance of ownership of the programme or intervention – not merely at the top – but throughout the system – involving each level of stakeholder from national through regional down to school level administrators and including teachers and parents; and (iii) the necessity of having 'feedback loops' that can sustain change and bring interventions to scale. Such 'loops' can involve public information, gaining political support, devising incentives, *etc.* Such feedback loops are fundamental to sustainable, systemic change and continuous improvement, requiring the alignment between institutional leadership and stakeholder ownership. Without such stakeholder involvement and ownership, surviving frequent changes in political leadership will be difficult.

3. The evidence on aid modalities

What has been achieved by the different aid modalities donors have applied to different recipient countries? The next sections review the scant evidence on the topic and discuss the existing challenges¹³.

3.1. Project aid

The fact that project aid continues to be given in significant amounts is striking. In 2010 nearly half of the total aid to education committed to developing countries was in projectized form (see Table 2). This is in spite of repeated critiques and the cumulative experience of the advantages of the new aid modalities. Project aid is given either with lip service paid to the international commitments on aid effectiveness or with rationalizations as to why project aid is the appropriate approach. Some projects, of course, can serve important purposes, especially in piloting new approaches. However, their success can never make more than a partial and limited contribution to sustainable educational progress, given the complexity of reforming education systems and the need for all the different and diverse stakeholders in education to work together to achieve lasting change.

Rigorous analysis of different aid modalities is made more difficult by donors adopting the 'new' rhetoric of co-operation and arguing that they are providing their aid to education as part of sector-wide approaches while continuing to provide aid in project form, but in a manner little different from traditional practices. For instance, the commitment to reducing the number of standalone Project Implementation Units (PIUs) within which discrete donor-funded projects were run, has often resulted in their reinvention, as Ministry-embedded, equivalent PIUs, within which local staff are paid supplementary salaries to ensure the work of the Unit is prioritized, where such staff are answerable to technical assistants (TA) or even their line managers, who, themselves, have been designated as Project Directors¹⁴. These changes ensure that these Units are not 'counted' as stand-alone PIUs, but in practice they function almost the same as they have always done.

3.2. SWAns

Education SWAp experience has been reviewed recently by Boak and Ndaruhutse (2011), and also by (Cafferini and Pierrel, 2009) that look in specific at the experiencea of L'Agence Française de Développement (AFD) in Burkina Faso, Mauritania and Niger. The main conclusions of these two studies provide a mixed picture and one far less positive than is commonly conveyed in donor literature. Whilst SWAps are in theory still heralded as better than project aid, there have also been problems. For instance, many donors have not changed their earlier practices in giving aid, while institutional management constraints and capacity development and political hurdles have held back the potential of SWAps to make a greater difference to education in aid-recipient countries.

The harmonization and alignment gains from SWAps have neither always materialized, and there has been more limited progress on meaningful engagement between national governments and civil society (Institute for Health Sector Development, 2003). 'Light' alignment in a SWAp has often meant little more than ensuring that the project objectives matched 'an' objective in the education sector development plan. And civil society engagement has often meant little more than having a single representative on the otherwise donor agency—government education group.

The Boak and Ndaruhutse (2011) analysis, however, underlines certain achievements that have emerged from education SWAps: improved inter-governmental relationships as well as partnerships between national governments and donors; and improved planning capacity and broad institutional development. Providing aid 'on-budget' has enabled broad state-citizen accountability, especially when policy trade-offs and their underlying resource needs are made transparent. Whereas donors in the past were shy to support recurrent costs, SWAps have often encompassed these, and coupled with support for capacity building, this has added value. SWAps have also contributed to what have become common practices across many countries: fee-free basic education service delivery, and in some cases, post-basic education. The enrolment gains seen in many countries due to the abolition of school fees have been supported through SWAps. In addition, SWAps have influenced targeting of the disadvantaged in gaining access to education in many countries through policies which have emerged from policy dialogue between donors and government, for instance (UNICEF, 2006).

