HEART
HEALTH & EDUCATION ADVICE AND RESOURCE TEAM

IMPROVING EARLY GRADE LEARNING OUTCOMES IN UGANDA

Final report

3 February 2016

Acknowledgements

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Abbreviations

AKF	Aga Khan Foundation
CAO	Chief Administrative Officer
CBA	Cost–Benefit Analysis
CCT	Centre Coordinating Tutor
CSC	Critical Success Criteria
CSO	Civil Society Organisation
DEO	District Education Officer
DFID	Department for International Development
EAC	East African Community
EAQEL	East Africa Quality in Early Learning
ECD	Early Childhood Development
EDP	Education Development Partner
EGRA	Early Grades Reading Assessment
EMIS	Education Management Information System
ESSP	Education Sector Strategic Plan
GDP	Gross domestic product
GILO	Girl's Improved Learning Outcomes
GPE	Global Partnership for Education
LARA	Literacy Achievement and Retention Activity Program
M4P	Markets for the Poor
MOESTS	Ministry of Education Science Technology and Sports
NAPE	National Assessment of Progress in Education
NDP	National Development Plan
NER	Net Enrolment Rate
NGO	Non-Governmental Organisation
NPV	Net Present Value
PBR	Payment by Results
PLE	Primary Leaving Examination
PTC	Primary Teachers College
RRL	Read-Learn-Lead Programme
RTI	Research Triangle International
RtL	Reading to Learn programme
SACMEQ	Southern and Eastern African Consortium for Monitoring Educational Quality
SHRP	School Health and Reading Program
UPE	Universal Primary Education
VfM	Value for Money

Executive summary

DFID Uganda is re-engaging in the education sector after several years. This is the final report on a process of identifying and appraising options for supporting improvements in early grade learning outcomes, conducted by a team of consultants under the direction of the DFID Uganda Education Adviser (see **Section 1**).

The strategic case (**Section 2**) for intervening to improve learning outcomes in the early grades of primary education is based on the need to improve foundational skills so that children can acquire higher-level skills that will make them more productive and allow them to gain personal and social benefits. Learning outcomes, as measured by basic literacy and numeracy, are low. The country and a large proportion of its 8 million primary school children are missing out on the benefits that education brings. The need for a better-educated workforce with greater economic potential is urgent because Uganda's rapid rate of population growth threatens to outpace its economic growth. From DFID's perspective, improvement in foundational learning is fundamental to the country's long-term development and poverty alleviation objectives. By choosing to invest in a programme to support early learning improvement, DFID is aiming to complement and add value to existing Government of Uganda and Development Partner efforts.

Section 3 analyses the context of this investment. Enrolments in primary schools have increased nearly 400% in less than two decades. This expansion of access has not been even throughout the country, and it has not reached all demographic groups equitably.[1] Nor has the expansion of access been sustained as there is high dropout in the upper primary grades. The increase in the number of students has similarly not been matched by improvements in quality. A significant feature of most primary schools is very high numbers of pupils in the first years. This is partly because of the inclusion of under-age children, as there is very little pre-primary provision, and partly because of repetition. Most of the pre-primary centres that exist are private and fee charging. Many primary schools are caught in a vicious circle of overcrowding, poor results and repetition. Teaching standards are low. Teachers come into the workforce with low levels of education. Their training and in-work support does not equip them with sufficient teaching skills. Their terms and conditions of service can be difficult and their career prospects limited. Lack of motivation manifests itself in high rates of absenteeism.

Education attracts a modest share of government spending relative to other countries, a large proportion of which goes to salaries. Most of the money available to districts, which are responsible for primary education, is provided by central government in the form of conditional grants, and there are considerable variations in the per capita amounts. Overall, the system is short of funds and dependent on external project funding for any developmental activity. The number of districts is increasing and this is adversely affecting the capacity among district staff. Teacher administration is slow and inefficient. The system of school supervision does not work well. There is a lack of accountability at all levels of education management.

DFID is keen to align its programme with existing quality improvement activities. Through Global Partnership for Education (GPE) funding, the government has a large project in place to improve teacher and school effectiveness. USAID has two projects to develop reading. Together these are operating in 89 districts. The government is keen to extend this coverage to the remaining districts, but in terms of relative deprivation and social indicators the areas of greatest need are mainly located in the northern regions of the country.

[1] For example, there is very strong anecdotal evidence that children with disabilities are disproportionately represented among those out of school.

Section 4 examines the options for DFID investment. From a long list of options for DFID involvement, three options have been selected for appraisal together with the counterfactual 'do nothing' option. For each of the shortlisted options, a range of proposed activities is outlined and the advantages and disadvantages explained. These options are:

- An extension of the national reading programme. This would involve replicating the approach to the teaching of reading adopted by USAID and the government through the GPE project and extending it to districts not currently covered.
- Testing cost-effective approaches to pre-primary education. This would be a research-led programme to increase the knowledge base and contribute to the development of policy.
- Strengthening the effectiveness of education management systems. This would work at both central and district levels to improve the efficiency and effectiveness of education management, especially the management of teachers.

The options are then appraised against critical success criteria (**Section 5**). These criteria include the extent to which the options will contribute towards:

- Improved learning in the classroom;
- Sustainable systemic change;
- Greater equity;
- Value for money (VfM);
- Harmonisation with other initiatives; and
- Manageability.

The options have been assigned scores against each of the criteria. The option that emerged as the preferred option is: **strengthening the effectiveness of education management systems.**

The supporting evidence for the shortlisted options is examined in **Section 6**.

For the preferred option a Theory of Change has been developed, which is presented in **Section 7.** It attempts to map out the chain of causality, the assumptions that have to be in place for the activities to achieve the outputs and the outputs to contribute towards the outcome. It also attempts to gauge the strength of the evidence supporting the connections in the chain.

The economic appraisal (**Section 8**) sets out the assumptions about the effectiveness and efficiency of the preferred option in terms of costs and benefits. It shows the total benefit from the DFID intervention costing £34 million, using conservative assumptions, as being a net present value (NPV) of £279 million, or a NPV benefit/cost ratio of 12.2 (using an economic discount rate of 10%). The cost–benefit ratio for the intervention indicates that the programme is very clearly value for money. In efficiency terms, a reduction of repetition by 20% as a result of the programme would generate efficiency benefits of £52 million, a figure well over the undiscounted programme cost.

1 Introduction

DFID Uganda is planning to introduce a new programme to support the delivery of quality and equitable education outcomes in Uganda. The DFID education programme will have three components. The largest of these components, which is the subject of this report, is concerned with adding value to existing efforts to improve learning at the early primary level. A second component will focus on assessment and a third will be concerned with supporting a mixed economy of state and non-state educational provision.

This report is the product of a series of exploratory and consultative activities over the period from late October 2015 to January 2016 in which a design consultancy team drew up a series of programme options for supporting improvements in early grade learning outcomes in Uganda. The team worked with the DFID Education Adviser to identify and appraise these options on the basis of documentary review, secondary data analysis and interviews. In early December 2015 the feasible options were presented to Government of Uganda and Development Partner stakeholders. This consultation helped to narrow the focus on the most promising options. This report takes the process further, appraising three possible programmes and the counterfactual 'do nothing' option, ranking them against a set of critical success criteria and examining the supporting evidence. From this a preferred option has been identified. This preferred option was then further developed with a Theory of Change and an economic appraisal. It is intended that this report will contribute towards a business case for DFID investment.

The timetable for the design consultancy is set out in the following table:

Table 1: Consultancy timeframe

Dates	Activity
26–31 Oct 2015	Initial scoping visit with DFID Education Adviser
5 Nov	Submission of Inception Report (output A)
10 Nov	Inception Report approval
9–13 Nov	Arrangements for main mission
16–26 Nov	Main mission
30 Nov	Submission of draft slide pack (output B)
1 Dec	Feedback on draft slide pack
2 Dec	Presentation of options slide pack
3 Dec	Selection of preferred options
15 Jan 2016	Submission of 1st draft final report
22 Jan	Feedback on 1st draft
29 Jan	Submission of final report

The Terms of Reference are in Annex 1. Lists of people consulted during two visits to Uganda are in Annex 2.

2 Strategic case

Uganda is a low-income country with a per capita GDP of US$ 715.[2] It has the aspiration to become a middle-income country by 2040. The second National Development Plan (NDPII) identifies developing human capital, together with increasing production and improving infrastructure and services, as fundamental to the socio-economic transformation the country needs in order to achieve Vision 2040. The previous NDP identified the lack of an adequately educated work force as a major limiting factor on economic growth. The high growth rate of 3.7% per annum of the unskilled labour force was seen as contributing to high levels of unemployment and underemployment.[3]

Uganda's ability to reach its social and economic goals is constrained by its rapid population growth. The population has risen from 5 million in 1950 to 37.6 million in 2013 and currently has an annual population growth of 3.2%[4]. Nineteen per cent of the population is under the age of 5 and three-quarters of the population under 30.[5] The sharp and sustained increase in the demand for education that these figures imply will put enormous strains on education services that are already struggling to improve access and quality.

2.1 Why is there a need for support to early grade learning?

Learning outcomes in Ugandan primary schools are poor. The low quality of educational foundations established in the early primary grades has consequences throughout the education system and far-reaching implications for society and the economy. In 2012, less than half the primary Grade 6 students tested by National Assessment of Progress in Education (NAPE) were proficient in literacy (41%).[6] In cross-country assessments (SACMEQ), Ugandan students scored in the lowest one-third of countries. Very few children are reading to an international benchmark.[7] According to the UWEZO[8] survey, only one out of 10 children assessed in primary 3 were able to read and comprehend a primary 2 level story and correctly solve primary 2 level arithmetical division. Only seven out of 10 children assessed in primary 7 succeeded in the same primary 2 level tests. There are marked differences in the learning outcomes recorded in different districts.

