National Audit Office

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COMPTROLLER AND
AUDITOR GENERAL

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Department for International Development

Bilateral Support to Primary Education

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National Audit Office

Department for International Development

Bilateral Support to Primary Education

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Amyas Morse
Comptroller and
Auditor General

National Audit Office

15 June 2010

The UK is a signatory to ambitious United Nations Millennium Development Goals seeking primary education for all by 2015 and reduced illiteracy in developing countries, with all children able to complete a full course of good quality primary schooling.

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This report can be found on the National Audit Office website at www.nao.org.uk/education-aid-2010

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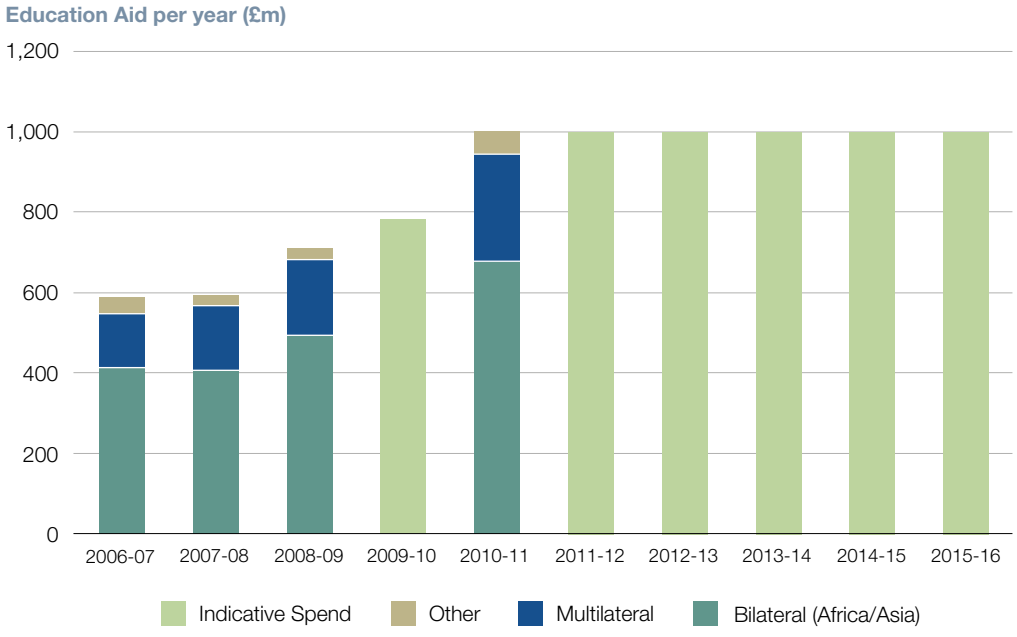
Summary

1 The UK is a signatory to ambitious United Nations Millennium Development Goals seeking primary education for all by 2015 and reduced illiteracy in developing countries, with all children able to complete a full course of good quality primary schooling. DFID's 2001 education strategy incorporated these goals, targeting:

- access to and completion of good quality education for all children, including girls and marginalised groups; and
- recognised and measurable learning outcomes, especially in literacy, numeracy and essential life skills.

2 The Department for International Development (DFID) has committed to rising expenditure on education; planned to reach at least £1 billion in 2010-11 (**Figure 1**). Some 69 per cent is bilateral (country-to-country), while the rest is channelled through other organisations. DFID is amongst the largest funders of primary education alongside the World Bank and the Netherlands. It estimates that its financial contributions in 2007-08 funded around five million children in state primary schools[1].

Figure 1
DFID expenditure for Education



NOTE
1 Cumulative spend = £8.5 billion.

Source: Department for International Development

3 This report focuses on DFID's support to primary education in developing countries since it started to implement the UN Goals in 2001, and what it has achieved against the criteria of pupil enrolment, course completion and attainment. The report also uses indicators, some widely used by international bodies, to assess the extent of efficiency and cost-effectiveness in delivery. Data on costs and progress in countries is generally weak and incomplete. It is rarely possible to analyse the share of progress attributable to specific interventions. But where DFID interventions plan to contribute to progress against particular targets, it is reasonable to associate DFID with the related successes or failures, even though performance depends on the education systems DFID supports. Education systems in developing countries are typically funded at under US$100 annually per child, and this relatively low level of funding influences the outcomes that can be expected.

Key findings

Support to education systems

4 DFID's aim has been to improve and expand state primary education. Its general approach is to move away from delivering aid directly towards influencing and supporting developing country governments' policies to pursue Millennium Development Goals. It derives influence partly as a large donor to state education systems, directing predictable long-term funding through developing country government budgets and specific programmes for school building, textbook procurement and teacher training. Although DFID funding typically represents only around 5 per cent of the national or state primary education budgets it supports, it also encourages other donors to support these systems. In addition, it exerts influence by providing valued technical assistance and policy advice to Ministries of Education, and by work to build management capacity and governance in education systems. The governments it has chosen to work with have largely adopted the goals of universal primary education, gender parity and free primary education – aims prioritised by DFID since 2001. Ministry officials and other donors we spoke to considered DFID a key and supportive donor, responsive to national situations and able to act quickly. But the extent of DFID's influence with national governments varies, partly due to political circumstances as well as how DFID chooses to deliver its programmes.

On enrolment and completion

5 DFID has adopted Millennium Development Goal indicators for enrolment, including parity between girls and boys, in its Public Service Agreement targets for 22 priority countries (**Figure 2** overleaf). Fourteen of these countries are on track to achieve the enrolment goal by 2015, with primary school enrolment in DFID priority countries up from typically 50 per cent or lower in the mid-1990s to 70-90 per cent now. Progress on gender parity has been good, with eight of the 22 already having achieved the goal.

Figure 2
DFID progress against enrolment targets

DFID PSA Success Measure	Achievement
Enrolment in primary education: 12 countries to be kept on-track and progress accelerated in at least four of the remainder.	Fourteen countries remain on-track. Of the rest five are off-track, with progress accelerated in two. Three have insufficient data to measure progress.
Ratio of girls to boys in primary education: 17 countries to be kept on-track and progress accelerated in at least two of the remainder.	Eighteen countries remain on-track; of the remainder three are off-track, and Sudan has insufficient data.

Source: Department for International Development

6 Despite rising enrolment, many challenges remain. Traditional schooling cannot cost-effectively reach remote or migrant communities. There are few rigorous assessments of cost-effectiveness, though evaluation of a non-formal education scheme in Ghana using flexible timetabling, vocational content and community-based teachers, showed it to be 30 times more cost-effective than traditional models. DFID has concentrated its efforts in promoting and funding non-formal approaches to reach the unenrolled, rather than considering the scope to enhance overall cost-effectiveness and affordability by extending successful non-formal approaches into formal schooling.

7 Enrolment is a crucial first step into education. It was therefore a helpful point of focus for DFID's efforts to support greater educational access. However, it is not a sufficient measure of access to education because pupil dropout in developing countries is high, and the amount of education delivered and received is low. Primary education can help poverty reduction only if it equips children with basic knowledge and skills to further their own, and their societies', development. Research indicates that one additional year of education adds approximately 10 per cent to a person's wage. Returns are particularly high for girls if they progress through to secondary, though recent statistics show only 44 per cent do this. So continued attendance is a crucial measure: but among DFID's priority countries typical dropout rates are 10 to 15 per cent for Year One. Completion rates for primary education as a whole are low, ranging from 17 per cent (Malawi) to 57 per cent (Nepal), though calculation of completion is problematic and DFID believes rates in India may be higher. DFID has not incorporated completion into its PSA targets, but tracks this in its departmental strategic objectives.

On attainment

8 Pupil attainment has been poorly measured. DFID has periodically supported initiatives in some countries to improve measurement, but has not consistently supported or required better measurement across its portfolio. The limited data available shows levels of attainment remaining low. Assessments in Ghana, for example, show 11-26 per cent of Year Six students as proficient in English and Maths. There is little or no progress on literacy since the United Nations agreed the Goals in 2000. High enrolment increases the proportion of children from uneducated families, increasing the difficulty of improved attainment.

9 Since 2001 DFID programme objectives have emphasised enrolment much more than completion or attainment, though activities to expand provision, such as teacher training or the procurement of textbooks, would also have been conducive to quality. The imbalance in part reflects how governments and donors collectively have interpreted Millennium Development Goals for Education. The imbalance is beginning to evolve; DFID's programme in India began to promote quality more explicitly from 2008, though effects on achievement will take time to emerge. In Africa, some new programmes address these factors directly – the Quality Improvement Programme in Ethiopia, aims for 9 and 3 percentage point improvements in completion and achievement respectively over three years.

On the efficient use of resources

10 DFID practices devolved management, in which individual country offices manage their resources and operations. DFID's country plans focused on unmet need and ways to expand and strengthen government systems, but did not articulate how planned DFID action, together with that of its development partners, would secure cost-effective, sustainable service delivery towards universal primary education. Indicators of cost effectiveness, such as those specified in an international education indicative framework since 2003, feature little in plans or monitoring. The first DFID review of its education portfolio, in 2009, identified wide variations in DFID approaches and apparent cost-effectiveness, but was not able to distinguish the effect of different contexts from the scope for improved performance. In some countries DFID has funded technical assistance, for example to remove ghost teachers from payrolls, or improved procurement of textbooks. But on the whole it has only fragmentary information on whether pay, materials and school infrastructure costs have been minimised, or on whether outputs, such as lessons taught and contact hours, have been maximised, to permit broad judgements on efficiency. The available evidence indicates scope for improvement.

11 Teachers' pay dominates education budgets, yet DFID has had little focus on it. We found little evidence over the period of monitoring pay levels against international or national comparators and taking specific action, despite indications that teachers' pay above these indicative benchmarks has limited the affordability of educational expansion in DFID priority countries. Work supported by DFID since late 2009 in Ghana has confirmed the extent of the challenge there. An increased focus on affordability will need to consider any effects on quality of teaching.