Furthermore, there is a need for greater ownership and leadership by recipient countries, and from the donors' perspective, a need to analyse the political economy of each country before implementing a SWAp, to understand and incorporate formal and informal incentives into the design of a SWAp. Similarly, the underdeveloped links between SWAps and civil service reforms, public financial management and sector management reviews often results in poor national integration of such fundamental policies (Brown et al., 2001). So rather than the bolstering of country systems, donor behaviour within SWAps often brings with it few externalities for national systems, whether for planning, budgeting, monitoring and evaluation, sector reviews, or human resource policy.

3.3. Budget support

One of the largest, most comprehensive and in-depth evaluations of General Budget Support was undertaken in the mid-2000s, (IDD and Associates, 2006) which included seven country case studies, underlining the importance of the increased expenditure and expanded basic services resulting from Partnership General Budget Support (PGBS). Some of the direct effects of PGBS on

 $^{^{13}}$ For a discussion on the 'Paris-style' aid modalities in the social sectors, see Addison et al. (2015).

¹⁴ There are many examples of this, including those in which the recipient governments legislate for ministry staff working on such donor projects to receive 'priority operating costs' (POC) (supplements) in relation to such work, such as in Cambodia, where the 'POC' is only due such staff in the GPE (WB-administered) and ADB project offices—in the Ministry of Education, Youth and Sport (Royal Government of Cambodia, 2010).

service delivery have been observed through increased expenditure and expanded education services, but often at the cost of deterioration in quality. Many of the key findings from the analyses of the impact of SWAps in education are also echoed in a more recent study of sector budget support in Mali and Rwanda (Williamson and Dom, 2010).

The study highlights the diminished policy dialogue surrounding education sector budget support, attributing this in part to the deprofessionalization of in-country donor staff, their mobility and the tendency for line ministry policy and planning departments to take the lead on the dialogue. Policy and planning departments 'tend to be made up of individuals with finance and economics backgrounds who have limited interaction with frontline service providers. They are therefore more comfortable discussing plans and budgets than specific issues relating to service delivery'. Such underlying reasons for diminished policy dialogue affect not only inter-departmental communication within ministries of education, but the utility of policy-related research for ministries of education.

4. What could work better in foreign aid to education?

Answering the question, 'What would work better in aid to education?' requires one to consider the obstacles to implementation. Problems lie in both the aid agencies themselves as well as within the recipient countries. The recent survey of progress made in relation to the Paris Declaration commitments illustrates well how difficult it is to induce behaviour change (OECD, 2011). It shows that five years on from the international commitments, only one of the thirteen targets has been reached, and that only marginally.

4.1. Capacity development, knowledge transfer and technical cooperation

One of the great blind spots in foreign aid, generally, relates to capacity development. The problem is not that capacity development has been neglected. Quite the opposite: it has been a major focus of donor aid efforts. The problem lies in the manner in which it has been approached. Donors have decades of 'capacity building' experience and huge sums of money have been spent on capacity development (European Commision, 2006). Capacity development failures, however, have continued to be manifested in projects as well as in SWAps, in pooled funds and in budget support programmes. They could be seen as the beam in the donors' eyes as they point out the mote in recipient governments'. 'Knowledge transfer' and 'technical co-operation' need to be viewed from within the perspective of the track record of capacity development.

So what precisely is the problem? There are the mantras of good practice in capacity development. For example, the Accra Agenda for Action (2008) stresses the fundamental importance of leadership, management and co-ordination by recipient governments when approaching the issue of building up national institutions and ensuring their effective functioning. Our understanding of 'good practice' in capacity development has moved along the trajectory from 'gap-filling' and individual training to paying 'attention not only to skills and organizational procedures, but also to issues of incentives and governance' (OECD, 2006a).

Institution building has been clearly highlighted as requiring further attention in the evaluations reviewed above. However, efforts to link aid to institution building and organizational development in a way that builds durable institutions and develops sustainable organizations has fallen short.

Monitoring and mentoring the processes and changes needed in what goes on in the classroom to improve the quality of education are crucial linkages for sector budget support and education SWAps. Failures to build and sustain adequate capacities in the classroom can easily be seen as problems that national governments have to address: they require national leadership and management as well as real ownership. When, in the world of SWAps, the project director in the Ministry of Education is no longer responsible for reporting on classroom competence and performance to the interested development agency, where does the incentive lie and the monitoring take place to ensure that the required reforms have been institutionalized, and who is overseeing their further development? Who has the incentive to see that this is done?