Poor achievement levels are associated with a peculiar pattern of access. This is manifested in very large numbers of children in the early grades of primary school, a situation exacerbated by high rates of repetition, and a steep decline in enrolments in the higher grades. Low achievement is also a contributing factor to the rapid fall-off in enrolments in upper primary. This is particularly pronounced between grades 6 and 7, when children are preparing for the Primary Leaving Examination (PLE). Measured against the international definition of survival to the start of the last year of primary school, the survival rate was 55% in 2011. Using Uganda's own definition the survival rate was 33%.[9] This problem carries through into higher levels of schooling and is reflected in the low level of transition to secondary education.

The low survival rate and poor learning outcomes mean that an expanding population of children and young people is emerging from the school system with low levels of education and skills. A large proportion of Ugandan children are missing out on the economic and social benefits and individual well-being derived from education. Education is a public good that benefits both the individual and

[2] World Bank Development Database, 2014.
[3] Uganda National Development Plan, 2010/11–2014/15.
[4] National Development Plan, 2010/11–2014/15.
[5] Situation Analysis of Children in Uganda, Ministry of Gender, Labour and Social Development/UNICEF, 2015.
[6] World Bank (2013). Project Appraisal Document for the Uganda Teacher and School Effectiveness Project.
[7] Piper, B. 2010. *Uganda Early Grade Reading Assessment – Findings Report: Literacy Acquisition and Mother Tongue*. Research Triangle Institute International.
[8] Annual Learning Assessment Report, 2014.
[9] GPE Teacher and School Effectiveness Project, Project Appraisal Document, August 2013.

wider society. It is a basic human right. It increases productivity and thus incomes.[10] Poor levels of learning mean that children are not gaining the necessary foundational skills for acquiring the knowledge and higher-level transferable skills, in communication, problem-solving, teamwork, creative and critical thinking, that are needed to improve their livelihoods. They are also less well equipped to avoid the social consequences of low levels of educational achievement, which are reflected in poor health and nutrition status and high fertility rates.

Income poverty is strongly associated with a lack of education and issues of gender inequality can be exacerbated or ameliorated by the provision of education.[11] High economic and social returns to early years education are widely recognised. One influential study estimates that an increase of one standard deviation in student scores on international assessments of literacy and mathematics is associated with a two percentage point increase in annual GDP per capita growth.[12] Global evidence shows that an extra year of primary schooling for girls in particular can increase their wages by up to 20%, most of which is likely to be reinvested in her family and community.[13] The number of years of education of girls is known to affect the age of marriage and reduce fertility rates.[14] Girls with more schooling tend to marry later, have fewer children, and exhibit lower rates of infant mortality,[15] as well as being more likely to educate their own children. Similarly, although the evidence base is more limited, existing research indicates that education for persons with disabilities also has a strong economic impact: for example, in Bangladesh, the World Bank estimated that lower levels of education among persons with disabilities led to reductions in wage earnings that cost the economy US$26 million per year.[16]

There is strong evidence that shows that investing in quality education will contribute to the achievement of other development goals: poverty reduction and increased equity of service delivery provision; reduced HIV/AIDS levels; reduced child mortality;[17] higher uptake of contraceptives and family planning methods; improved birth spacing; and stronger economic growth.[18]

2.2 Why should DFID intervene?

DFID is re-engaging in the education sector after a hiatus of several years. The planned education programme will have three major themes. In addition to this investment to support improvements in learning in the early grades, DFID is intending to support assessment and initiatives that develop mixed economy models of public and non-state provision.

Improvement in foundational learning among young children is fundamental to DFID's long-term development and poverty alleviation objectives. Learning is central to DFID's education work

[10] Education and Economic Growth, International Encyclopaedia of Education Hanushek and Wossmann, 2010.
[11] Lloyd C. B. (2011) Evidence Paper for Girls' Education Challenge Fund, Consultancy Report to DFID.
[12] Education and Economic Growth, International Encyclopaedia of Education Hanushek and Wossmann, 2010.
[13] Psacharopoulos and Patrinos (2004), Returns to investment in education: a further update, *Education Economics* 12(2).
[14] 'Women with a secondary or higher education ultimately have about 3 children fewer than women with no education': UN Population Division Report 'Population, Education and Development', 2003.
[15] It is estimated that globally half the reduction in deaths of children under five over the last four decades can be attributed to basic education for girls: Gakidou, Cowling, Lozano and Murray (2010), Increased Educational Attainment and its Effect on Child Mortality in 175 Countries between 1970 and 2009: A Systematic Analysis, *The Lancet* 376(9745), pp. 959.
[16] Project appraisal document on a proposed credit to the People's Republic of Bangladesh for a disability and children-at-risk project. Washington: World Bank; 2008, quoted in Banks and Polack, 2014, *The Economic Costs of Exclusion and Gains of Inclusion of People with Disabilities*.
[17] Hanushek, E.A. and Wößmann, L. (2007) The Role of Education Quality for Economic Growth, Washington, DC, World Bank, Human Development Network (Policy Research Working Paper, 4122); Bledsoe, C.H., Casterline, J.B., Johnson-Kuhn, J.A., and Haaga, J.G. (eds.) (1999) Critical Perspectives on Schooling and Fertility in the Developing World. National Academy Press, Washington, DC; Mensch, B, Lentzner, H, and Preston, S (1986) Socio-economic Differentials in Child Mortality in Developing Countries, New York, United Nations. For other reviews see Colclough (1982); Hannum and Buchmann (2005); UNESCO (2002); Watkins (2001); and World Bank (1985).
[18] Bruns, B., Mingat, A and Rakotomalala, R. (2003), 'Achieving Universal Primary Education by 2015 – A Chance for Every Child'. Washington DC: World Bank.

worldwide.[19] By opting to invest in a programme to support learning improvement, DFID is aiming to add value to existing Government of Uganda and Development Partner efforts. These include major initiatives funded through the GPE and USAID. DFID Uganda has an opportunity to complement these efforts, thus maximising the impact of its investment and supporting the government's commitment to quality improvement.

The proposal that DFID should support sustainable change in the quality and equity of primary-level foundation skills has been generally welcomed by the Government of Uganda and by other Education Development Partners. It is recognised that the UK is a source of development expertise and professionalism and that DFID has areas of comparative advantage that will benefit their collective efforts. These areas of comparative advantage are concerned with bringing about transformational change, through systems development based on broad international experience. DFID's investment in a significant education programme aimed at supporting crucial improvements in learning will enhance its contribution to policy discussions with government, add value to the government's efforts under GPE, and complement the areas of expertise of the other donors.

[19] DFID Learning Framework, Education Position Paper, July 2013.

3 Situation analysis

This situational analysis outlines the context of education in Uganda, the challenges to improving early years learning and the bottlenecks hindering progress. It also examines existing initiatives operating at scale and identifies those districts that are currently underserved.

3.1 Context

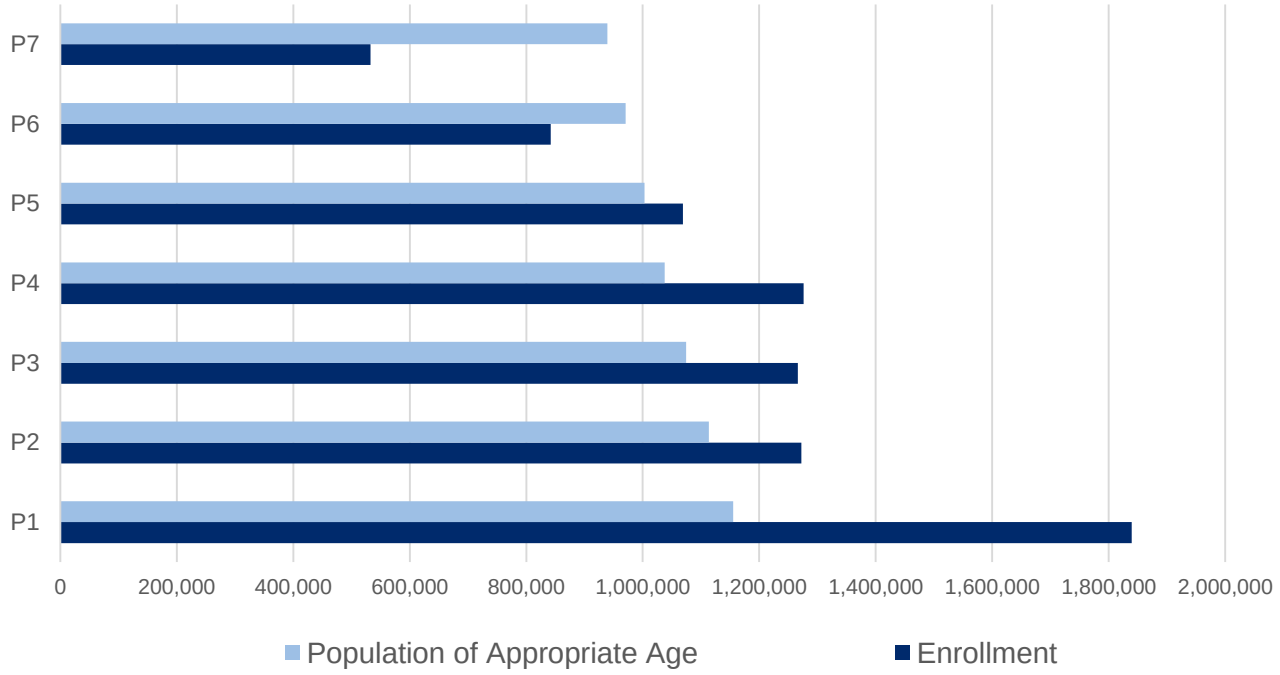
Policy responsibility for education lies with the Ministry of Education, Science, Technology and Sports (MOESTS). Responsibility for delivering primary education in Uganda's almost 18,000 primary schools lies with the districts (and municipalities), of which there will soon be 136. However, as districts have little locally generated income, most of the funding comes from central government in the form of conditional grants with very little devolved discretion. Since the Universal Primary Education (UPE) legislation of 1998, primary education has been provided for seven years from age 6, finishing with the PLE at the end of grade 7. Primary school fees were abolished in 1997 and a system of school grants (UPE grants) was set up in 2006.