12 On teacher performance, we found growing awareness of problems but as yet little success in securing improvement.

- Teacher attendance remains problematic, with absences estimated at up to 40 per cent. Time actually teaching is low; as little as one third of intended hours in Ethiopia.
- School inspection arrangements exist in each country we visited, but are not fully functional or resourced. The results of such scrutinies were not always centrally collated. But even where they were, as for school audit in Kenya, DFID did not see them, accepting partner governments' autonomy to choose what they share with donors. DFID is supporting new arrangements such as school score cards to boost community oversight, but impacts are not yet clear.

- DFID has collated information on the unit costs of teacher training, but wide variations in costs have not been explained. In Kenya, teachers are still being trained despite large numbers of qualified teachers being unemployed. In Ethiopia, teachers were selected mainly from the weakest graduates from secondary schooling, leading to quality problems and supplementary training.

13 DFID funds procurement of classrooms and textbooks in many of the countries it assists. A recent DFID review identified wide ranges in unit costs, Classroom construction varied from US$3,600 to US$20,000, while on average textbooks ranged from US$0.50 to US$5.00. Such wide ranges suggest national circumstances alone would not fully explain variations, and further DFID analysis could identify scope for improved value for money. Experience from a DFID-supported unit in Kenya, showing that community contracting could build classrooms at half the cost of centralised contracting, illustrates the potential for improved performance.

14 In March 2010 Ministers announced a new strategy for education with three strategic priorities:

- Access to a basic cycle of primary and lower secondary education, particularly in fragile and conflict affected states.
- Quality of teaching and learning, particularly for basic literacy and numeracy.
- Skills so that young people benefit from opportunities, jobs and growth.

These elements are not new: DFID acknowledged in 2001 that providing poor quality education to more children risked wasting scarce resources, and that without improving quality, education outcomes and broader developmental impacts would not be delivered. The new strategy gives this greater emphasis.

Conclusion on value for money

15 DFID has successfully supported developing countries to pursue universal enrolment and improve educational prospects for girls. It has helped secure significant progress against ambitious targets – although the enrolment targets and Goals are unlikely to be achieved in full, enrolment in DFID priority countries has increased significantly. It has clearly acted as a positive influence in many ways, with qualitative and quantitative effects on education policy and delivery. The economic benefits of attending school in developing countries are high, and research into wage rate returns indicates that they exceed the costs. Improved numeracy and literacy also increase social benefits.

16 Educational quality and attainment, however, have remained at the very low levels prevailing at the start of DFID's 2001 Education Strategy. DFID support has increased the scale of provision, but placed insufficient emphasis on quality and cost-effectiveness. DFID has only recently started to address this imbalance. The

available evidence indicates that aided education systems remain inefficient, consuming scarce existing financial and human resources. There is considerable scope, within existing resources, to improve effectiveness, particularly through more cost effective delivery of teaching time and reduced pupil drop-out. Opportunities to act on warning signs of cost-effectiveness provided by indicative benchmarks have not been fully identified or grasped. DFID needs to take a tougher, clearer stance on the importance of cost and service performance information; particularly on indicators of education delivery and attainment. Without such information, fully informed judgements of value for money achieved, or the cost-effective targeting of assistance, are not possible.

Recommendations

17 The following recommendations address cost-effectiveness, quality and attainment elements that feature in past and present DFID Education Strategies, but need to be better targeted and measured across the portfolio.

a To implement the 2010-15 strategy with more success DFID must:

- Build direct indicators of quality and attainment into internal programme objective and monitoring documents.
- Carry out explicit diagnosis of the barriers to progress in individual countries, with analysis of the cost-effectiveness of the systems DFID intends to support, to better inform its allocation of resources.
- Improve corporate analysis and review of country programmes, to confirm compliance with corporate objectives and to better identify and disseminate good practices.
- Ensure it has sufficient experienced advisers to manage its increased education spending and advise Education Ministries.

b **DFID has focused on pupil enrolment but not on attendance (typically 20-30 per cent are absent on any given day).** DFID should work with governments to:

- Target improved levels and patterns of pupil attendance, and assess its effect on pupil performance.
- Ensure consistent coverage from research on pupil-teacher contact time, attendance, dropout, completion and attainment, to ensure that each country programme is well-informed wherever these are major factors.

c **DFID has funded successful non-formal education initiatives to get marginalised children into education, but cost-effective approaches need wider application.** DFID should:

- Review evidence on the cost-effectiveness of non-formal education initiatives, reflecting this in its programmes and advice to governments.
- Evaluate non-formal education innovations such as flexible, community-driven timetabling, use of local teachers, and the integration of academic and life-skills within the curriculum, assessing whether such features should be reflected in formal schooling.

d **The incomplete examination and assessment data currently available show weak attainment and little or no progress over the last five years.** DFID should in each country work with governments to:

- Promote transparency in school performance, drawing information from school inspection, assessment and examination results enabling local communities to hold schools and teachers to account.
- Improve national examinations to better represent desired learning achievements and to enable comparison across districts and over time.
- Support routine, sample-based student learning assessments throughout primary education, sufficient to track the outcomes of the educational initiatives that it supports.

e **Teachers are the costliest input to primary education, but DFID has not had a close enough focus on their recruitment, pay, behaviour or performance. Instructional hours delivered are often low as a proportion of those planned, and funded.** DFID country operations should:

- Ensure that its support programmes evaluate levels of teacher pay against average wages for educated people, assessing whether budgets can afford sufficient teachers to support full enrolment at 40 pupils per teacher. Influence government pay policies where analysis indicates unaffordability, or that an excessive share of education funding is captured by service providers.
- Support functional school inspection regimes, and feed summarised results into their own interventions.
- Work with Education Ministries to ensure that incentives and sanctions on school and teacher performance are adequate to motivate improvement.

f **Wide variations in input unit costs, of textbooks, classrooms and teachers, remain unexplained.** DFID should work with governments to:

- Develop use of efficiency and cost effectiveness metrics such as costs per hour of instruction delivered and received to measure teacher productivity.
- Investigate unit cost variations to assess whether costs are as low as they should be, whilst still maintaining standards.
- Disseminate and implement across its network the lessons from successful community contracting in India and Kenya.

Part One

DFID's objectives and resources

DFID has committed rising resources to global goals for primary education

1.1 The UK is a signatory to United Nations Millennium Development Goals to ensure education for all by 2015 and reduce illiteracy (**Figure 3**). There have been significant increases in primary school enrolment. The number of un-enrolled[3] children worldwide fell by 33 million between 1999 and 2007[4]. Of the 72 million primary school children remaining unenrolled, almost all live in developing countries with seven out of ten living in sub-Saharan Africa or South and West Asia. Some 54 per cent were girls.[5] (**Figure 4**).

Figure 3
Millennium Development Goals targets and indicators

MDG Target 2a Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling.	**2.1 Net enrolment in primary education.**[1] DFID's Public Service Agreement target is for 12 of its 22 priority countries to remain on-track, with progress accelerated in at least four of the remainder.	By 2009, 14 were on-track but there was no net acceleration in the others.
	2.2 Proportion of pupils starting Year one who reach last year of primary.	Not a Public Service Agreement target.[2]
	2.3 Literacy rate of 15-24 year-olds, women and men.[3]	Not a Public Service Agreement target.
MDG Target 3a Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015.	**3.1 Ratios of girls to boys in primary, secondary and tertiary education** DFID's PSA target is for 17 priority countries to remain on-track with progress accelerated in at least two others.	The 2005 goal was missed, but 17 countries are on track for 2015.

NOTES

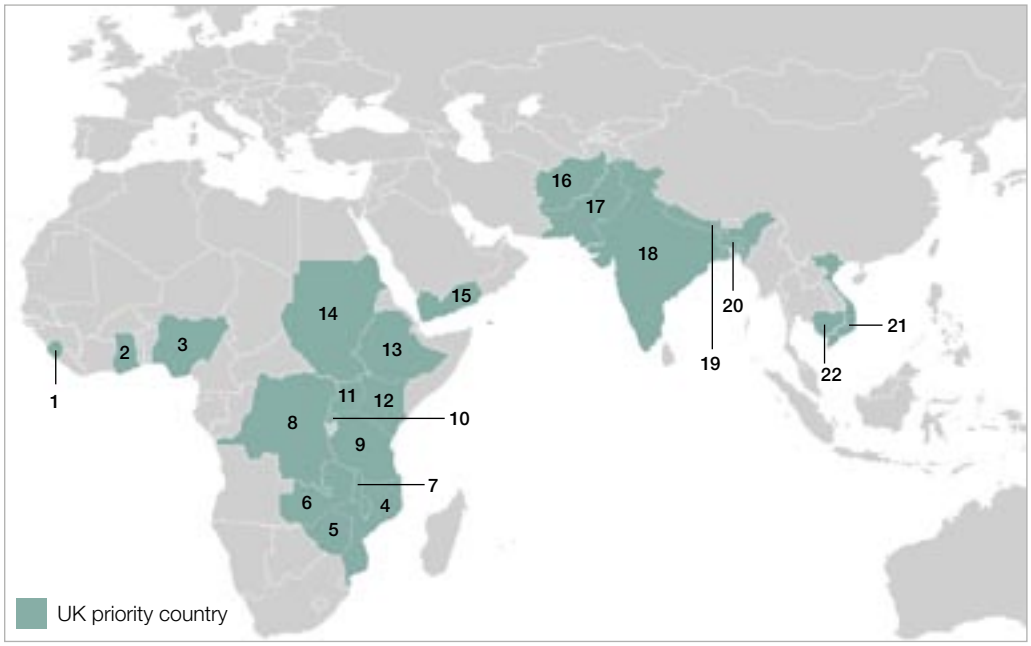
1 DFID applies a threshold target of 97.5 per cent net primary enrolment as sufficient to meet the target.