What further complicates the process is that the national coordinator may well be one of those whose capacities require further development in order to carry out his role (De Grauwe, 2009; Netherlands Ministry of Foreign Affairs, 2011).

One of the reasons that this approach persists is that the way that capacity development is 'managed' by donor agencies. Capacity development projects attract the personnel for the jobs, a request for proposal may be issued by the development agency, to which consultancy firms respond with their rosters of 'experts' with the know-how and track records to do the job. Often, a team of people will be chosen, who may never have met each other before, and whose interpersonal skills may well also be an unknown. Local firms and personnel may well be included in the roster, but typically, it is difficult for them to compete with international consultancy firms (Williams et al., 2003).

UNESCO's International Institute for Education Planning (IIEP) has carried out extensive research into capacity development in the education sector (De Grauwe, 2009) including two case studies of donor influence on capacity development in education planning in Guyana and Bangladesh (Riddell, 2011). The Mid-term Evaluation of the FTI also focused on capacity development and specifically the Education Programme Development Fund (EPDF)¹⁵. The studies point out the importance of focusing on the *process* of capacity development and not merely the product. When funding is predicated on capacity development, the danger is that it becomes formulaic. What is particularly worrying is that these problems have been repeatedly highlighted in successive evaluations of capacity development; both within the education sector and beyond (see e.g. World Bank, 2005)

4.2. What do we know about the 'transferability' of aid-supported educational programmes?

What we know about the 'transferability' of aid-supported educational programmes is closely linked to what we know about bringing to scale any pilot educational projects. It encompasses: that the contextualization of programmes into the (unique) political economy of the recipient country and ministry is crucial; that local ownership and national leadership are essential; that capacity development initiatives surrounding the 'transferred' programmes are comprehensive, and also locally owned and led; and that there is (always) locally-based co-ordination by those buying in to the programme.

The cumulative and extensive knowledge built up from evaluations and research of educational aid interventions do provide lessons of what might work in different contexts. Development agencies wanting to find quick wins may continue to fund education programmes that have been found to be

¹⁵ See Cambridge Education et al. (2010), Volume 3, Appendix IV.

successful elsewhere provided they understand the different local contexts. However, to be successful, education programmes need to be conceived and run systemically. Even short-term interventions need to be conceived within long-term frameworks that relate to the way institutions are run and organized and with an understanding of the way that current incentives work within institutions.

4.3. South-South co-operation

The statement of the Busan Partnership for Effective Development Co-operation (2011), which was the key outcome of the (4th) High Level Forum on Aid Effectiveness was the first that included the 'new official donors', notably India, China and Brazil as well as representatives of civil society organizations in an internationally agreed statement on aid effectiveness. South–South and triangular co-operation are important and form part of the increasingly complex 'jig-saw' of relationships and stakeholders with roles to play in enhancing the impact and effectiveness of aid. There is the potential for such relationships to differ in practice from North–South co-operation, but there is nothing automatic about South–South co-operation producing more sustainable, quality outcomes.

One way in which the gap between the rhetoric and the reality of capacity development, institutional development and knowledge transfer might be narrowed is through the incentive system. Clearly, the incentives for deepening aid effectiveness need to be strengthened. While setting up South–South learning and knowledge exchange often draws on enormous enthusiasm of the involved actors, implementing longer-term activities can face challenges. Frequent changes of decision-makers and officials in the public sectors stand out as a critical factor putting at risk continuity in implementation and accumulation of lessons learned'. It is the longer-term sustainability and capacities of the institutions and organizations responsible for the strategic management of the education sector and the coordination of aid contributions to it that requires greater attention by all.