Uganda has made considerable progress in enrolling children into primary schools. Primary enrolment has risen from 2.5 million in 1997 and is now estimated to be 8.7 million, giving a net enrolment ratio of 83%.[20] However, this figure masks large regional differences, with poorer areas in the North, North East and North West performing least well. It also disguises a wide variation by grade. There is a very high intake in Grade 1, at 140% of the population of target age.[21] The problem of repetition in the early grades is more serious than the 10.3% that is officially reported.[22] This is a major source of inefficiency in the system, which drags down VfM. There is a steep decline in enrolment in the higher grades of primary school and a relatively low primary completion rate. This was around 57% in 2013, which compares unfavourably to a completion rate of 90% in neighbouring Tanzania and an even higher rate in Kenya.[23]

Figure 1 below shows the pattern of enrolment in primary schools. In the early grades, there are many more children in school than there 'should' be, due to over-age and under-age enrolment. There is significant repetition in the early grades contributing to a vicious cycle of overcrowding, limited acquisition of basic skills, and further repetition. There is significant dropout after Grade 5 and it is particularly acute between years 6 and 7, when children are being prepared for the PLE.

[20] Uganda National Board of Statistics, 2010.
[21] Stumbling at the First Step: A Triple Crisis at the Foundations of Education Systems, Luis Crouch PPT, August 2015.
[22] Draft National Development Plan II, May 2015.
[23] Figures based on World Bank Edstats (2013) adjusted for repeaters. The completion rate in Kenya in 2008 was 94%

Figure 1: Enrolment in relation to population

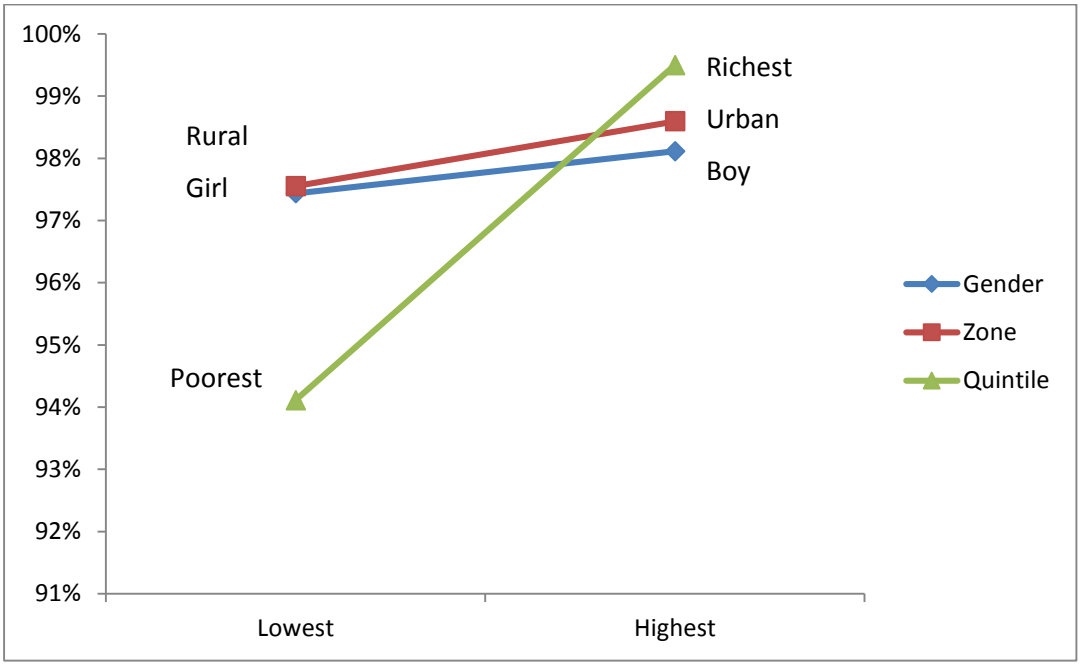


Source: Luis Crouch presentation: Stumbling at the First Step: A Triple Crisis at the Foundations of Education Systems Aug 2015

Within this overall picture, there are a number of inequities. Girls' enrolments are slightly lower than boys at primary level. However, the main challenge for girls appears to be at transition to lower secondary and the gender gap grows throughout secondary education.[24] Far more significant determinants of access at the primary level are location and relative wealth. Rural children are 1.1% less likely to access primary education than those in urban areas. As the steep differential among income quintiles in Figure 2 below indicates, the poorest are 5.7% less likely to access primary education than the richest.

[24]. The proportion of girls in the total entry was 49.3%, while the proportion of girls in those passing was 48.3%: Uganda Education Statistical Abstract, 2011.

Figure 2: Differences in the probability of accessing primary education



Source: Mamy Rakotomalala, World Bank 2015

It is estimated that in Uganda there are approximately 2.5 million children living with some form of disability. As a recent report has pointed out, these children are disproportionally vulnerable to mental and physical violence and sexual abuse through isolation, a lack of access to services, and socio-cultural beliefs.[25] A study in four areas – Igandga, Jinja, Kampala and Masaka – found that 90% of children with disabilities do not access education.[26] The Government of Uganda acknowledges, in its report to the UN Committee on the Rights of Persons with Disabilities, that the lack of a policy on early childhood development for children with disabilities, has been a barrier to inclusive pre-primary and primary education.[27]

The pre-primary sector is relatively small. Different ways of defining it lead to differences in official statistics. The Uganda Demographic and Health Survey in 2011 put 6.6% of all children in the age bracket 3–5 years as enrolled in pre-primary education,[28] while according to Education Management Information System (EMIS) data net enrolment at pre-primary level in 2013 was 10.1%.[29]

The provision of pre-primary education is dependent on non-governmental organisations (NGOs) and the private sector. This limits access, with high disparities between urban and rural areas and among different socio-economic levels. Access is largely limited to upper- and middle-income classes and two-job families and only partly available to the working poor. The Ugandan government does not currently provide any subsidies to private pre-primary schools. Anecdotal evidence suggests that low-fee private Early Childhood Development (ECD) providers face a range of issues. They are often unregistered, do not adhere to a standard curriculum, draw from a pool of low-skilled

[25] Situation Analysis of Children in Uganda, Ministry of Gender, Labour and Social Development and UNICEF, 2015.
[26] Research Study on Children with Disability living in Uganda: Situational Analysis on the Rights of Children with Disabilities in Uganda. Riche and Anyimuzala, Kampala, 2014.
[27] Government of Uganda, Initial report of State Party to the UN Committee on the Rights of Persons with Disabilities, 2013
[28] Uganda Bureau of Statistics and Measure DHS, 2011. Uganda Demographic and Health Survey, 2011. Kampala, Uganda Bureau of Statistics.
[29] The differences can be explained partly by problems of definition between pre-primary (for 4 and 5 year olds) and ECD, which covers a broader age range. There are also reporting problems as it is likely that some for-profit nurseries and community-based ECD centres do not report their enrolments and that some children attend without being enrolled.

teaching/care-giving workers, and usually lack access to stable financial services to cover costs.[30]

In more rural or disadvantaged parts of the country where for-profit private providers do not venture due to lack of lucrative markets, there are a growing number of community-based pre-primary or ECD education centres. These centres are established by community contributions and managed/hosted by faith-based organisations or other community-based organisations. These ECD centres are either stand-alone kindergartens or attached to government primary schools, but are privately owned and managed, even in the latter case. A number of NGOs like Plan International, Save the Children, Aga Khan Foundation (AKF) and Child Fund are also involved in alternative pre-schools in Uganda, mainly using the model of community-based centres. UNICEF is heavily involved in advocacy for ECD and in policy discussions with government.

There are many reasons for low learning outcomes. One symptom of the situation, and one of the possible causes, is acute overcrowding in primary classrooms due to the weight of numbers in the early grades. Classes of over 60 children are the norm and classes of over 100 are not uncommon. This makes teaching very difficult and learning really challenging.

Low teacher quality is a contributing factor to poor learning outcomes.[31] Teachers enter the profession with limited subject knowledge and few pedagogic skills and they have few opportunities to develop thereafter. The conditions in which they work and live are often challenging and uninspiring, particularly in rural areas, where living conditions are difficult and amenities scarce. Recruitment deployment and transfers are often influenced by local patronage and clientelism, so that informal mechanisms are more significant than the formal rules of employment.[32] Although teachers are reasonably well paid in relation to the communities in which they work, salary payments can be erratic and subject to seemingly arbitrary delays. The regularity of salaries has improved in recent years, but teachers' perceptions are that they are poorly rewarded and poorly managed. Typically, they get little professional support from head teachers who lack leadership skills. Their career prospects are limited. Low levels of motivation are reflected in high rates of absenteeism. UWEZO reported 21% of teachers were absent from school on the day of its 2014 survey.[33] A similar pattern can be seen in the table below, which points to particular problems in rural areas.