2 DFID has a lower level Departmental Service Objective in this area; to halve the number of countries off-track to achieve universal completion of primary education by 2021. Currently nine countries remain off-track against a baseline of ten.

3 DFID does not track the adult literacy indicator as part of its MDG progress monitoring.

Source: Department for International Development

Figure 4
Un-enrolled children in DFID priority countries



Label	Country	Children not enrolled 2007 (000s)	School age children 2006 (000s)
1	Sierra Leone	No data	899
2	Ghana	930	3,446
3	Nigeria	8,221[1]	24,111
4	Mozambique	954[1]	4,111
5	Zimbabwe	281[1]	2,396
6	Zambia	108	2,346
7	Malawi	314	2,526
8	DRC	No data	10,383
9	Tanzania	143[1]	7,436
10	Rwanda	88	1,459
11	Uganda	341	6,489
12	Kenya	769	5,937
13	Ethiopia	3,721	13,415
14	Sudan	No data	5,966
15	Yemen	906[2]	3,803
16	Afghanistan	No data	4,600
17	Pakistan	6,821[1]	19,534
18	India	7,142	124,425
19	Nepal	714	3,574
20	Bangladesh	1,837[1]	17,842
21	Vietnam	No data	No data
22	Cambodia	220	2,080

NOTES

1 Year ending 2006.

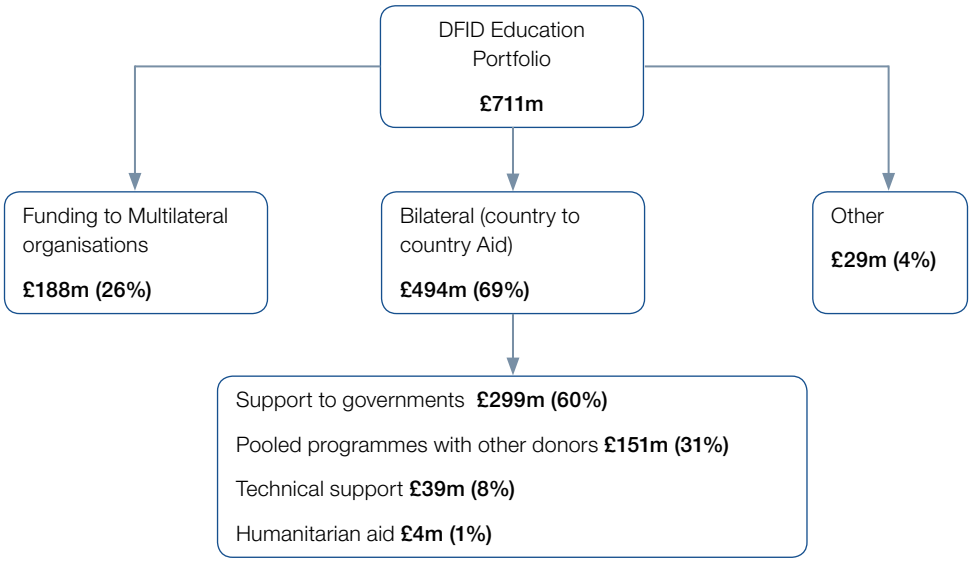
2 Year ending 2005.

Source: Global Monitoring Report 2010

1.2 The Department for International Development (DFID) adopted the education Millennium Goals in 2001, focusing on primary education, and prioritising enrolment and gender equity for its Public Service Agreement targets, rather than completion or literacy. DFID is amongst the biggest funders of primary education alongside the World Bank and the Netherlands, complementing its financial investment with policy advice to developing country governments. It focuses largely on the poorest countries of Sub-Saharan Africa and Asia.[6]

1.3 DFID has committed £8.5 billion to education in the decade to 2015-16, with annual expenditure doubling to at least £1 billion between 2007-08 and 2010-11. Estimated global aid to basic education was $4.3 billion in 2007.[7] In 2009, DFID prioritised support for fragile states, where access and gender parity are particularly deficient. DFID estimates that its education funding through governments supports five million primary school children. In 2008-09, it gave nearly £500 million bilaterally to individual countries for education (**Figure 5**), comprising £180 million directly attributable to primary education and unspecified proportions of general budget support and influencing work.[8]

Figure 5
DFID education budget 2008-09



NOTES
1 Multilaterals include the World Bank, European Union and UNICEF.
2 Other includes specific projects and programmes, funded directly or through other donors.

Source: Department for International Development

Scope of our examination

1.4 We examined DFID's support to primary education in developing countries since it started to implement UN Goals in 2001, and what it has achieved in pupil enrolment, course completion and attainment; also using indicators defined by international bodies to assess efficiency and cost-effectiveness in delivery. Our examination (Appendix 1) included detailed work in four countries where DFID has major education programmes; representing 39 per cent of its education bilateral expenditure.[9] DFID is in each case among the largest donors, though small compared to domestic funding (**Figure 6**).

1.5 Our approach draws on indicative benchmarks of effective education systems. Performance against these in our case study countries varied widely, though data is incomplete and was not routinely monitored or targeted by DFID in its key decision documents (**Figure 7** overleaf).

DFID education strategy and country assistance planning

1.6 DFID's education programmes from 2001 drew on experience of what had worked well in countries then making substantive progress to universal primary education.[10] Its strategy for education incorporated Millennium Development Goals prioritising access to and completion of good quality education for all children, including girls and marginalised groups, to achieve measurable learning outcomes, especially in literacy, numeracy and essential life skills.

1.7 The strategy noted the central role of governments and the need for funders to work more collaboratively with them.[11] DFID directs some 70 per cent of its funding through governments as general support to national budgets or directly earmarked to education ministries[12]. Its main focus has been to improve and expand state primary education and to strengthen government systems through predictable, long-term financing, improved governance and broader influence on education policy. In working alongside developing country governments, DFID encouraged increased state resources for universal free primary education.[13] In many countries it also funds civil society organisations.

Figure 6
DFID aid in context, 2008-09

	Total education expenditure (£m)	Total DFID funding to education (£m)	DFID funding as percentage of total funding to education	Percentage of DFID funding going to primary education
Ethiopia	459	31.2	6.8	82
Ghana	660	28.4	4.3	44
Kenya	1,388	34.0	2.4	69
India	3,456	72.4	2.1	64

Source: Department for International Development

Figure 7
Fast Track Initiative Indicative Framework indicators

Criteria	Ethiopia	Ghana	Kenya	India	OECD Countries
Government spending on education – about 20% of budget (UNESCO)	23% (2007)	31% (2008-09)	19% (2007-08)	11% (2003)	13%
Spending on primary education – about 50% of education budget	51% (2007)	34% (2005)	55% (2006)	36% (2005)	Not known
Teacher salaries – about 3.5 times GDP per capita	Not known	4 (2005)	Not known	4.0-6.6	0.95-1.3
Pupil-teacher ratio – about 40:1	72:1 (2006)	32:1 (2008)	46:1 (2007)	40:1 (2002-03)	17:1
Repetition (primary pupils repeating years of study) – 10% or lower	6% (2007)	6.5% (2008)	5.8% (2005)	3.4% (2007)	1.5%
Required annual hours of instruction – 850 or more	930	c.800	N/A	1,051	c.800
Private Education Under 10% of total enrolment	4.3%	17% (2008)	10% (2007)	Not known	5% (2007)

NOTE

1 A November 2009 review of the FTI noted incomplete reporting against framework indicators. DFID reports that the FTI is reconsidering its future composition.

Source: Various, including Global Monitoring Report 2010, UNESCO World Education Indicators 2006, DFID, World Bank, Ministry of Education in Ghana

1.8 Education ministry officials and other donors we spoke to considered DFID a key and supportive donor, responsive to national situations and able to quickly provide funding and technical cooperation.[14] Its country-based advisers were often prominent in donor and government education working groups, which help develop policy and coordinate activities. It had influenced ministries' policy and implementation, often by providing experts to help develop strategies or strengthen systems.

1.9 DFID's allocation criteria favour investment in countries with high poverty but relatively good governance and institutions[15]. Individual country teams use these centrally determined resource levels as a basis to plan specific aid programmes. DFID mandates no specific planning analyses for support to education beyond its generic guidance for all aid. DFID programmes in our case study countries took account of factors such as host government policies and plans, activities of other donors[16], and indicators of need such as the number of unenrolled children and the general quality of primary education delivered. Conversely, the eight country plans (current and previous) and supporting analyses we examined in India, Kenya, Ethiopia and Ghana lacked:

- A clear diagnosis of the performance of underlying systems and how best to improve them to make cost effective progress. Plans focused more on gaps in provision, though India's plans were best informed and better covered factors addressing quality and attainment. In 2007-08, 78 per cent[17] of DFID's bilateral resources for education were delivered through government systems[18]. It was not always clear that government strategies addressed the underlying issues with their own performance.
- Proportionate focus on the most significant cost – teachers' pay. DFID has supported state education in Ghana for over 20 years, but only latterly has it begun to address serious unaffordability issues. Financial modelling supported by DFID in Ghana since late 2009 has identified a 40 per cent shortfall in education budgets, unless pay rises are constrained and a rise in pupil teacher ratios from 34 to 45 accepted.
- Consideration of variations in performance between different educational channels – such as state, voluntary or private sector schools or traditional schools compared to non-formal education – to plan improved performance across the system as a whole.

Part Two

Progress towards education targets is mixed

2.1 DFID's 22 priority countries for education have made significant progress on enrolment including the balance between boys and girls; both targeted in DFID's public service agreement. DFID policy advice and financial support have helped partner governments to boost enrolment. Student completion and attainment, however, remain low and it is these which generate economic and social development.

Initial enrolment is high

2.2 Fourteen of DFID's 22 priority countries are on track to achieve the enrolment goal by 2015 and progress on gender parity has been good, with eight of the 22 already having achieved the goal (Appendix 2). Gender parity remains a major challenge in countries where culture and religion influence girls' enrolment and retention.