4.4. What do we know about the scalability of aid-supported educational programmes?

One of the clear lessons of effective aid to education is that a holistic, systemic view is required. In most cases, this is represented by the education sector development plan and donors then look beyond such a plan for the other macro influences on its implementation: the share afforded to education in public expenditure, teachers' salaries and allowances and their relationship to public service reform, a sectoral medium-term expenditure framework and a results framework. However, putting all the pieces together is a challenging task, made more complicated by the multiple demands made of education ministries to meet different donors' requests. Upscaling educational programmes is made more difficult by the fragmentation of donors' contributions, but if agreement on the co-ordination of different inputs can be reached, the bringing to scale of successful pilot programmes is likely to be more successful. Just the same, the challenges of foreseeing and accommodating appropriately all the linkages within the educational system of any programme will need to be addressed.

The challenges of 'going to scale' have been addressed in a number of studies of education reform. Samoff et al. (2011) highlight the lack of documentation of pilot education reforms in Africa that have been effectively scaled up to become nation-wide programmes. Their findings underline the importance of charismatic and effective local leadership, strong local demand for the

innovation at each site, and adequate funding, and also warn against various negative effects of upscaling, resulting in the destruction of promising reforms. Local roots need to be cultivated, raising the challenge of programme replication, especially where external funding superimposes policies in place of local initiative.

Similarly, Gillies (2010) underlines the components of reform that need to be successfully addressed for bringing pilot projects to scale: genuine ownership and leadership at all levels and the sustainability of the reform. These factors go beyond any positive impact of the individual pilot project itself and therefore provide a wider framework in which the results of such evaluations need to be considered.

A World Bank (2002) study listed a number of elements, which have fed into the spread of the new aid modalities in aid to education. On the recipient country side, they include: country commitment to improving policies, governance and institutions; sound policies and committed leadership at the country level (supported by appropriate expenditure frameworks and effective budget execution); community and country ownership; adequate operational capacity to implement at all levels; capacity of communities to participate effectively, and the right incentives. On the side of donors, the elements for bringing programmes to scale include: external support for change and capacity building; financial resources adequate to scale up programmes that work; and value-for-money considerations as well as government's seeing the advantages in scaling up. These elements were drawn on case studies 16 which led, for instance to the Indicative Framework used in FTI, which proved controversial precisely because it appeared as a blueprint for transferring 'best practice', and thus working against the contextualization that has been emphasized as being necessary in most studies of education outcomes

Evidence of a project's success is clearly an insufficient basis for upscaling: all three reviews pinpoint the importance of adequate funding, strong demand, adaptability, sufficient capacity to manage the larger-scale intervention and local ownership and leadership as crucial ingredients of success. Samoff et al. (2011) and Gillies (2010) both emphasize the importance in upscaling of understanding the conditions and context that enabled the reform to take place before attempting to replicate it and the importance of wide stakeholder involvement.

5. Concluding remarks

We have shown the positive contribution that aid has made to education in aid-recipient countries, the most tangible outcome of which has been the contribution made to expanding enrolments especially of basic education. But we also indicate that there is a considerable gap between what aid does and what it could potentially achieve, especially in relation to its contribution to improvements in educational quality. However, perhaps the most important conclusion relates to aid's contribution to capacity development in education—on the one hand, an issue of central importance, but on the other, one in which the record has been characterized by systemic weaknesses and failures and in which few lessons seemed to have been learned.

If capacity development is at the root of much of what does not work, as well as what could work better in aid to education, how has this been played out across the different factors that have emerged from this analysis? Certainly the complexity of education systems and the multiplicity of factors that influence

 $^{^{\}rm 16}$ The case studies were Uganda, Malawi, Ghana, El Salvador, Tanzania, Guinea and Madagascar.

the outcomes of those who pass through them is a central issue, with clear implications both for enhancing educational outcomes as well as for designing appropriate capacity development policies.

We have highlighted weaknesses of particular approaches. For instance, projectizing capacity development is not the answer, nor are donor-led capacity assessments that identify 'gaps' and then try to fill them because even when the competencies are developed, their sustainability within a ministry of education has been questionable.

Aid to the education sector has certainly helped to expand the technical skill base of ministry staff, by increasing, especially, the planning and EMIS functions, but, as the analysis has shown, donors have repeatedly given priority to skills training to deliver more immediate products such as the plans or the annual school census data over progress in institutional and organizational capacity development, so that insufficient attention has been paid to their use within the ministry: one cannot 'make' staff use data unless it serves a purpose. If, or when, the purpose is to 'supply' data to donors for 'their' accountability rather than for the ministry's own targeting and resource allocation, then the plans and policy analysis will quickly become more like alien instruments than tools that, embedded in the core workings of the ministry, enhance the government's ability to respond better to its own demands for information and its use. Data use must be driven by need, not directed from on high, or from outsiders, or it will remain someone else's agenda.