Table 2: Primary school teachers' attendance and knowledge

	Public schools	Rural public schools
Teachers absence from school	23.8%	30.6%
Teachers' absence from classroom	52.5%	59.5%
Time spent teaching per day	2h 55m	2h 43m
Minimum knowledge	19.5%	16.9%

Source: World Bank Service Delivery Indicators Nov 2013 (SDI@worldbank.org)

A relatively low proportion of the government budget is spent on education. The share of education in the national budget was 13.1% in 2011. This represented a real decrease in education funding of 21% between 2006 and 2011.[34] The proportion for 2015/16 draft budget is 10.96%.[35] Roughly half

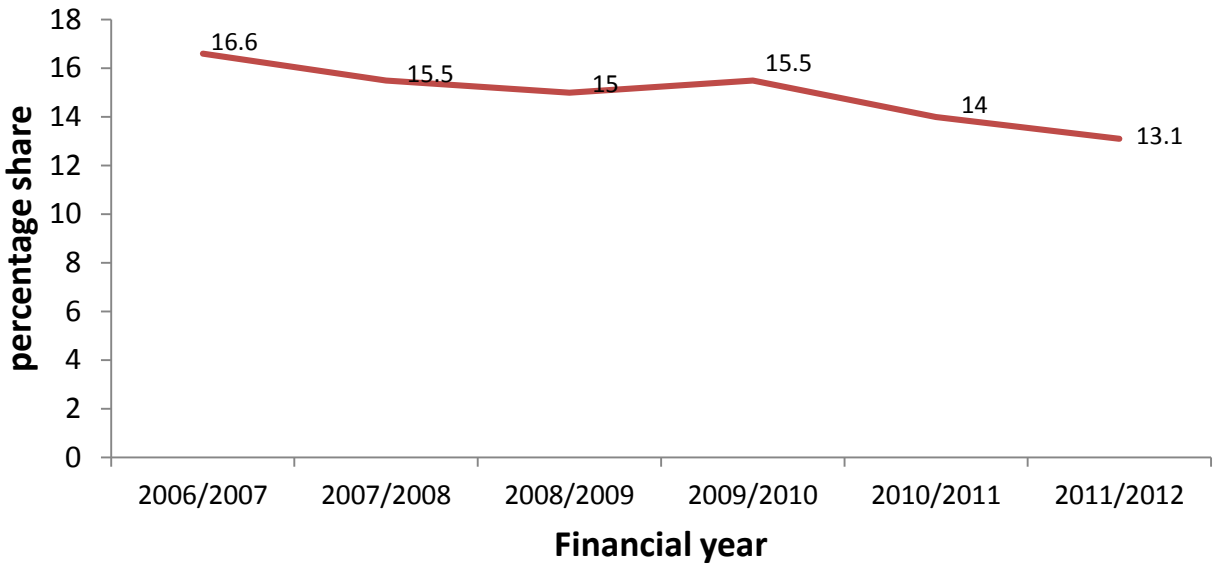
[30] Anecdotal evidence gathered from interviews during this design consultancy, November 2015.

[31] According to DFID Education Evidence Paper 2014, teacher quality has the greatest impact on learning outcomes.
[32] Primary Education Systems Analysis Report: Uganda, Cambridge Education, 2011.

[33] In over half the public schools in the country over 60% of teachers were not in the classroom teaching. World Bank Social Delivery Indicators Report, 2013.
[34] World Bank PPT on Secondary Education Project, 28 May 2015.
[35] Analysis of the Government of Uganda proposed national budget for the 2015/16 financial year, World Bank, 2015.

of this expenditure is on primary education. Uganda's education share of national income, 3.2% of GDP, is also relatively low, below that of other East African Community countries (Kenya 6.7%, Tanzania 6.2%).[36]

Figure 3: Government education spending



Source: World Bank PPT on Secondary Education Project, 28 May 2015

The pupil/book ratio remained at 4.1 throughout 2009 to 2013 and the pupil /teacher ratio stagnated at 49:1 during the same period.[37] Since 2006 schools have received UPE capitation grants but these are small, have not kept track with rises in the cost of living, and have not always been paid in full. The capitation grant was set at 7,000 Ugandan Shillings (Ug Shs) in FY 2007/8. This was increased to 10,000 Ug Shs in 2015. However, the main problem with the UPE grant is not only the amount allocated per child but the fact that schools have not always received the amounts due, because the Ministry of Finance does not release adequate funds.[38]

Restrictions on budgetary allocations to education and the high proportion of the available finance that goes to salaries mean that MOESTS has very little funding for any developmental work. The ministry is highly dependent on external project funding for any developmental activity. This has implications for the strategic direction of MOESTS because there is a tendency for policies to 'follow the money'. The GPE-funded Teacher and School Development Project, more than any other programme, reflects government policy, but is itself strongly influenced by the Development Partners.

There is no immediate prospect of an increase in government spending on education. Although education is regarded as a priority it is not as high a priority as the construction of roads and infrastructure to grow the economy. Ministries of education worldwide are stereotypically regarded as big spenders providing limited returns. Education is not thought to be high on the President's political agenda. He is on record as regarding spending on social sectors as 'unproductive'.

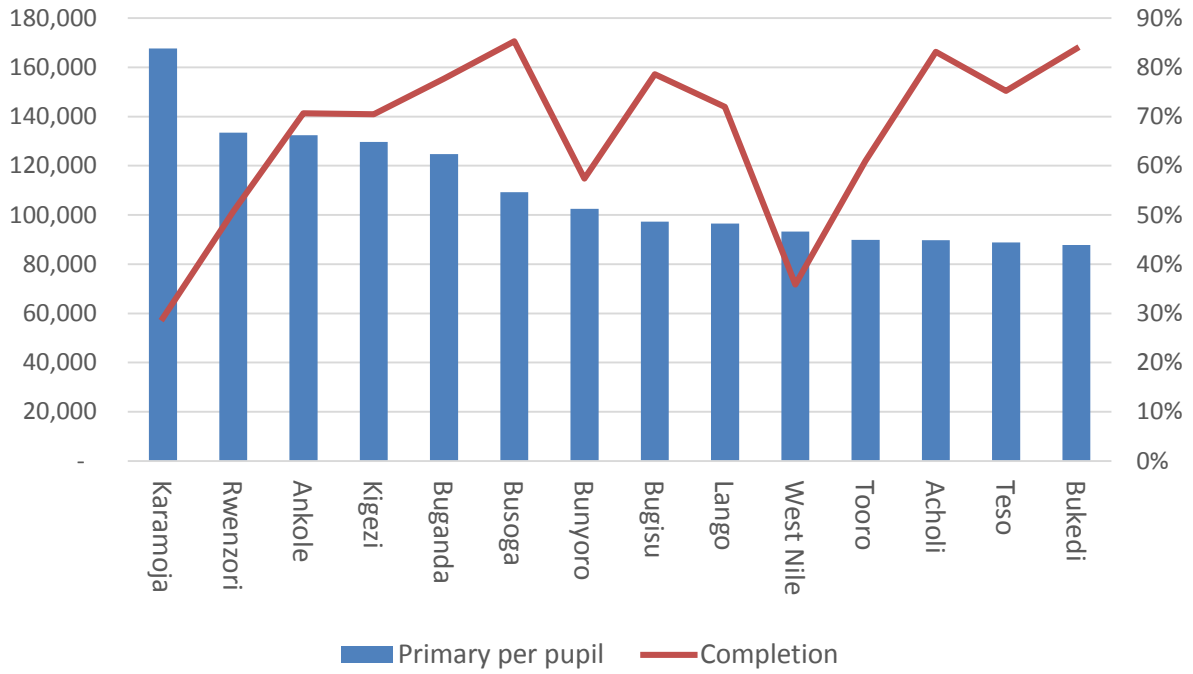
[36] World Bank data on education spending: http://data.worldbank.org/indicator
[37] Draft National Development Plan II, May 2015.

[38] Anecdotal evidence from interviews conducted during the design consultancy.

While the absolute amount of funding available for education is important, the allocation of funds and the effectiveness with which they are spent are equally significant. There are wide variations in fiscal allocations to districts for primary education because of successive digressions from the original funding formulae. Plotted against the left-hand axis of the graph in Figure 4 below, the columns show the per capita spending in Ugandan shillings by region (administrative groups of districts). This illustrates the variation in education spending per head.

However, the amount of resources available is not necessarily a predictor of results. Superimposed on this graph is the primary completion rate for each district (the right-hand axis). This shows little correlation between financial inputs and technical outputs. Other factors, such as geography, relative deprivation and possibly governance, are clearly influencing the effectiveness of service delivery.

Figure 4 Spending per capita (UG Shs) and completion rates by region



Source: UNICEF 2015

The number of districts has increased from 34 in 1991 to 112 in 2015. Further district creation is in process in a phased manner, so that the number of districts and municipalities is due to rise to 136.[39] The proliferation of government units is a feature of the system of political patronage and it has had an impact on the capacity of local government. District education staff vary in terms of numbers, competence and experience. The staffing of some of the newer districts is barely adequate. Management systems are antiquated, the wheels of administration turn slowly and bureaucratic processes are subject to delay and political influence. Administrative systems do not keep up with realities on the ground. Staff vacancies go unfilled for long periods and many head teachers and

[39] This figure includes existing districts, municipalities and Kampala, as well as a number of new districts, which are being established over the coming years.

district administrators are in acting positions, the prospect of confirmation being used as a form of loyalty incentive.[40]

On paper, education management structures and processes look workable. The District Education Officers supervise primary schools. The district inspectorate is responsible for maintaining standards. The district service commission organises teacher recruitment and deployment and sets terms and conditions. There is a system of professional outreach through the Centre Coordinating Tutors (CCTs) attached to the Core Primary Teachers' Colleges, which provide in-service teacher training as well as pre-service education.

In practice, schools lack supervision. Beyond areas involved in externally funded projects, teachers have very little administrative and professional support. Only one in every four schools reported having been visited by a district inspector or a CCT during the 12 months prior to the 2009/10 Uganda National Household Survey.[41] CCTs have large geographical responsibilities but limited access to transportation. The same survey also found that district-level officers (district education officers and district inspectors) visited schools the least frequently in comparison to other visitors. Restrictions on district travel budgets limit the mobility of supervisory staff. The scale of teacher and head teacher absenteeism is a symptom of how inadequately supervision operates. Teacher absenteeism studies reveal that districts with lower levels of inspection generally have higher absence rates.[42]

A lack of adequate funding is often cited as a major reason for these problems. Non-salary finance is scarce, but there is also a problem of accountability throughout the system, in MOESTS as much as at district level. A lack of individual responsibility and a reluctance to stand out in a crowd are common and understandable features of many bureaucracies. When the issues seem large and intractable it is difficult to see how the actions of individuals can influence events. However, the tendency to pass the buck means that issues circulate within education management structures without ever being adequately addressed. Moreover, superimposed on the formal management structures and sometimes subverting rational governance processes are layers of informal 'rules of the game' created by patronage and clientelism. Any attempt to reform the ways in which governance works will need to take full account of the realities of the political economy.[43]

3.2 Initiatives currently supporting early years learning improvement

MOESTS is committed to a national programme of early grade reading and is keen to extend the coverage of the current reading projects. The government is also interested in support in two other thematic areas: early grades numeracy and 'life skills'.