2.3 DFID's work has contributed towards increased primary school enrolment in its priority countries, from typically 50 per cent or lower in the mid-1990s to 70-90 per cent now. Such changes are not exclusively due to DFID. But it has facilitated them through prominent advisory input to governments, by linking its budget support to these aims, and by soliciting further support from other donors, typically contributing 2-3 times the levels of DFID funding. Governments have also responded with increased national funding.

2.4 A key use of these increased resources has been removal of school fees, the last direct financial barrier to access; widely advocated by DFID. In many countries, Ministries of Education paid teacher salaries from general taxation but left schools to resource maintenance, textbooks and consumables. With increased resources, Ministries have offered capitation grants to replace school fees. In Ghana and Kenya capitation is £2 and £8.50 per child, respectively, and goes directly to schools, giving school management committees discretion on how to utilise the funds within specified guidelines.[19] The abolition of school fees in Kenya in 2003 increased gross enrolment[20] from 88.2 per cent in 2002 to 102.8 per cent in 2003[21]. Gross enrolment includes over-age children, so can exceed the school-age population. Parents interviewed for our study said that this left no excuse for withholding children from school.

2.5 In countries where DFID support has facilitated free places in the State system, enrolment in private fee-paying schools has also grown. In Kenya, 54 per cent of the growth in enrolment between 2003 and 2007 was attributable to private schooling[22]. In Ghana, Pakistan and Bangladesh the private sector share of enrolment exceeds the 10 per cent indicative benchmark, (Figure 7 on page 16), indicating that many parents perceive this as more effective or accessible than free state provision.[23]

2.6 Countries find it difficult to enrol the last 5 to 10 per cent of children, comprising the most excluded and poorest, often found in rural areas. In some cases, DFID has addressed this well, though scaling up localised interventions to a national basis proves more challenging (**Figure 8**).

Many children drop out

2.7 Course completion is off-track to achieve the Millennium Goal, reflecting high numbers of children who enrol but subsequently drop out of school (**Figure 9** overleaf). In Ethiopia (**Figure 10** on page 21) almost a fifth of enrolled children drop out within the first year. Aggregating annual dropout rates, only 37 per cent of Ethiopians originally enrolled in Year One would complete Year Eight. Wider factors such as the cost of education, levels of parental education and the need for children to support their families play a part.[24] The extent of such influences varies between societies, but research indicates that parental or student perceptions of low quality education and attainment are also significant in prompting drop out.[25]

2.8 Some children who have not progressed sufficiently repeat school years. Besides imposing additional costs on schools and households, over-age children are more likely to leave school early. DFID-funded research shows that on average children are three years over-age in Ghana.[26] Ethiopia has experienced an increase in school age population with children entering primary school late, due to a rapid expansion in the system over the last decade[27]. In 2000 in Malawi, 60 per cent of primary education resources were used on children who dropped out or repeated a year.[28]

Figure 8
A successful gender strategy supported by DFID

Mahila Samakhya is an empowerment programme for women in deprived areas of rural India, established in 1989 with Dutch and Indian Government funding. DFID has committed £35 million between 2007 and 2014, enabling a doubling of the programme to cover 50,245 villages across 10 states. Women from communities form groups, receive training, and support other women and girls, especially in improving access to and demand for education for the most marginalised girls from minority groups and castes. Specific educational initiatives include residential accelerated primary schools teaching vocational skills, bridge schools for girls who are over age or dropped out, and non-residential courses with flexible hours, mobile libraries and midday meals. The current cost per group member is £5.50 a year. Over several years groups become self-sufficient. The initiative has been successful: in programme areas, girls' enrolment in primary education has overtaken that of boys. However, the programme still only focuses on highest-need areas, covering under 10 per cent of rural India. Achieving benefits on a greater scale would require enhanced support, which donors have not so far influenced federal or state governments to implement.

Source: National Audit Office

Figure 9
Percentage of pupils reaching last grade in DFID priority countries

	1999	2006	Up/Down
Vietnam	83	92	● ↑
Kenya	N/A	84	
Ghana	N/A	83	
Tanzania	N/A	83	
Zambia	66	75	● ↑
Pakistan	N/A	70	
India	62	66	● ↑
Nepal	58	62	● ↑
Sudan	77	62	● ↓
Yemen	80	59	● ↓
Ethiopia	51	58	● ↑
Bangladesh	55	58	● ↑
Afghanistan	N/A	55	
Cambodia	49	54	● ↑
Mozambique	28	45	● ↑
Malawi	37	36	● ↓
Uganda	N/A	25	
Rwanda	30	N/A	

Source: Global Monitoring Report 2010

Levels of attainment remain low

2.9 Most national or state authorities set formal examinations at the end of primary school, testing only the minority of students who complete primary education. DFID country teams do not routinely collect or analyse examination data as an indicator of the outcomes of the education system. Examinations are nonetheless key in influencing pupil progress, parental views of success, and in tracking progress in securing the learning the nation considers important. Where exams have been set to common standards, results have remained at a similar level over recent years.

2.10 Recognising the need for wider measures of attainment, DFID has assisted some Education Ministries to conduct national learning assessments which measure literacy and numeracy amongst samples of pupils at set points during primary education. Other countries lack timely continuous educational assessments.

Figure 10
Average dropout

	Average dropout rate (%)	Year, Definition
Ethiopia	15.7	2006, Year one dropout (1)
	18.3	2006, Year one dropout (2)
Ghana	9.2	2006, Year one dropout (1)
Kenya	9.1	2004, Year one dropout (1)
India (national)	15.4	2005, Year one dropout (1)
	8	2007-08 Average annual primary dropout (3)
	46.0	2006-07, Years one to eight dropout (4)
India (Bihar)	12	2007-08 Average annual primary dropout rate (3)
	76.1	2006-07, Years one to eight dropout (4)
India (Andhra Pradesh)	5	2007-08 Average annual primary dropout rate (3)
	56.7	2006-07, Years one to eight dropout (4)

NOTE

1 Wide variations between sources indicate inconsistent definitions/data.

Sources: (1) Global Monitoring Report 2010, (2) Education Ministry, (3) District Information System for Education 2009, (4) Education Ministry Annual Report 2008-09

2.11 Trend data does not exist for all countries, and calculation methods differ internationally, but available data show low standards and little or no progress. Ethiopia's national learning assessments suggest deteriorating Year Four and Eight learning achievements. Most pupils perform below basic levels. In Ghana, proficiency is very weak measured at mid-primary and end-primary stages (**Figure 11** overleaf). In India, NGO data for 2008 indicates very low achievement. Only 53 per cent of Year Five children could read at the standard expected for Year Two – showing no material progress since 2006. On numeracy, by Year Five, 38 per cent of pupils could do simple division, down from 45 per cent in 2006.[29] **Figure 12** overleaf describes the tests. Official Indian data from 2005-06 indicated slightly higher achievement in maths, with 38 per cent of Year Five pupils showing proficiency with fractions and decimals, rising to 57 per cent when working with averages. Literacy scores were 65 and 55 per cent for grammar and comprehension respectively. DFID is assisting India's federal government to strengthen this national learning assessment.

Figure 11
Proficiency in literacy and numeracy in Ghana

	Pupils rated proficient in 2005 (%)	Pupils rated proficient in 2007 (%)
English P3 (mid-term)	16.4	15.0
English P6 (near completion)	23.6	26.1
Maths P3	18.6	14.6
Maths P6	9.8	10.8

NOTES

1 Proficiency defined as scoring 55 per cent on a four-choice multi-choice test (where 25 per cent represents guessing).

2 About half of students attained minimum competency (35 per cent or better).

Source: Ghana National Education Assessments

Figure 12
Literacy and numeracy tests in India

Literacy

All children were assessed using a simple reading tool. The reading test has four categories:

- Alphabets: Sets of common alphabets;
- Words: Common famillar words with 2 letters and 1 or 2 matras;
- Level 1 (Standard 1) text: Set of simple 4 linked sentences. Each no more than 4-5 words. These words or equivalent are in the Standard 1 text book of the state; and
- Level 2 (Standard 2) text: 'short' story with 7-10 sentences. Sentence construction is straight forward, words are common and the context is familiar. These words (or their equivalent) are in the Standard 2 text book of the state.

Numeracy

All children were assessed using a simple arithmetic tool. The arithmetic test has three categories:

- Number recognition 1 to 9: randomly chosen numbers from 1 to 9;
- Number recognition 11 to 99: randomly chosen numbers from 11 to 99;
- Subtraction: 2 digit numerical problems with borrowing; and
- Division: 3 digit by 1 digit numerical problems.

Source: ASER Status of Education Report, 2008

2.12 Large increases in enrolment increase the proportion of children drawn from uneducated or very poor households – factors likely to hinder attainment. DFID education teams acknowledge that low attainment may also indicate poor quality education and teaching in large classes. Generally, DFID teams lack sufficient data to assess the relative importance of different factors behind low progress and to devise the most cost-effective responses. We found better research evidence to inform decision-making in India than in Africa.

Development outcomes depend on good attainment

2.13 Completion of primary education and high attainment is strongly correlated with individuals' productivity, earnings and lower poverty[30]. One additional year of education adds approximately 10 per cent to individuals' wages[31], although returns from primary education have declined since the 1990s, which researchers associate with increased numbers of primary graduates with low attainment.[32] Economic returns to secondary education are considerably higher, but first pupils must complete primary, achieving suitable proficiency. Returns are particularly high for girls if they progress through to secondary, though recent statistics show only 44 per cent do this.[33] Education offers significant wider benefits through improved literacy and numeracy. For example, women with primary education tend to have smaller families, yielding major development benefits in densely-populated countries.[34] Parents cite benefits from education relevant to their daily lives, for their households and the wider community.