Responsibility for the weakness of aid's contribution to capacity development in education lies not solely with the contributing donors, however. In the absence of national leadership hungry for such capacity development, aid's contribution will be lessened considerably, given the lack of sustainability of the capacities developed. When donors drive the capacity development agenda, ministry officials may well agree to the proposed capacity development projects and work with donors to help achieve their objectives, and staff may well be trained. But the likelihood of the overall 'system' improving will be low, as the evidence consistently seems to confirm.

What this suggests is the need for broad accountability and transparency of information, such as pointed out by Pritchett (2008), in warning that aid's bolstering of the state's role in the provision of education services as a public good may inadvertently diminish the voice of private (individual and family) stakeholders.

Recent years have seen a marked shift by donors towards greater attention to education quality, due in part to the limited evidence of their aid's impact. And they are financing considerable learning achievement assessments, such as EGRA, but also the regional and international achievement surveys. The danger is that either, like the plans, the EMIS and the policy analysis, the

information garnered from these assessments will not be used to focus on improving the system, or that internationally managed assessments will supersede the national assessments required and will utilize the limited, trained staff to focus on trying to achieve objectives other than those nationally owned and understood.

We have shown that many of the lessons of what works in aid to education are known, but they are not implemented. These lessons are of two sorts, the first cluster relates to the interface of aid with education systems in recipient countries. To make a difference, what is of paramount importance is to start at the level of the whole education sector—rather than to pick out the sub-sector most popular with donors and channel a disproportionate share of funds to make this 'work' better, for this distorts a government's sector-wide planning.

The second cluster of lessons are those related to the 'nuts and bolts' of education systems themselves—what makes them work, how the different bits fit together and how aid funding can distort priorities, making the government co-ordination efforts more difficult as well as creating fragmented accountability. Add to this the projectized capacity development and the untouched institutional or organizational development, together with any lack of leadership or ownership of the capacity development, and the distorting influence of aid likely trumps their contributions. We have reported the distortions of focusing on enrolments and insufficiently on quality, on products such as plans and EMIS, and 'inputs', rather than processes and outcomes, such as, what the students learn, and whether the teachers' pay and status are sufficient to keep them in the classroom and continuing to teach.

It is easier it is to assess the impact of health than educational interventions. Aid to education and its evaluation needs to be systemic and long-term, and the capacity development that is afforded needs to be nationally managed and co-ordinated. Sustainable education outcomes will not be achieved merely by reproducing yet more successful, but individual projects. Perversely, development agencies that focus only on demonstrable short-term impact may well be contributing, unwittingly, to an undermining of the education systems and their deepening development, to whose progress they are trying to contribute.

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Appendix A

Table A1

Table A1A summary of some recent, representative random controlled trials in education.