Of the current 112 districts, 63 are currently participating in two USAID reading projects: the School Health and Reading Program (SHRP=31 + 4 control districts) and the Literacy Achievement and Retention Activity Program (LARA=28). A further 27 are participating in the reading component of the Teacher and School Effectiveness Program under the government's GPE funding. This leaves

[40] The role of patronage and clientelism in teacher postings is discussed in the Primary Education Systems Analysis Report: Uganda, Cambridge Education, 2011.

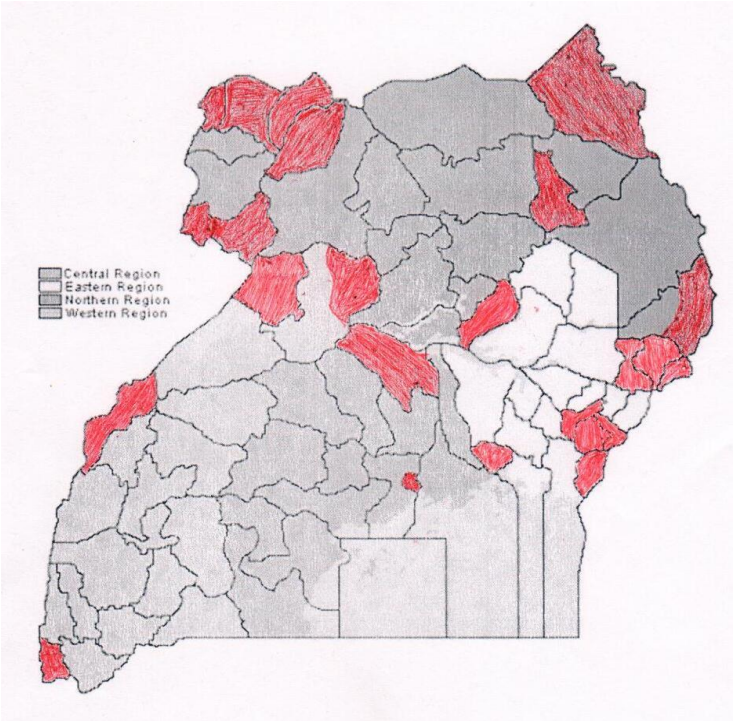
[41] Uganda National Household Survey 2009/10: www.ubos.org UNHS0910.

[42] Teacher Absenteeism and the Salience of Local Ethnic Diversity: Evidence from African Districts, prepared for presentation at the Working Group in African Political Economy (WGAPE), World Bank, Washington, DC, 20 May 2013, Habyarimana.

[43] Diana Cammack, Fred Golooba-Mutebi, Fidelis Kanyongolo and Tam O'Neil (December 2007), Neopatrimonial Politics, Decentralisation and Local Government: Uganda and Malawi in 2006. Good Governance, Aid Modalities and Poverty Reduction: Linkages to the Millennium Development Goals and Implications for Irish Aid, Research project (RP-05-GG) of the Advisory Board for Irish Aid.

26 'orphan' districts[44] not currently covered by a major education project. A list of these districts, related to the poorest performing districts, is attached in Annex 3. The locations of these 'orphan' districts are illustrated on the map below.

Figure 5 Location of districts that are not yet included in existing early grade reading programmes



USAID's SHRP is an established early grades reading project. Starting in 2012, it will run until 2019 at a cost of $61 million. LARA, a new project, ($36 million), has recently started and is scheduled to finish in 2020. Research Triangle International (RTI) manages both these projects. They are based on the acquisition of reading skills through the teaching of mother-tongue phonics, with English as a second language up to the transition to English as the language of instruction in Grade 4. The programmes involve the development of reading texts in 13 languages, a suite of structured teachers' guides, schemes of work and lesson plans, teacher training and continuing teacher in-school support.

The government's GPE programme, supervised by the World Bank, is a multi-faceted set of project interventions, a significant part of which is a reading programme based on a similar RTI methodology. The programme is costed at US$100 million and will run for three years from 2015. It has three components:

- 'Effective Teachers', amounting to $39 million, which focuses on improving teacher quality and performance;
- 'Effective Schools', amounting to $45 million, which seeks to improve the overall school environment in the form of enhanced school management, accountability, and learning conditions;
- 'Technical Assistance', amounting to $16 million, which will finance advisory, technical and capacity-building support.

[44] This figure of 26 'orphan' districts includes the four SHRP control districts.

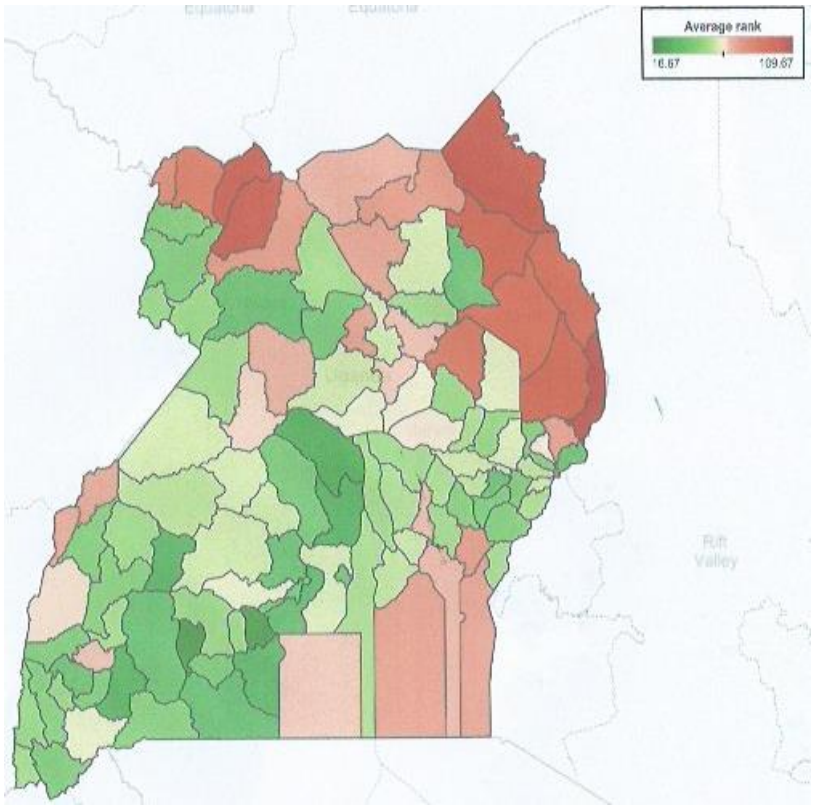
The World Bank is developing a loan facility to support secondary education. UNICEF is developing a new country programme for the period 2016–2020 in which the quality of early years' education (minimum requirements for schools), ECD and post-primary transition will be priorities. Of the bilateral donors, the Belgian Technical Cooperation is concentrating on vocational education and Irish Aid, which is traditionally focused on the nine districts in the Karamoja region, is also developing a new strategy. Its activities, which were dominated by school building, seem likely to include school development planning (probably through UNICEF), vocational education (in cooperation with Belgium), and bursaries to improve retention.

NGO actors include the Aga Khan Foundation, BRAC and Save the Children, which are all working in different ways in the pre-primary sub-sector. STIR is doing some innovative work to develop primary and secondary teachers through self-help change networks. A number of relevant private sector actors, notably Mango Tree, Build Africa and Bridge Academies, are working in a growing market for private education.

3.3 Targeting of DFID's engagement in education

For its new Country Strategy 2016–2020, DFID Uganda is currently determining a set of priority districts. As part of this work in progress, DFID has produced district-level data against education, health and poverty indicators. The final column of the table in Annex 3 shows a ranking of the bottom 30 districts based on a composite set of indicators. The information this produces reveals that education and health indicators do not correlate exactly with the poverty headcount. Kalangala district, for instance, performs well on the poverty headcount indicator (only 8%) but performs poorly on the health and education indicators. This information is reproduced on the map below. The districts marked in red / pink on the map are those with the highest (and therefore worst) scores against the composite indicators.

Figure 6 Map of the worst performing districts



There are a number of considerations that need to be taken into account in selecting the areas in which the new programme will operate. The map indicates that the areas of greatest need, judged against these indicators, are in the north-east and north-west of Uganda. If the support to early grades learning is to be targeted at the areas of greatest need, the geographical bias will be towards northern districts. The contrast with the map in Figure 5 is striking, although there is some overlap; eight of the 'orphan' districts are among the poorest performing districts.

Much of the development partners' efforts – including those of DFID in other sectors – are already directed at northern districts. There may be synergies to be reaped from jointly concentrating efforts on certain areas. On the other hand, the poorest performing areas are also likely to be the areas with the lowest capacity and are the most challenging in which to succeed. There must also be questions about the absorptive capacity of local governments to cope with further external interventions. The Government of Uganda will wish its views to be considered and there will be other stakeholders to consult as well. Ultimately, the choice of programme sites will depend on what is possible given the nature of the programme chosen and the politics surrounding the decision.

Annex 3 includes a further refinement of the information about the poorest performing districts by setting out those districts where existing projects are working.