> "Primary-educated agricultural workers use the right amount of fertiliser, don't get ripped off for their inputs and know the benefits of using organic fertiliser. Children who finish primary school can sign their name which is essential to open a bank account." Rural woman, India
>
> Source: National Audit Office

Monitoring and responding to trends in enrolment, completion and attainment

2.14 DFID's monitoring of the outputs of primary education has been uneven. Some 71 per cent of DFID education project frameworks track enrolment, but only 46 per cent track completion and 28 per cent attainment. Proxies for quality such as pupil teacher ratios (28 per cent) are more frequent than measures such as teacher absenteeism or community complaints (2 per cent). Measures of education activity in schools, such as taught hours, or pupil attendance rarely feature in DFID monitoring frameworks – we did not see any monitoring of teacher/pupil contact hours. Data on indicators of an effective education system recommended by the Indicative Framework (Figure 7 on page 16) do not feature consistently in monitoring frameworks or in dialogue with governments. Data on pupil attainment remains incomplete, insufficient to measure trends, and constitutes a weak basis for corrective action by donors and governments.

2.15 Some newer DFID programmes show that tighter measurement is possible. The General Education Quality Improvement Programme in Ethiopia, which began in 2009, has indicators for completion and attainment rates, with targets to increase completion rates by around 9 percentage points and raise learning assessment scores from 20 to 23 per cent by 2011-12. The programme will fund a mix of inputs (better textbooks, trained teachers, school planning) and evaluate their interaction to improve teaching and learning. In India, the main programme supported by DFID has since 2008 included targets to improve teacher attendance from 80 to 90 per cent by 2009-10, with an unquantified aspiration to increase attainment results.

2.16 In most cases, however, DFID education monitoring frameworks lack a satisfactory set of indicators to permit the tracking of inputs through to activities, outputs and educational outcomes, or to form the basis of value for money judgements. Often, the indicator frameworks reflect weak national information systems, which DFID has been working to improve, although progress is slow. DFID acknowledges, however, that better indicators and targets are needed[35]. In late 2009, DFID commissioned consultants to develop its capacity in measuring the results of education investment and relating this to the quality of education.

Part Three

Getting value from teaching resources

3.1 Improving the cost effectiveness of teachers is critical to future progress. Because teacher performance is crucial to good quality education, problems there reduce the value for money of DFID's other investments in education. Cost-effective non-formal education schemes need wider implementation, and have features that might usefully be replicated in formal state primary schools.

Unaffordability of teachers limits progress

3.2 Payrolls, predominantly for teachers, typically represent over 90 per cent of all recurrent expenditure in developing country education budgets, compared to typically 60 per cent in developed countries. In many countries DFID does not directly fund teacher salaries, but contributes indirectly through budget support.

3.3 Developing countries must balance the need to attract high quality recruits from a limited pool of educated people, with affordability. Current international indicators (Figure 7 on page 16) suggest that average teacher salaries should not exceed 3.5 times average per capita income.[36] This is exceeded in Ghana and India, and not routinely monitored in Kenya and Ethiopia (Figure 7). In Kenya state teacher salaries are relatively high, and set to increase. Nevertheless, its teacher workforce of 171,000 remains some 23,000 below requirement, despite high unemployment amongst trained teachers, because further expansion is unaffordable at current state pay rates. Teachers work in private schools at lower rates.

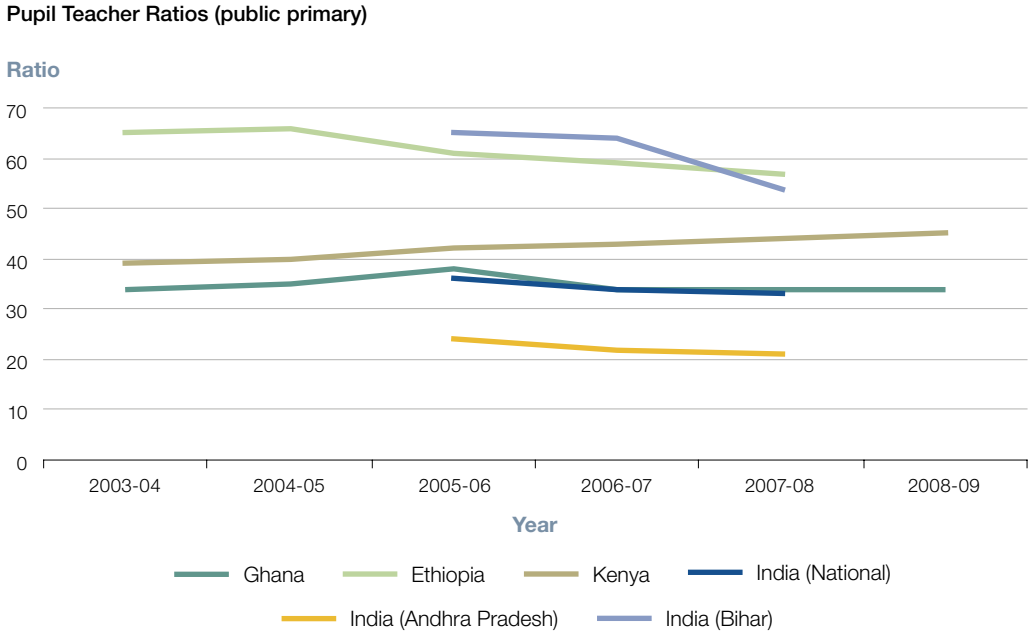
3.4 Bihar State in India found that even with substantial Federal government financial support and high state spending, implementation of universal primary education was unaffordable on established payscales. Instead they used contract teachers paid at approximately a quarter of the cost of permanent, pensionable teachers. We found no persuasive evidence that quality of service and attainment had suffered as a result; Bihar officials noted that term contracts reinforced teacher commitment. Striking the right levels of pay is a dominant influence on the cost-effectiveness of primary education.

3.5 The other key influence on paybills is the number of teachers employed, which affects class size, a key factor in successful education. Pupil/teacher ratios form the basis of most national planning. The ratios in our four case study countries are widely spread (**Figure 13**). National figures also mask geographic variations, and between years. For example, we visited a school in Ethiopia which had average ratios of 60:1 in Years One to Four, and 91:1 in Years Five to Eight, including 108:1 in Year Eight.

3.6 DFID often uses national pupil teacher ratios as a proxy indicator for quality of education. This would be enhanced by defining the range of values it considers appropriate, and identifying and actively pursuing inconsistencies – for example, the relatively good ratios for Ghana, but low educational attainment, which could be influenced by levels of teacher competence and contact time.

3.7 DFID has contributed to increased training and recruitment of teachers, estimating that it funded training for 100,000 teachers in 2007-08. However, costs showed high variation, from some US$500-$600 in Ghana and Nigeria, to over US$22,000 in Pakistan. Inadequacies remain in teacher selection and pre-service training. In Ghana, the percentage of teachers who are trained fell from 77 per cent in 2002 to 58 per cent in 2008. In India pre-service training has not kept up to date with curriculum and exam changes. In Kenya the Government continues to invest in pre-service training despite teacher unemployment (paragraph 3.3). In Ethiopia primary teachers are recruited from school leavers who did not progress to upper secondary. DFID is now supporting the upgrading of Ethiopian teachers to address serious shortages of teachers qualified to teach Years Five to Eight – a particular problem because from Year Five the language of tuition is English.

Figure 13
Pupil Teacher Ratios in sample countries



Source: Government Data

Teachers are not delivering the volumes of teaching required

3.8 Increased expenditure and education reforms have focused heavily on providing additional inputs to schools, including more teachers. However, investment in expanding the number of qualified teachers does not in itself ensure success. Ghana's and Kenya's expenditures on primary education are amongst the highest in the world as a proportion of GDP, and over 90 per cent goes on salaries.[37] But attainment is low (Figure 9 on page 20).

3.9 The amount of effective contact time between teacher and pupils is a basic influence on educational outcomes, affected by authorised and unauthorised teacher absence, teacher time not spent teaching, and pupil absence.[38] Data is patchy, but sample studies have shown teacher absenteeism between 20 and 40 per cent in developing countries.[39] Students in Ghana were learning for only 39 per cent of government expected time, or 76 net days out of an expected 197 each year. The main reasons were informal school closures and non-instructional time, such as classroom organisation, socialising or the teacher being out of the room. Education management systems often fail to require teachers' constant presence, with research noting a lack of school-level authority and unwillingness to use sanctions such as salary deductions. In Ethiopia, taking into account days schools were closed and teacher and student absence, the time on task was 69 days out of a possible 203.[40] A study in India found that 25 per cent of teachers were absent on any given day, and that less than half were engaged in teaching. The study concluded that it was not clear that expanding inputs along existing patterns was the most effective way of improving educational outcomes.[41] However, new data shows teacher attendance in India improving from 75 per cent in 2005 to 89 per cent in 2009[42].

3.10 We found that DFID and other donors' country-based staff were aware of these problems, and had in some cases sponsored evaluations, which could be used to influence governments to address them. In Ghana, a World Bank evaluation identified that at any one time some 9,000 of the 60,000 teachers were absent from school on paid study leave plus additional training allowances. In response, donors, including DFID, pressed the Government to introduce distance learning, though there is currently no evaluation of whether this has been a success.

3.11 Student absences compound the reduction of contact time. We found much less focus amongst donors and education authorities on pupil attendance than on formal enrolment. Attendance data exists at school level and would be better utilised through collation, analysis and discussion at national level, as are data on numbers enrolled, classrooms built or teachers trained. Our observation at over 20 schools indicated highly variable attendance, ranging from below 50 per cent of the numbers nominally enrolled to over 100 per cent.[43]

Management of teaching workforces is weak

3.12 Financial management of education has been weakened by poor payroll systems. DFID has funded technical assistance to help remove ghost teachers, including fraudulent payees and former teachers inadvertently left on payrolls, from systems in several countries. In Malawi reviews conducted at the request of DFID and other donors in 2008 removed 700 "ghosts" (3.5 per cent of the total) from the payroll.[44] They also found that between five and 28 per cent of funds intended for teacher salaries did not reach teachers, depending on the district, requiring a switch to direct payment. Substantial numbers of ghost teachers have been alleged in other countries such as Sierra Leone and Kenya.[45]

3.13 School supervision and monitoring is important to gain information and leverage over teacher behaviour. We found that arrangements were insufficiently developed in the countries we visited. In Ghana, district level supervision budgets have been cut by approximately 50 per cent. Previous multilateral donor investment in motorbikes for school inspectors is now ineffective because districts have insufficient funds for fuel. Schools, especially in rural areas, are not visited as often as intended and there is little opportunity to return to problem schools.[46] Government, assisted by DFID, has proposed a new inspection organisation analogous to the UK's OFSTED. The Schools Audit Service in Kenya reports on school financial management and performance. It has insufficient staff to carry out its functions and lacks travel and other budgets. There are gaps in the extent of coverage and the depth of audit, and its reports are not routinely seen by donors.