Author(s) (year of study)	Title	Publication (year) and (web link)	Type of policy intervention under analysis	Country/ region (rural/ urban)	Methodology	Sampling and sample size	Outcome variables used	Main findings incl. impact size
Ferreira, Francisco H. G., Filmer, Deon, and Schady, Norbert (2005–2007)	Own and Sibling Effects of Conditional Cash Transfer Programmes Theory and Evidence from Cambodia	World Bank Policy Research Working Paper 5001 (2009) (http://ddp-ext.worldbank. org/EdStats/KHMimp09a.pdf)	Scholarships for poor female students	Cambodia (Rural)	Two-period schooling decision partial equilibrium regression discontinuity model	100 schools/800 middle schools in scholarship programme in five provinces offering 3800 student scholarships/ 26,537 applicants; households from schools selected randomly from these provinces	Drop-out scores, work for pay, work without pay, siblings work	Increased attendance, but no better achievement; Scholarship recipients were more than 20 percentage points more likely to be enrolled in school and 10 percentage points less likely to work for pay
Barrera-Osorio, F., M. Bertrand, L. L. Linden and F. Perez-Calle (2005-06)	Conditional cash transfers in education: design features, peer and sibling effects evidence from a randomized experiment in Colombia	NBER Working Paper No. 13890 (2008) (http://www.nber.org/papers/w13890)	Three treatments: a basic conditional cash transfer based on school attendance, a savings treatment that postpones a bulk of the cash transfer due to good attendance to just before children have to re-enroll, and a tertiary treatment where some of the transfers are conditional on students' graduation and tertiary enrollment rather than attendance	Bogota, Colombia (Urban)	RCT. Simple difference estimates, then with controls for individuals and families, then an instrumental variables model to estimate externalities, OLS	Random allocation of about 10,000 treatments were made to about 17,000 registered children following a recruitment drive. This model enabled randomization at the child-level, generating variation within schools, families, and networks of friends. The randomization was stratified on locality, type of school (public/private), gender, and grade level	Attendance rates	On average, the combined incentives increase attendance, pass rates, enrollment, graduation rates, and matriculation to tertiary institutions. Taken together, all of the cash incentive treatments generate significant changes in the behaviour of students directly treated by the programme. Students are more likely to attend school (2.8%), more likely to remain enrolled (2.6%), more likely to matriculate to the next grade (1.6%), more likely to graduate (4.0%), and more likely to matriculate to a tertiary institution (23%). For daily attendance, the effect is much stronger for students who would not have met the attendance target without the program. Simply changing the timing of the transfer with the savings incentive increases enrolment in both secondary and tertiary institutions over the basic treatment (by 3.6% and 3.3% respectively) while not reducing the daily attendance rates of students despite the lower monthly transfers. Compared to the basic treatment, the tertiary treatment encourages higher levels of daily attendance (3.5% more for students least likely to attend) and higher levels of enrolment at the secondary (3.3%) and tertiary levels (46%). Important spillover effects of the programme are observed within

families and peer networks

Author(s) (year of study)	Title	Publication (year) and (web link)	Type of policy intervention under analysis	Country/ region (rural/ urban)	Methodology	Sampling and sample size	Outcome variables used	Main findings incl. impact size
Kremer, M and Miguel, E. (1998-2000)	Worms: identifying impacts on education and health in the presence of treatment externalities	Econometrica 72, 1 (2004) (http://elsa.berkeley.edu/-emiguel/ pdfs/miguel_worms.pdf)	Deworming	Kenya (Rural)	Group-level randomization to identify peer effects; probit estimation with non-experimental method for decomposing direct and within- school indirect externality effects	75 schools, 30,000 students in 3-year phased programme	Health and education outcomes: effect of deworming; attendance and school exam scores	Deworming increased school participation in treatment schools by at least seven percentage points, a one-quarter reduction in total school absenteeism. Within-school participation externality benefits were positive and statistically significant (5.6 percentage points) for untreated pupils in the treatment schools in the first year of the programme. The average school participation gain for treatment schools relative to comparison schools across both years of the project is 5.1 percentage points. The estimated differences in test scores between pupils in treatment and comparison schools are –0.032 standard deviations for the first year posttreatment and 0.001 standard deviations for the second year, neither of which is significant, nor are the within-school externality effect estimates statistically significant
Andrabi, Tahir, Das, Jishnu and Khwaja, Asim (2004–2005)	Report cards: the impact of providing school and child test- scores on educational markets	The Abdul Latif Jameel Poverty Action Lab (2009) (http://www. povertyactionlab.org/publication/report- cards-impact-providing-school-and- child-test-scores-educational-markets)	Detailed information of externally collected data on performance, intensively disseminated to parents, teachers, and school administrators	Punjab, Pakistan (Rural)	RCT—half schools in villages in treatment group;Standard Difference in Differences	112 villages chosen at random: 823 public and private schools, 12,000 Grade 3 children, 5000 teachers and a sample of 1800 households	Test scores at the student and school level in Urdu, Maths and English, school fees, school inputs, teacher effort, and household inputs	Initially bad (below median baseline test scores) private schools respond by increasing quality—showing learning gains of 0.34 standard deviations - or shutting down, but show limited fee changes. In contrast, initially good (above median) private schools show no learning gains, but drop fees substantially. Government schools see a tenth of a standard deviation increase in learning. Report card provision improves learning by 0.10 standard deviations and decreases private school fees by 21 per cent, with very small changes in school switching and moderate increases in overall enrolment
Muralidharan, Karthik and Sundararaman, Venkatesh (2005–2007)	Teacher performance pay: experimental evidence from India	Journal of Political Economy Vol. 119, No., pp. 39–77 (2011) (http://www.jstor. org/stable/10.1086/659655)	1. Group bonus payments to teachers based on the average improvement of their students' test scores in independently administered learning assessments (with a mean bonus of 3% of annual pay) and individual bonuses based on teacher performance. 2. Parallel initiative for different set of schools provided with an extra contract teacher, and with a cash grant for school materials respectively	Andhra Pradesh, India (Rural)	Experimental design using pooled group and incentive dummy variable at school level regressed on test scores (with separate student, grade, school and, mandal residuals)	500 schools. Random allocation of incentive programmes across a representative sample of 300 government-run primary schools with 100 schools each in the group and individual incentive treatment groups and 100 schools serving as the comparison group. Sampling 5 districts across each of the 3 socio-cultural regions of AP in proportion to population with random selection of one division and then random sample of 10 mandals in the selected division. Random sample of 10 schools in each mandal with probability proportional to enrolment	End of year student assessments using independent tests based on syllabus. Teacher behaviour in response to the programme with both teacher interviews as well as direct physical observation of teacher activity	1. +2 years: students in incentive schools performed significantly better than those in control schools by 0.27 and 0.17 standard deviations in math and language tests respectively. Positive spillovers in non-incentive subjects. 2. Schools receiving the input programmes scored 0.08 SD higher than those in comparison schools. The incentive programmes had a significantly larger impact on learning outcomes (0.22 versus 0.09 SD). The mean treatment effect of 0.22 SD and a minimum average treatment effect of 0.1 SD at every percentile of baseline test scores for group incentive. Average treatment effect was 0.28 SD in the individual incentive schools compared to 0.15 SD in the group incentive schools