4 Appraisal Case

4.1 Feasible options that address the need set out in the Strategic Case

Three feasible options have been identified and a counterfactual of 'do nothing':

- **Option 1: Do nothing** (counterfactual).

- **Option 2: Extending the National Early Grade Reading Programme** to cover the remaining 26 districts that are not currently included under the two USAID programmes (SHRP and LARA) and the GPE Uganda Teacher and School Effectiveness Project. An existing model would be used for the development of mother-tongue reading schemes, involving contractor-managed technical assistance to guide the development and implementation of materials and teacher training programmes and existing government structures and staff for materials writing, teacher training, and continuing teacher support.

- **Option 3: Testing cost-effective approaches to pre-primary education**. This programme would have three major elements: i) promoting market-based approaches for the development of low-fee private pre-primary education; ii) enhancing access to quality community-based pre-primary education; and iii) a research and evidence component to provide both formative and summative evaluation of components i) and ii) above and to build the knowledge base for further development of pre-primary policies in Uganda.

- **Option 4: Strengthening the effectiveness of education management systems.** This programme would focus on: i) strengthening education policy formulation, implementation and monitoring in MOESTS; ii) improving education service delivery and accountability at central and district levels; iii) supporting improved primary teacher management and training; and iv) enhancing the professionalism and effectiveness of primary school teachers in order to impact learning outcomes.

In arriving at the options outlined above, a number of other approaches were considered and discussed through a consultative process, which involved extensive interviews and discussions with stakeholders and a meeting of the joint Education Sector Group. The options outlined below are all feasible and in other circumstances might have been selected. However, the balance of advantages and disadvantages weighed in favour of the chosen options, so these were discounted:

- **Financial Aid:** Budget support to provide direct funding to the education ministry for routine spending, typically in return for policy undertakings, was not considered, as DFID does not wish to fund inputs through government systems. There may, however, be scope for linking disbursement to outputs through payments by results (PBR). An element of PBR is proposed within the proposed options being appraised.

- **An alternative reading programme**: The model developed by RTI and supported by USAID and the government through the GPE programme has a number of particular elements. These include the teaching of mother-tongue phonics, the production and extensive distribution of mother-tongue reading materials, and a highly structured scheme of work for teachers to follow with detailed lesson plans. This is not the only way of teaching reading. There is no universal agreement that this particular approach of teaching reading through phonics is the most effective approach in all circumstances. There is also some uncertainty about children's ability to make a smooth transition from reading in their mother tongue to reading in English in the higher grades

of primary school. Mother-tongue teaching is problematic in multi-lingual areas.[45] Most private schools – even pre-primary schools – teach reading in English in all grades. However, there is evidence to support the efficacy of the RTI approach (see below). Moreover, it is government policy, backed by a large investment of GPE funding. It would not be practical or in the interests of a harmonised approach to "re-invent" a different approach, particularly as one of the major attractions of extending support to the existing approach is that there is some evidence that it works and it has government buy-in. Moreover, much of the considerable development cost has already been expended. The idea of a fundamentally different approach to the acquisition of reading skills has not therefore been pursued.

- **A programme on early grade numeracy**: Such a programme would attempt to complement the current emphasis on reading in government policy and donor activity. It would require the development and publication of mathematics books and teachers' guides, the development of master trainers and the roll-out of in-service teacher training and ongoing support. Although this option had support from a number of government officials, it has been ruled out on the grounds of practicality and sustainability, as it would require time and effort to develop the necessary materials, to train the trainers, and to provide teacher training at scale. This would stretch beyond the currently envisaged five-year timeframe for DFID's programme. Additionally, the development costs of producing materials and lesson plans from scratch would be high. A numeracy programme would strain the absorptive capacity of teachers currently struggling with the current emphasis on the teaching of reading. Moreover, it would strain the capacity of the implementers and resource personnel (district and Primary Teaching College staff, CCTs etc.) already involved in the various reading programmes.

  There is the additional technical consideration that numeracy and literacy are linked. The acquisition of numeracy skills is in part dependent on the ability to read and write. Where literacy skills are low, a programme concentrating on improving numeracy would need to have a complementary emphasis on reading. This would involve additional layers of technical complexity and cost. However, the most compelling argument against a numeracy programme is that there are doubts over its sustainability. It would rely on intensive, large-scale and direct interventions to improve service delivery through the injection of project funding that may not be sustainable through government self-financing.

- **Separate programmes on teachers and education management**: During the course of the design a programme relating specifically to teacher management and development and a programme focused exclusively on systems and capacity development in education management at central and district levels were considered. However, there are a number of connections and cross-over points between these two possible programmes, which suggested that they could be combined into a single stronger option rather than considered as two discrete options.

- **Variations within the option aimed at strengthening education management systems**: one such variation was a programme that concentrated solely on ministry-level policy, coordination and management. Working with MOESTS and its agencies to improve policy, coordination and management could be a coherent project in itself. However, this idea was rejected in favour of the current Option 4, which combines work at the centre with work in selected districts. It was felt that a centrally based programme might be divorced from the realities of learning in schools. It was also felt that it is important to reflect the inter-relatedness of the education system as a

[45] Respondents interviewed in Mbale district pointed to the difficulties encountered in one small area of the district that is home to people of a different language group.

whole and that supporting one part without corresponding work on the other would limit the effectiveness of the proposed programme.

4.2 Further development of the shortlisted options

The four remaining options to deliver the desired outcomes are appraised below:

4.2.1 Option 1: Do nothing

(Up to £34 million for two other elements of the DFID Uganda Education portfolio or for other sectors)

Under Option 1, DFID would not provide funding to support early years learning under the Uganda Country Programme.[46] Although the amount of funding provisionally ear-marked for this aspect of the education programme is significant and the largest share of the overall funding envelope for education, it is not very large in terms of the DFID education programmes in other countries or in comparison with the amounts that other donors such as USAID and the World Bank are providing in Uganda.

The proposed new DFID education programme for Uganda has three components. Assuming the 'do nothing' option applies only to the early years learning component, it would be possible to expand the other two components of the education programme (support to assessment and support for a mixed economy of public and private provision). DFID is also a major contributor through the GPE and there may be scope for other multilateral approaches and joint donor funding, as DFID and USAID practice in the governance field.[47]

Advantages and disadvantages

'Doing nothing' to support early years learning would free up funds for other programme priorities in the DFID Country Programme. However, DFID has made a policy commitment to the education sector and has a specific and publically announced intention to support improvement in critical primary-level outcomes. Re-engagement in the sector has been well advertised and is eagerly anticipated both by the Government of Uganda and by other Development Partners. Development aid is generally welcomed. MOESTS officials are keen for additional project funding at a time when their budgets are being constrained. From informant interviews conducted during the scoping visits of this design consultancy team, there also appears to be a genuine desire to re-establish links with the UK in the education sector, partly because of a shared history but also because UK is highly regarded as a source of development expertise and professionalism. The 'do nothing' option would therefore represent an embarrassing U-turn, which would possibly have damaging repercussions for the rest of the aid programme and bilateral relations generally.

There is a widely held belief among the Education Development Partners (EDP) in Uganda that DFID has particular areas of comparative advantage in bringing about transformational change, through its systems approach and based on broad international experience, which will complement those of the existing donors. The EDP is expecting that DFID's deployment of an Education Adviser in charge of a significant education programme will contribute a level of knowledge, weight and rigour to discussions with government. Without an input in terms of a significant contribution to the education sector, DFID's position 'at the table' would be far less influential.

[46] Under all options, including Option 1, sector support would still continue under separate funding arrangements through the centrally DFID-managed Girls Education Challenge, under which Uganda is a major beneficiary. DFID is also a major contributor to the GPE and there may be scope for other multilateral approaches and joint donor funding (as per DFID and USAID practice in the governance field).
[47] The Governance Accountability Participation and Performance Program (GAPP).

4.2.2 Option 2: Extension of the Early Grade Reading Programme to remaining districts

(Up to £34 million over five years from 2016/17)

This option would take as its model the approach to the teaching of reading pioneered by the USAID SHRP and subsequently adopted by LARA and by the government as part of the GPE programme. Together these projects cover all but 26 districts in Uganda and the ***proposal would be for DFID to complete district coverage, so that all districts are involved in programmes with a common approach to improving reading***.

The proposal would be to adopt the established phonics-based approach to reading acquisition through teaching and materials in mother tongue in grades P1–P3, with the transition to reading in English by Grade P4. Some variation in the methods of delivering the programme may be necessary to fit the context of the districts involved and to take into account the diverse needs of learners, for example learners with disabilities, but the theoretical underpinning of the approach to teaching reading (the use of mother-tongue phonics) and the overall delivery modalities would follow the established model. This model has been adopted as policy by MOESTS and an alternative model would not be regarded as appropriate. The main thrust of the programme would therefore be to extend the geographical spread of the accepted technical approach to the teaching of reading.

The outcome of the programme would be improved reading proficiency in years P1–P3 in the target districts. This would be measured in terms of reading speeds and comprehension. In the timescale of DFID's funding commitment (currently five years) dramatic improvements in outcomes cannot be expected, but it is anticipated that the architecture and systems will be set up that will enable measurable reading improvement beyond the current funding phase.

Extending the national reading programme would involve the following elements:

Outputs	Main activities
Reading support materials produced and disseminated	Supporting the writing and publication of ***early grades mother-tongue reading textbooks*** in sufficient numbers to ensure one book per child in grades 1–3 in all government schools. This would include preparation of textbooks in accessible formats for learners with disabilities. Funding the production and distribution of step-by-step ***teachers' guides*** *for early grades teaching of reading in mother tongue* and preparation for transition to English in year 4.
Capacity for improved ongoing in-service teacher support established	Organising the induction, training and continuing ***support for master trainers/mentors*** from among PTC staff, CCTs and district staff to provide initial training of teachers and continuing in-school and cluster support. Facilitating the structured ***face-to-face training of teachers*** of grades 1–3 during school holidays. This would include training in inclusive education methodologies. ***Instructing head teachers*** in reading methodologies and necessary school management activities, such as timetabling of a reading hour and teacher support. ***Establishing a system of in-school/cluster follow-up and mentoring of teachers*** of grades 1–3 in which each school is visited at least once a term.