Community and parental involvement needs sustained support

3.14 Given weaknesses in professional inspection, parent or community oversight acquires added importance. DFID has championed school-based management approaches in Ghana, Kenya, Ethiopia and India, though initial success has not always been sustained. School Management committees in Ghana and Kenya were trained when the programmes were launched in 2005 but training has not been repeated since. In Kenya parents and Chairs of School Management Committees reported a lack of continuing support after the initial programme of training and advice on textbook procurement and management.[47] In India, support to community involvement through manuals and training are currently being developed.

3.15 Most countries exhibit little transparency over school performance. Head teachers often lack up to date information enabling them to place their school results within regional or national patterns. Parents are not routinely told about the performance of their children, nor do they know how one school compares to others in the area. In Kenya the Education Ministry stopped publishing a list of the top ten performing schools as parents would transfer their children to them, leading to school over- and under-crowding. Without such knowledge, however, it is more difficult for parents to exert pressure on teachers or education officials. We did not find consistent evidence of DFID lobbying Governments for greater transparency over school performance, but noted new efforts since 2009 to introduce score cards which capture and display key data about how well schools are doing.

Ways to increase productivity are emerging

3.16 Approaches are emerging to ensure that students receive more of the teaching time that governments, donors, and parents pay for, although only patchily across DFID priority countries. In Ethiopia the new quality improvement programme aims to increase teacher accountability through community involvement in school management and utilisation of grants. In Kenya primary school teachers are hired and deployed by district education offices to specific schools, and commit to a five year retention period. In Malawi DFID is promoting more selection and training of local people to be deployed in their own communities. In Ghana the standard approach is to train new teachers in central training colleges, but these can then prove resistant to deployment to rural areas[48].

> "…because of the rural nature of our district, the teachers do not want to stay. We have a few urban areas [where] they are prepared to stay but not in the rural areas. This is because these trained teachers were trained in colleges with electricity, water and other amenities. So when they go to those rural areas where these facilities are lacking these young men do not find it easy to stay…"
> District Official, Ghana
>
> Source: National Audit Office

3.17 Recent research has identified potential to enhance teacher motivation and commitment through targeted financial incentives (**Figure 14**). DFID has prioritised teacher remuneration in some countries, for example in Gambia, with the introduction of performance-related pay. There is scope for DFID to support nationally implemented schemes elsewhere. In countries like Ghana DFID is supportive of government plans for incentives to trained teachers to deploy to rural areas. But we did not find comparative analyses of the cost effectiveness of this approach compared to training local people, which DFID already supports.

Figure 14
Teacher Performance pay in India[1]

Researchers piloted a teacher incentive programme across a 500-school representative sample of government-run rural primaries in Andhra Pradesh State. Small bonuses equating to 3 per cent of annual pay were given to teachers based on the average improvement of their students' test scores in independently administered assessments. After two years, students in incentive schools performed better in maths and language tests than those in control schools, and performed better on subjects for which there were no incentives, suggesting wider benefits. Incentive schools performed better than other schools that received additional schooling inputs of a similar value, such as additional learning materials or staff. Improvements were delivered partly through improved teacher attendance but mainly through greater and more effective teaching effort when present, such as assigning additional homework and class work, providing practice tests and extra classes after school and giving special attention to weaker performers.

NOTE

1 National Bureau of Economic Research September 2009, K Muralidharan, V Sundararaman. Research commissioned by the World Bank and part-funded by DFID.

Source: National Audit Office

Cost-effective approaches have scope for wider application

3.18 DFID and other donors believe that reaching the ten per cent or so of children currently unenrolled will be difficult and costly. DFID does not know the costs of scaling up specific interventions aimed at enrolling the 'hard to reach' – some of which appear more cost-effective than traditional schooling (**Figure 15**). In Kenya DFID funding has supported mobile schools, for itinerant populations, which have proved up to 20 per cent cheaper in capital terms than formal schools, and far more accessible given the communities' lifestyles. Success is not unqualified everywhere; evaluations of some non-formal education schemes in Ethiopia have indicated low cost but also lower attainment than formal schools, and a need for quality. DFID does not have strategies, either centrally or at country level to chart cost-effective routes to universal enrolment and attainment. Useful research on comparative cost-effectiveness, such as in 1997-2001 into alternative approaches to teacher training, was not subsequently updated and integrated into policy and implementation at national level.[49]

Figure 15
Innovations in teaching to meet local needs

Since 2008 DFID has committed £1.14 million (2008-11) to "School for Life" (SFL) in four of **Ghana's** 170 districts, to reach children outside formal primary schools. Denmark established the programme in 1994 and donors have worked in succession to sustain its life on a localised basis, without inducing government to implement it nationwide.

Some 80 per cent of pupils graduate to formal schools after nine months tuition, most entering between Years Three and Five. Annual costs per pupil are similar to the state system, but SFL is three times as cost-effective in delivering completed schooling, and still more cost-effective taking into account higher pupil attainment.[1] Under SFL the cost per learner meeting minimum literacy standards (in mother tongue) was US$53, compared to US$1,500 in the state system (in English)[2]. Parents identify key success factors as timetabling to match agricultural and religious practices, a relevant curriculum taught in mother tongue, including livelihood practices such as health and trading, and use of local people as teachers, selected by, and accountable to, the local community for attendance and performance.

In Kenya, DFID has helped the government to support non-formal schools[3] which provide education, particularly in Nairobi slums, through more flexible timetables than in state schools. Investment shows high cost-effectiveness: Government expenditure of £1.7 million in 2007-08 supported total enrolment of 140,000. Teacher costs are low and parents report a greater say in schools management. The Government reports that children in non-formal schools perform at a level equivalent to those in formal primary[4].

NOTES

1 Evaluation of School for Life by USAID in 2006, found that the cost per learner completing the equivalent of third year primary education was $43 in SFL versus $135 in the State system.

2 ibid.

3 Non-Formal Education (NFE) institutions are non-formal schools that offer the state primary education curriculum or non-formal centres that use NFE curriculum.

4 *Kenya Education Sector Report 2008* p126.

Source: National Audit Office

Part Four

Getting value from investment in textbooks and classrooms

4.1 DFID has successfully encouraged increased levels of expenditure on education amongst its priority countries, in some cases above indicative benchmarks. However, wide ranges in the unit costs of textbooks and classrooms indicate scope to secure greater efficiency in their procurement.

Provision of textbooks

4.2 DFID's funding has enabled the purchase of textbooks in low income countries, through both general budget support and specific funding, though National pupil-textbook ratios hide significant local and regional variations. In some countries DFID has funded tracking exercises which provide assurance that textbooks have got through to schools. Our own work indicates that textbooks are reaching schools, though often later than required.[50]

4.3 In 2009 DFID collated the average unit cost of textbooks reported from 12 of its education portfolio countries, showing a ten-fold variance between highest and lowest cost countries (**Figure 16**).

Figure 16
The average cost of textbooks varies significantly between countries

	Ghana	Kenya	Ethiopia	India (Procurement devolved to States)	Highest in range Zimbabwe/ Nigeria	Lowest in range Vietnam
Cost per Textbook (US$)	3	2	1.25	0.72	5	0.50

Source: Department for International Development Education Portfolio Review, costs as at 2009

4.4 DFID's project monitoring frameworks have lacked robust measures relating specific outputs and outcomes to the associated costs, such as the unit cost of infrastructure or textbooks. Only 3 per cent of projects tracked cost effectiveness or efficiency. As a result, DFID cannot easily analyse trends in value for money over time or between providers.[51] Although DFID country teams do not routinely analyse unit cost information and use this to drive value for money in textbook procurement, there are examples of appropriate interventions. In Ethiopia textbooks were of low quality and required frequent replacement. DFID encouraged government to recentralise procurement. With better access to detailed information on costs it then encouraged international tendering to increase quality for the best price. The outcome of this new approach is awaited.

Assessing costs of school infrastructure

4.5 Shortages of classrooms remain a key constraint to accommodating out-of-school children. DFID estimates that in 2007-08 its funding built or rehabilitated 12,000 classrooms globally, sufficient to accommodate about 500,000 pupils[52]. Making its money go further would enable quicker progress. In 2009 DFID collated the average unit cost of classrooms in 16 of its 22 education portfolio countries, revealing wide variations – from US$3,600 per classroom in Nepal to US$20,000 in Nigeria and Zimbabwe.[53] The higher costs in the range greatly exceeded regional averages presented by the World Bank.[54] This was a useful start point for future analysis, though it did not analyse the reasons for variations or judge whether overall costs were as low as they could be. Substantive analysis would require adjustment for differing classroom sizes and specifications, costs of land, labour and materials and examination of procurement efficiency in each country. Without such analysis, DFID understanding of cost drivers and the scope for improvement remains weak.