Source: Andrabi et al. (2009), Barrera-Osorio, Bertrand, Linden and Perez-Calle (2008), Duflo, Hanna and Ryan (2012), Ferreira et al. (2009), Kremer and Miguel (2004), Muralidharan and Sundararaman (2011) and Pradhan et al

	A. Riddell, M. Nino-Zarazua/Interno
The absence rate (measured using unannounced visits both in treatment and comparison schools) changed from an average of 42% in the comparison schools to 22% in the treatment schools; +1 year: test scores in programme schools were 0.17 standard deviations higher than in the comparison schools and children were 40% more likely to be admitted into regular schools	Dropout rate, repetition rate, and test scores in Indonesian and Maths
Students: basic competency exams controlled for bontrolled for Teacher attendance rates: number of valid days teaching	420 treatment schools in nine debrois in nine darrics in central dava and Yogyakarta
60 informal one-teacher schools in rural India, randomly chosen out of 120 (the treatment schools); other 60 = control schools	evaluation + qualitative research
RCT: OLS and 2SLS estimation	Two-stage sampling, pairwise impact
India (Rural)	(Rural)
Financial incentive programme to reduce teacher absenteeism through data and time camera monitoring at beginning and end of school day	Strengthening school committees through grants (US870) + one or training, democratic election and/or linkage of school committee members with village committee
American Economic Review 102(4): 1241-1278. (https://www.aeaweb.org/articles.php?doi=10.1257/aer.102.4.1241)	American Economic Journal: Applied Economics 6(2): 105–126. (https://www.aeaweb.org/articles.php?doi=10.1257/app. 6.2.105)
Incentives Work: Getting Teachers to Come to School	Improving educational quality through enhancing community participation: results from a randomized field experiment in Indonesia
Duflo, E., R. Hanna and S. P. Ryan (2003–2005)	Pradhan, Menno et al. (2007–2010) Only linkage has significant results: test scores in Indonesian improve by 0.17 standard deviation and 0.22 for linkage + election of committee

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