Evaluated reading progress	***Monitoring and quality assuring*** the training and follow-up processes involved. ***Conducting the testing of children*** on a sample basis, using the Early Grades Reading Assessment (EGRA). [48] Producing a ***baseline survey of reading skills and classroom observation of teaching methods*** and conducting ongoing evaluative research to assess the rate at which reading skills are acquired and the efficacy of the approach in improving the teaching of reading. This would include disaggregated data for children in different demographic groups, including children with disabilities, to track the equity of results.
Improved policy analysis	***Supporting the MOESTS with policy analyses*** in collaboration with other Partners, aimed at helping the government consolidate and further develop the structures and policies necessary to maintain improvement in student outcomes in early primary grades across Uganda. This would include: • Assessing impact to date and lessons learned from GPE and USAID projects. • Supporting MOESTS in developing its mother-tongue medium of instruction policy in relation to mixed language areas and languages without orthographies. • Exploring ways of extending and sustaining the policy of mother-tongue reading acquisition through government-financed initiatives. • Working with MOESTS to ensure that its mother-tongue reading acquisition policy is implemented in a way that is sensitive to the needs of learners with disabilities, in line with the Government's commitment to the development of inclusive curricula and assessment methods.[49] • Assisting the coordination of government agencies (The National Curriculum Development Centre (NCDC) for curriculum and material, the Department of Teacher and Instructor Training (TIET) for teacher training, and the Department for Education Standards (DES) for quality assurance) to support concerted efforts to improve early grades learning.

Management arrangements

The mode of delivery for this proposed programme would be through a contracted managing agent recruited through international competition. The contractor would be responsible for managing technical assistance and programme support activity for training and materials production. Technical assistance will be the largest expenditure item, although the costs of goods and services (the production of books and materials and support costs for training) will be significant. Prospective contractors will be expected to set out their technical approach and management proposals as part of the bidding process. Once contracted the chosen managing agent will finalise the design of the programme in consultation with MOESTS and DFID within a four-month inception period.

[48] The Assessment would be applied in a non-discriminatory way, with reasonable adjustments for learners with disabilities.
[49] Initial report of State Party to the Committee on the Rights of Persons with Disabilities, 2014

Government systems would be used in as far as the principal materials' writers and trainers will be drawn from among government staff. Existing district and PTC structures and personnel will be mobilised. This model of using existing resource personnel from within the in-service teacher training system, supplemented by head teachers and district education staff, is well established. It appears to have had the added advantage of influencing the teaching of reading for pre-service teacher training.

In line with DFID policy, programme funds would not flow through government systems and the contractor would maintain financial control and accountability. In this respect DFID's programme would closely resemble the modality of the USAID projects (rather than the government's GPE programme, which uses government financial systems). The costs of publishing and distributing mother-tongue reading books at scale and the costs of producing structured teachers guides and lesson plans would be charged to the programme. Local publication of books and materials to support national publishers would be investigated, although lower unit costs may be attained through procurement abroad. The government would be expected to provide counterpart funding to cover the salaries and regular transportation allowances of all government staff involved in the programme (e.g. for CCTs to visit schools, as part of their job).

Advantages and disadvantages

This proposed programme would have a direct impact on learning, which can be measured by testing children's ability to read, using the EGRA. By targeting districts not yet covered by the existing support to reading, it would gain strong support from MOESTS, which is keen for national coverage in line with its stated policy on reading acquisition. The ministry is dependent on project funding to ensure the roll-out of its policy and there are political advantages to be gained from an equitable distribution of programme benefits.

Extending the established approach to improve reading nationally would demonstrate that DFID is fully committed to a harmonised approach among development partners. The programme would replicate an existing model, which is accepted in government as the established orthodoxy and believed by other development partners to be technically sound. It makes use of, and develops the capacity of, existing teacher support institutions and personnel for materials writing, training and ongoing support. By basing the content of the reading materials and teachers' guides on existing materials, heavy development costs will be avoided. As the programme is rolled out at scale, unit costs can be expected to reduce.

However, there are a number of significant drawbacks to this option. The first relates to a fundamental aspect of the design: the identification of a dominant mother-tongue language in each district. The national model functions in 13 languages, the dominant language in each district being decided by local language boards. In the 25 districts that remain outside the USAID and GPE projects, there are multiple languages, not all of which have agreed orthographies. With no agreement on the commonality of the languages to be used or the written script, the production of mother-tongue reading books could be a protracted and costly affair.

The geographically scattered distribution of the 25 districts also presents challenges for programme management. Economies of scale are more likely if districts are contiguous or closely grouped. The training model, for example, is dependent on training teachers close to their schools and following up the training in schools and clusters. Providing technical inputs and monitoring progress and performance becomes logistically more difficult over a large number of dispersed project sites.

There are two more basic concerns with this option. The first of these is a concern over the sustainability of the approach. It relies on intensive and direct interventions to improve service delivery through the injection of project funding. Given current restrictions on the amounts of public finance available for education, the capacity of the system to self-finance the continuation of such

an initiative must be in doubt. Improving the teaching of reading is not a one-off job, but rather a process that will require continuous resource flows to make and maintain progress and to induct new recruits into the teaching force. Sustainability will be largely dependent on continued external funding.

The other fundamental concern is that there is, so far, limited evidence that the existing reading programmes are proving effective at scale. Improvements in learning undoubtedly take time to occur and register in test scores. There is some international evidence of the efficacy of the approach and some evidence from EGRA in Uganda that children are making some progress. Data from the SHRP second follow-up exercise revealed that increases in fundamental reading skills were statistically significantly higher in the programme schools than those in control schools.[50] However, the evaluation of the Mango Tree reading programme in northern Uganda, which uses a similar approach to that used in SHRP showed that while reading proficiency gains were significant from the full-cost pilot version, they were insignificant when a reduced-cost version, designed to simulate conditions of operating at scale, was used.[51] At this stage, therefore, it is difficult to point to hard evidence that an extension of the national reading programme is likely to be effective at scale.

4.2.3 Option 3: Testing cost-effective approaches to pre-primary education

(Up to £10 million over five years from 2016/17)*[52]*

This programme would have three major elements: i) promoting market-based development of low-fee pre-primary education; ii) enhancing access to quality community-based pre-primary provision; and iii) a research and evaluation component to build the knowledge base for the development of pre-primary policy.

Only about 7% of children attend any form of pre-primary education.[53] There is very little government involvement in providing pre-primary education. Provision is dependent on NGOs, community/faith-based provision, and the for-profit private sector. According to EMIS 2014, almost 60% of ECD centres are in the central or eastern region; over 80% of ECD centres are privately owned. Pre-primary education is out of the financial reach of most Ugandans. Access in rural areas is limited by the scarcity of pre-primary centres and wide access exist among different socio-economical groups. For example, access for children with disabilities is limited: the Government of Uganda acknowledges, in its report to the UN Committee on the Rights of Persons with Disabilities, that the lack of a policy on early childhood development for children with disabilities, has been a barrier to inclusive pre-primary education.[54]

One consequence of the lack of pre-primary provision is the acute problem of under-age entry into primary schools. This causes serious overcrowding, reduces the learning that goes on and leads to high rates of repetition. By taking in under-age children who are not school-ready, the government is unintentionally providing pre-primary services, but doing so in a way that is highly inefficient and has deleterious effects on the learning of basic foundation skills in primary schools.[55]

[50] USAID/Uganda School Health and Reading Program: Early Grade Reading Achievement in Uganda: Cluster 1 Follow Up 2 Report, May 2015.
[51] Jason T. Kerwin and Rebecca Thornton (August 2015), Making the Grade: Understanding What Works for Teaching Literacy in Rural Uganda.
[52] See Section 5.1.2 below.
[53] Access, Cost, Quality and Relevance: the case for Pre-primary and Primary Education in Uganda, National Panning Authority, July 2015
[54] Government of Uganda, Initial report of State Party to the UN Committee on the Rights of Persons with Disabilities, 2013
[55] *Stumbling at the First Step: A Triple Crisis at the Foundations of Education Systems: Luis Crouch presentation, August 2015.*

Under the GPE-funded Uganda Teacher and School Effectiveness Project there is provision for a review of ECD policy and the existing different models of delivery. The planned review is aimed at articulating a justification and cost-effective modalities for government intervention to expand ECD services. These will be captured in a costed 10-year strategic plan and advocacy strategy. The government's inclusion of this work under the GPE project is a clear acknowledgement of the challenges created for primary schools by the lack of pre-primary provision. The review will, among other things, be an opportunity to test the assumption that future government intervention will require direct involvement in providing pre-primary services by building pre-primary classrooms in all primary schools.

The programme proposed under this option will contribute to an ongoing debate about the value of pre-primary education and the feasible ways in which it can be provided equitably, given limitations on public funds that are likely to persist into the future.