4.6 DFID's lack of cost data partly reflects lack of focus on efficiency measures by donors and education ministries generally. In Ghana, government officials examine unit costs of individual classroom projects during project approval, but do not analyse trends and variations. DFID Ghana obtained basic unit cost data to support DFID's portfolio review in late 2009. In India we found little analysis of average unit costs, as opposed to statistics on activity. However, India's Federal government approach to classroom procurement, based on giving fixed allowances and standardised designs to local communities, has driven economies, with blocks of three classrooms plus vital ancillary facilities being built for £10,000, towards the bottom of DFID's observed cost range. Kenyan data shows halved average standard classroom costs through community contracting, compared to government public works.[55] DFID-funded consultants have helped pilot and rolled-out community-led construction, which experience has shown can work well given strong local leadership and committed project management.[56]

Part Five

Getting value from DFID's knowledge

5.1 DFID operates devolved management, delegating authority to individual country offices to manage their own resources and operations to meet local circumstances. This chapter shows that corporate overview of performance across the education portfolio is very recent, and has raised more issues on performance than it has answered. DFID's cadre of experienced education advisers is stretched.

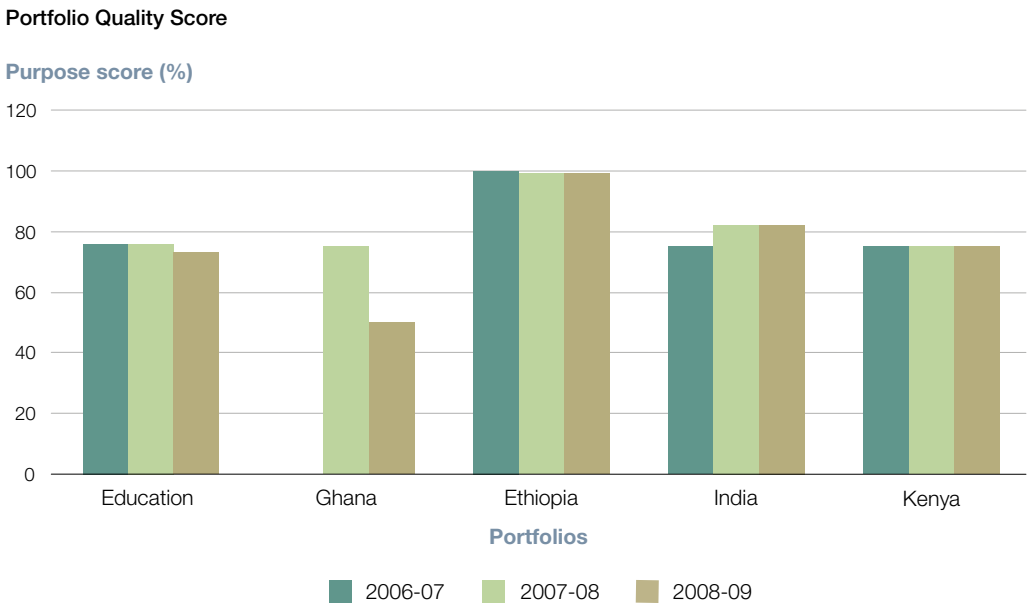
Learning lessons across the portfolio

5.2 In early 2009 DFID reviewed its education portfolio to strengthen information on the value for money of different investments and to identify scope to improve. The review concluded that "DFID's education portfolio provides excellent public value not least because the benefits of education are huge". The review found that differences in learning achievements mattered more in explaining cross-country differences in productivity growth than differences in years of schooling or in enrolment rates[57]. It recognised the challenge and importance of improving quality, but did not reach a conclusion about the scale of possible improvements to cost-effectiveness of educational systems.

5.3 DFID scores its larger projects for likelihood of success against objectives, annually and on completion. Education programmes scored an average of 69 per cent over the six year period from 2002-03, and 71 per cent in 2007-08[58], meaning they are "likely to achieve most objectives". In our four case study countries, overall results have been stable in recent years (**Figure 17** overleaf). We concluded that the results were partly supported, but not yet robust because most projects were set up before DFID improved its project scoring in 2006-07.[59] We did not find corporate analysis of why, for example, Ethiopia scored higher than Ghana, or how to raise Ghana's performance.

5.4 Lesson learning is not sufficiently institutionalised. DFID's evaluation department publishes some 20 reports annually, but has not covered education in the last four years. DFID has commissioned three education consortia to provide research on barriers to access, education quality and education outcomes. This is disseminated to country teams but advisers lack time and opportunities to apply this in their work.[60] DFID also organises annual meetings for advisers to share experience. But overall though we found good examples of lesson learning at country level there was little evidence of good practice being reflected in project design in other priority countries.[61]

Figure 17
DFID education project scores in NAO study countries[1]



NOTES

1 Data at sector level not collated before 2006-07.

2 Scores relate to all education projects and programmes and do not distinguish between promary and other levels of education.

Source: Deparment for International Development

Managing DFID's cadre of education experts

5.5 DFID has to meet the needs of a rising education programme while meeting corporate pressures to reduce running costs. In education as in other sectors, DFID's approach is increasingly to exit from labour-intensive direct project delivery and move towards influencing others. So DFID's education advisers in countries have a key role: using their expertise to influence recipient governments and other donors to allocate appropriate resources to education, ensuring that aid recipients make effective use of UK resources, and reporting on progress. Examples we saw included supporting ministries to develop education management information systems and education strategies and plans. Most advisers spend between 20 and 30 per cent of their time on education policy[62].

5.6 DFID has 34 education advisers[63]. Twenty work overseas, of whom two are health advisers covering education and seven cover wider remits. The World Bank has a similar education spend, but 162 dedicated education specialists[64]. DFID advisers are typically supported by one or two locally engaged staff, but staffing is stretched given the substantial sums disbursed and the devolved nature of education. Advisers have limited time 'in the field' to observe actual practice and progress (**Figure 18**). Most of their time is spent planning, monitoring and responding to central DFID requests for information, influencing national government and coordinating interventions with other donors. Civil Society Organisations consider that staffing constraints in DFID restricted opportunities for interaction with the Department.[65] Average duration in post at 21 months is not high given advisers' need to establish and sustain key business relationships. In three out of our four sample countries the education adviser was either new in post or about to leave.

Figure 18
DFID education advisers in case study countries, October 2009

Country	DFID education spend 2008-09 (£m)	Months in post	Time spent on education in country (%)	Days working outside city of DFID office during previous 12 months	Comments
Ghana	28	3	70	24	Adviser also covers health.
Kenya	34	3	60	0	Adviser also covers Somalia and wider region.
Ethiopia	28	25	80	15	Adviser also covers water and sanitation.
India	72	(1) 2 months (2) vacancy	Two part time posts	20	

Source: Department for International Development

Appendix One

Methodology

Our approach was designed to determine whether DFID's expenditure on primary education is adequately contributing to the achievement of the relevant Millennium Development Goals. We looked in detail at DFID's work in four representative countries (Ghana, Kenya, Ethiopia and India), receiving 39 per cent of DFID bilateral education expenditure in 2007-08. Primary methods comprised:

Method	Purpose
1 Reviewing project proposals and monitoring documentation on some 16 DFID programmes in Ghana, Kenya, Ethiopia and India, and on the development strategies of DFID and partner Governments	To evaluate progress against plans
2 Evaluating statistical, financial and economic data	To determine levels of investment and progress made
3 Interviewing senior officials in Government ministries and agencies in the respective countries, and representatives of NGOs, Civil Society Organisations and other donors	To gather views of development progress and DFID's performance
4 Semi-structured interviews and focus group discussions by consultants with beneficiaries, district officials and local service providers	To gather views on progress in education over the past five years
5 Literature review of academic, donor and NGO publications on selected approaches to delivering primary education	To assess extent of consensus about 'what works' in education in relation to access, quality and the outcomes of education
6 Analysis of DFID Education Advisers Country Survey	To gather views of development progress and triangulate with fieldwork overseas
7 Semi structured interviews with London-based Education and Skills Team and DFID staff in overseas countries	To follow up issues raised by our other work and to gather views of operations and performance of DFID

A more detailed description of methodology is at: www.nao.org.uk/education-aid-2010.

Appendix Two

Millennium Development Goal progress

	Education spend DFID 07-08	MDG progress MDG 2.1 Per cent of Children				MDG 2.2 Per cent of Children				MDG 3.1 Ratio of Girls to Boys			
	£m	1991	2002	2007	Progress	1991	2002	2007	Progress	1991	2002	2007	Progress
Ethiopia	55	22.0	54.0	83.4	●		23.5	44.7	●	0.75	0.70	0.90	●
India	44	50.0	85.0	94.0	●	58.0	60.0	63.0	●	0.77	0.87	0.97	●
Ghana	28	53.5	58.9	71.9	●	61.2	62.5	70.7	●	0.85	0.94	0.99	●
Tanzania	26	55.4	80.7	97.3	●	62.4	59.3	85.4	●	0.98	0.97	0.98	●
Vietnam	20	94.0	94.1	97.4	●	96.1	102.0	101.0	●	0.93	0.94	1.00	●
Mozambique	19	41.5	56.9	76.0	●	26.4	22.2	46.3	●	0.74	0.79	0.87	●
Bangladesh	18			89.6	●	81.4	68.1	71.9	● ↓			1.08	●
Afghanistan	14				●			37.7	●	0.55	0.46	0.63	●
Kenya	11	69.0	78.0	91.6	●		68.2	81.0	●	0.97	0.95	0.99	●
Zambia	10	68.2	70.7	95.4	●	65.0	59.7	88.1	●		0.93	0.97	●
Malawi	9	48.8	94.6	87.6	● ↓	28.7	67.9	55.4	● ↓	0.84	0.97	1.04	●
Uganda	9	62.3	86.0	84.0	● ↓		59.2	54.4	● ↓	0.81	0.98	0.99	●
Nigeria	9	52.8	62.5	65.2	● ↑		71.9		●	0.79	0.81	0.85	●
Nepal	9		81.0	89.0	●	50.9	69.6	76.0	●	0.63	0.86	0.99	●
Pakistan	8	46.0	42.0	56.0	● ↑			61.8	●	0.68	0.73	0.82	●
Rwanda	7	70.0	91.0	95.8	●	21.8	38.1	52.0	●	0.93	0.99	1.02	●
China[1]	7	97.8	98.6	99.3	●	105.2	98.7		●	0.93	1.00	0.99	●
Sudan	5				●			19.4	●			0.93	●
Yemen	5	48.7	66.3	75.4	●		57.4	60.3	● ↑		0.66	0.74	●
Sierra Leone	4	42.9	42.0	69.0	●			80.8	●	0.70	0.71	0.90	●
South Africa[1]	4	91.7	95.1	91.0	● ↓	75.8	94.7	92.2	● ↓	0.99	0.97	0.97	●
Zimbabwe	1		83.3	88.4	●	97.2	82.9		● ↓	0.97	0.98	0.99	●
DRC		53.9	33.4		●	45.9	38.5	50.7	●	0.75	0.78	0.81	●
Cambodia		77.8	87.0	92.1	●	42.4	59.5	85.1	●	0.81	0.90	0.93	●

● Target achieved ● Target on track for 2015 ● Target on track for 2040 ● Target off track for 2040 ● Insufficient data

↑ Trend is in the intended direction ↓ Trend is in the wrong direction

NOTES

1 Not a Department for International Development PSA country.

2 Data is given to the nearest available year.

3 Subsequently, Bangladesh has moved from grey (insufficient data) to green (on-track) for 2.1 and 3.1.

Source: Department for International Development

Endnotes

1 Portfolio review estimate calculated by taking a pro-rata share of the number of children in primary school in each country, based on DFID's contribution to overall expenditure.

2 Evidence taken from a small-scale study.

3 The Education for All Global Monitoring Report (GMR) reports 'out-of-school' children as Children in the official primary school age range not enrolled in either primary or secondary school. Data reported by governments may understate real out-of-school numbers for primary school age children. Household survey data indicate that total out-of-school numbers may be as much as one-third higher than those reported by governments, who have different approaches for counting population and children nominally enrolled but not regularly attending.

4 Global Monitoring Report, 2010, p1.

5 Global Monitoring Report, 2010. p1.

6 DFID assists primary education in 22 priority countries. Figure 5 provides an analysis.

7 Global Monitoring Report 2010 p2. Highlights $4.3bn at £1.50/$ = £2.87bn.

8 We did not find specific and complete attribution of budget support to primary education, within the education sector as a whole.

9 In 2007-08.

10 The challenge of universal primary education, DFID, 2001, set three key priorities for DFID: contributing to the development and coordination of international commitment, policies and programmes designed to achieve education for all; strong, well targeted country programmes; and knowledge and research strategies and outcomes that will contribute to the ability of the international community, including partner countries, to learn lessons, share experience and monitor progress.

11 DFID, The Challenge of Universal Primary Education 2001, Paragraph 10.

12 In 2007-08, source: DFID Education Portfolio Review.

13 DFID's Strategy priorities for governments and civil society were: 1) ensuring strong government commitment including increased resources for primary education; 2) making primary education free; 3) ensuring commitment to gender equality; 4) ensuring access and inclusion of all children; 5) understanding and strengthening demand for education; 6) improving quality; 7) developing an integrated, sector wide approach to primary education; 8) taking action on HIV/Aids; 9) harnessing technology; 10) responding to conflict and preparing for reconstruction; 11) increased development resources and new and more effective ways of delivering them; and 12) promoting information and knowledge.

14 Based on NAO interviews with senior officials in Ghana, Kenya, India and Ethiopia.

15 Based on the P. Collier, D. Dollar approach on poverty efficient aid allocations: "Can the world cut poverty in half? How policy reform and effective aid can meet international development goals" (2000).

16 NAO review of DFID country programme documentation.

17 DFID Education Portfolio Review p21.

18 This is an important way of implementing the Paris Declaration's target of aligning donor support with government priorities.

19 Funding is used to improve school facilities, make basic repairs, purchase desks, exercise books and chalk and to ensure quality assurance.

20 Gross enrolment is calculated by expressing the number of students enrolled in primary education, regardless of age, as a percentage of the population of official school age. Including over-age children can result in enrolment above 100 per cent.

21 Education Statistics booklet, EMIS unit Ministry of Education, 2008.

22 Table 3-5 Education statistics booklet 2003-07, Kenya Ministry of Education.

23 Global Monitoring Report, 2010.

24 Socioeconomic determinants of Primary School Dropout, Okumu Mike et al Uganda, 2008.

25 Do Students Care about School Quality? Determinants of Dropout Behaviour in Developing Countries. Hanushek, Lavy, Hitomi November 2007.

26 CREATE consortium.

27 Ethiopia Government educational statistics annual abstract 2007-08.

28 World Bank (2004). Cost, *Financing and School Effectiveness of Education in Malawi: A Future of Limited Choices and Endless Opportunities*. African Region Human Development Working Paper Series, No. 78. World Bank, Washington DC.

29 Annual Status of Education Report for 2009 by the NGO Pratham. Dividing a three-digit number by a single-digit number.

30 See, for example, Hanushek, E. and Kimko, D. (2000), 'Schooling, labor-force quality, and the growth of nations', American Economic Review, 90, 1184-208.

31 Psacharopoulos and Patrinos 2004.

32 The patterns of returns to education and its implications, Christopher Colclough, Geeta Kingdon, Harry Anthony Patrinos, Recoup policy brief April 2009.

33 Recoup Policy brief no 4. The patterns of returns to education and its implications. See Schultz, 2004; Kingdon et al, 2008. GMR 2010.

34 NAO analysis of evidence from Malawi. Average 4.9 children for women with no primary education, 2.9 children for women with incomplete education, 2.5 for completed education.

35 "Better indicators and targets are needed which highlight progression age-in grade, learning opportunity, worthwhile levels of achievement, quality of learning infrastructure, and equity", Keith Lewin, in UKFIET (2009) Education and our common future: UKFIET's response to DFID's education strategy.

36 Fast Track Initiative indicative benchmark set in 2004. The composition of the FTI indicative framework is under review and DFID expects this benchmark to change.

37 Kenya spent 3.8 per cent and Ghana spent 2.5 per cent of GDP on primary education institutions and administration in 2006, 3rd and 10th in the world, respectively, and compared to 1.4 per cent of GDP in the UK. Ethiopia at 2.0 per cent of GDP was 15th in the world. UNESCO Statistics http://stats.uis.unesco.org/unesco/TableViewer/tableView.aspx?ReportId=172.

38 Various research including Teacher's time on task and nature of task in India, D Sankar World Bank July 2009.

39 H Abadzi, World Bank pp10-11.

40 In Ethiopia the official school calendar includes 203 days. [School quality in Woliso, Ethiopia: Using Opportunity to Learn and Early Grade Reading Fluency to Measure School Effectiveness, DeStefano and Elaheebocus, June 2009].

41 Teacher Incentives in Developing Countries, Muralidharan and Sundararaman 2006, citing "Missing in Action: Teacher and Health Worker Absence in Developing Countries: Chaudhury et al 2005.

42 Annual Status of Education Report 2005 and 2009 by the NGO Pratham.

43 NAO observation of rural and urban schools in Ghana, Ethiopia, Kenya and India (Bihar and Andhra Pradesh). At the school with under 50 per cent attendance, we observed major building works left uncompleted, and received complaints about the teachers from a delegation of local people. Schools with high attendance had features attractive to parents such as the provision of feeding programmes.

44 Ghosts are those on the payroll who may never have existed, or were once legitimate payees but have since retired, died, absconded or taken unauthorised leave.

45 Report to the Ministry of Justice by the Kenyan government Efficiency Monitoring Unit, suggested 20,000 additional teachers on the Ministry payroll. June 2009.

46 Mid Term Review of the Fast Track Initiative Catalytic Fund in Ghana 2009.

47 Empowering School Communities: Experiences of Providing Textbooks to Kenyan Primary Schools, Audit by the Kenyan National Audit Office and the UK NAO, September 2009.

48 The Ghanaian Education Sector Progress Report (2009) refers to acute inefficiencies in deployment with only 24 per cent of teachers allocated according to the PTR norm in deprived areas.

49 Lewin K and Stuart J: Researching Teacher Education, DFID Research Paper March 2003.

50 Research by ITAD for the NAO in Kenya and Ghana. NAO staff interviews with class teachers in the four visited countries.

51 Sample of 61 programmes and projects, undertaken by an external consultant as part of DFID's Education Portfolio Review (2009).

52 Based on typical classroom sizes and densities observed in NAO fieldwork.

53 Countries with no classroom costs available were Uganda, Ethiopia, DRC, Sudan.

54 DFID Education Portfolio Review p41.

55 Data from 4,608 communities that the Kenyan Ministry of Education is supporting to develop their educational infrastructure. Dates 2005-09, £5,375 compared to £10,416 via public works.

56 Recognition of the relative economy of community-based approaches is not new. January 2003, "Review of Cost-Effectiveness and Design Standards." EMC Jatula Associates, Malawi.

57 DFID Education Portfolio Review.

58 DFID Education portfolio Review.

59 We examined plans and progress reports for 16 programmes each worth over £1 million in our case study countries. In 11 out of 16 programmes, baseline data and milestones against which to assess progress were missing or incomplete. Of the 13 programmes which had reported progress, four had very poor or no reporting against indicators, while another five had inconsistent reporting, with assessments of progress lacking sufficient evidence. Three programmes designed since 2007 have better measurement frameworks reflecting process improvements by DFID, but these have yet to report.

60 CREATE, Recoup, EdQual.

61 Advisers report mainly sharing of documentation, and peer reviews of each others' programmes.

62 DFID staff survey commissioned as part of the Education Portfolio Review. Data from 14 countries.

63 Five UK-based advisers, 11 Africa, nine Asia, four advisers on secondment, three advisers not in education jobs, two other (one maternity, one FTI).

64 Education Portfolio review.

65 NAO forum with Ghanaian NGOs and CSOs, September 2009.

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