The programme would involve the following elements:

Outputs	Main Activities
A strengthened regulatory framework for pre-primary education.	Working with government to ***develop a market development framework for non-government and community providers of pre-primary education***. This would acknowledge the review being undertaken under GPE and build on the existing policy framework developed by the government with UNICEF and others. This policy framework sets minimum standards for pre-primary centres and expected qualifications of caregivers, but without the means of enforcement it is little more than an aspirational guideline. In order to be effective, regulation needs to be sufficiently permissive to encourage the development of low fee provision, but robust enough to discourage poor practice and maintain safeguards against exploitation. The development of this market development framework implies the need for effective enforcement for pre-primary providers and the implications of this will be a prime focus of the engagement with government.
Improved models of pre-primary provision.	***Evaluating pre-primary provision pioneered by national CSOs and international NGOs*** (e.g. BRAC, Save the Children, AKF and LABE) in rural locations. The principal objectives of this would be to: • Evaluate these rural community-based pre-primary programmes in terms of their quality, equity, contextual specificity and scalability. • Derive models that are sustainable and contextually appropriate.
An improved market for pre-primary education.	***Developing, with government's active participation, ways of facilitating pre-primary education***. These would include: • Exploring and documenting the range and coverage of pre-primary education in both urban and rural areas. • Providing accessible information to parents and government on the range of provision available, standards of goods practice and quality,

	and the levels of performance against these standards of current pre-primary provision. • Supporting improved quality of pre-primary activities through the provision of training for proprietors and caregivers in school leadership, play-based pedagogy, inclusive pre-primary education, and the use of materials. • Building capacity of an inspector cadre to carry out regular monitoring of pre-school centres. This would include monitoring of equity considerations.
Tested forms of financial support for pre-primary education for the poor.	Experimenting with different ***modes of direct financial support*** to non-state and community-based centres in the form of development grants and small-scale loans administered either directly or through NGOs/CSOs. ***Trialling indirect financial support*** in the form of parental subsidies through conditional cash transfers or vouchers.[56]
An improved information base for pre-primary education.	i. ***Designing and conducting research***, which will encompass all the activities of the programme. This research will include: • Formative research and evidence to inform programmatic decisions (e.g. design, scale-up, etc.). This would be focused on crucial operational research and process evaluation questions to test whether the assumptions of quality and cost regarding low-cost private pre-schools, and access and quality of community-based pre-schools, are correct. Further formative research to fully understand: o The nature of the low-cost private (mainly) for-profit pre-school market: is this market working well for the poor and for different demographic groups?; what types of standards and rules govern this market?; what is the nature of the market failure (if any)?; and how could these be addressed through regulation, 'carrots-and-sticks', finance, provision of information to providers and parents, etc.? o Implementation challenges for community-based pre-primary education, per child cost of provision, etc. This is evidence that will inform future (re)design/scale-up decisions. • Summative research and evidence: o Is the market development approach the most suitable approach (whether through causal attribution or contribution) for generating improved learning outcomes through low-cost private pre-schools? o Is the community-based approach the most suitable approach (whether through causal attribution or contribution) for access and generating improved learning outcomes for poor/rural children? • Learning for Uganda and elsewhere for what might work to improve learning in pre-primary (and readiness and performance in primary) grades through a two-pronged private/market development (urban) and community approach (rural).

[56] Support would include allowance for the extra costs associated with education for pre-primary children with disabilities (for example, accessible materials and infrastructure, additional staff training).

Management arrangements

The delivery mode for this programme would be through a managing agent or consortium. This contractor will require strong engagement and communication skills, a recognised research capability and solid capacity in fund management. The research and capacity-building components will require technical assistance but a large proportion of the disbursement would be in the form of small-scale grants to communities and private providers and/or accountable grants to NGOs. Prospective contractors would be expected to propose innovative technical proposals for carrying out the activities in the project. A six-month inception period would be allowed for surveying current provision, establishing the necessary relationships and setting up research and fund management arrangements.

Advantages and disadvantages

The rationale for the programme envisaged under Option 3 lies in the high observed returns to pre-primary education. There is strong evidence to suggest that children who attend pre-primary education are better prepared for school and learn faster than those who have not had the same opportunities. A concentration on pre-primary education would also go some way toward addressing the serious problem of under-age entry into primary schools and the consequent acute overcrowding and repetition this causes.

There is a broad consensus among the government and the donor community that pre-primary education is important and that, in the absence of large-scale government investment in the sub-sector, work needs to be done both to regulate and promote various forms of provision and to broaden access, so that provision is more accessible to the poor and rural populations. By focusing on models of low-fee provision both through the private sector and through community/CSO efforts, the programme would have a strong pro-poor bias.

While the proposed project would provide useful knowledge that will spread awareness and fill critical evidence gaps to inform policy, its main drawback is that it will not provide immediate solutions to the issues of poor access and quality of pre-primary education. Relatively small-scale interventions to improve the market for the poor and broaden access in rural communities are unlikely to have impact at scale. In the absence of government funding for pre-primary education or very large-scale external financial support, the prospect of the programme producing appreciable results in the short term, beyond pilot research level findings, is limited. The programme is unlikely to make much of a dent in the immediate problem of over-subscribed first grade classes in primary schools or affect the inefficiencies inherent in the early grades 'churn' of poor results and repetition. Moreover, it is unlikely to have immediate systemic impact; it will provide the knowledge base for future transformative change, but it will not bring about these transformations.

4.2.4 Option 4: Strengthening the effectiveness of education management systems

(Up to £34 million over five years from 2016/17)

This programme option would aim to:

- Strengthen policy and strategic direction of education, by improving MOESTS's capacity to relate policies and plans to budgets and to monitor implementation.
- Improve education service delivery and accountability at central and district levels.
- Support improved primary teacher management.
- Enhance the professionalism and effectiveness of primary school teachers in order to impact learning outcomes.

This programme would therefore be targeted at both a national level and at districts with weak performance indicators. In these areas pilot activities will be carried out, evaluated and documented for replication/adoption by government. The programme will specifically aim to add value to the current USAID SHRP and LARA projects and to the GPE Teacher and School Effectiveness Project. There will be a number of potential synergies with the GPE project in particular. This option would be designed to enhance and enrich the systemic changes the GPE project is beginning introduce. It will also assist the government's future GPE application for further support to succeed the current project.

The Education Sector Strategic Plan (ESSP) 2007–2015 (amended in 2010) has now run its course. It gave prominence to equity issues, including equity as it relates to poverty, geography, disability, gender, and HIV/AIDS. However, implementation of the Plan's commitments on equity has been very slow: for example, despite commitments to enhance teacher training on disability and to provide accessible materials,[57] the national umbrella organisation of persons with disabilities reports that there remains a lack of suitably trained Special Needs Education teachers, and of relevant materials in Braille and other accessible formats. Barriers include a lack of budget, inadequate capacity, and a shortage of data. [58]

Work is now beginning under GPE funding to assess achievements and develop MOESTS priorities for the next five years (ESSP II). Simultaneously, the Ministry of Finance is leading on reform of the system of fiscal transfers to districts, an arrangement which, over the years, has become less and less equitable. There are proposed public financial management reforms that, if accepted, will change the basis of ministerial finances from the current input-based to programme-based budgets. In addition, the Office of the Prime Minister is developing the idea of a Delivery Unit to monitor the main service delivery agencies and hold them to account.

Despite the efforts of committed and able individuals, the present organisation and accountability structure of MOESTS does not seem well adjusted to take on board and successfully manage these changes. MOESTS has been slow to take the initiative in driving forward a strategic vision and managing an evolving relationship with the districts, which have responsibility for the delivery of primary education. The capacity of district administrations to provide basic services is severely constrained. They lack the funds and the expertise to make improvements.

This proposed programme will aim to provide support at the centre and in selected districts to improve their efficiency and their levels of responsiveness and accountability. The selection of the districts involved will be in line with the focal areas in DFID's evolving Country Programme. There will be a particular focus on teacher management and development because these aspects of service delivery have clear impact on learning in schools and are central to the effectiveness and efficiency of the system, given the high proportion of spending that goes to teachers' salaries.

The structure of the programme is outlined below:

Outputs	***Main activities***

[57] ESSP 2010-2015, page 50
[58] National Union of Disabled Persons of Uganda, Alternative Report to the UN Committee of Experts on Implementation of the Convention on the Rights of Persons with Disabilities.

Clearer education policies and strategies informed by use of data and evidence and supported by budgets and budget releases.	In collaboration with other Development Partners, ***support MOESTS with policy analyses*** aimed at helping the government consolidate and further develop improvement in student outcomes in early primary grades across Uganda, including: • Assessing impact to date and lessons learned from GPE and USAID projects. • Supporting MOESTS in developing its mother-tongue medium of instruction policy in relation to mixed language areas and languages without orthographies. • Exploring ways of extending, strengthening and sustaining the policy of mother-tongue reading acquisition through government-financed initiatives. • Working with MOESTS to ensure that its mother-tongue reading acquisition policy is implemented in a way that is sensitive to the needs of learners, both boys and girls and children with disabilities, in line with the Government's commitment to the development of inclusive curricula and assessment methods.[59] • Assisting the coordination of government agencies (NCDC for curriculum and materials, TIET for teacher training, and DES for quality assurance) to support concerted efforts to improve early grades learning. [60] • Engaging in policy dialogue in MOESTS aimed at improving the career path for teachers and raising the professionalism of the teaching workforce.[61] ***Support MOESTS in translating emerging strategic priorities into operational activities.*** • Audit current organisational roles and responsibilities for education service delivery both internally and in relation to district governments and examine whether these are fit for purpose. • Focus on priorities relating to equity, and inclusive education.[62] [63]

[59] Initial report of State Party to the Committee on the Rights of Persons with Disabilities

[60] The programme would also support MOESTS to **coordinate with other Ministries** whose work affects equitable access to education, such as the Ministry of Finance and Economic Planning, the Ministry of Works and Transport, the Ministry of Internal Affairs (for safety issues – children with disabilities are prone to attack, especially those with albinism), the Ministry of Communications and ICT, and the Ministry of Health. In particular, there should be coordination to ensure that children with disabilities have access to assistive devices and services to enable their full participation (for example, mobility aids, magnifying glasses, hearing aids, sign language interpreters).

[61] This would include specific consideration to the incentives in place for Special Educational Needs teachers. Currently such teachers are not included in the Public Service Code, which acts as a barrier to recruitment and retention [source: National Union of Disabled Persons of Uganda, Alternative Report to the UN Committee of Experts on Implementation of the Convention on the Rights of Persons with Disabilities]

[62] We define 'inclusive education' as education that enhances equity not only for children with disabilities, but also those who are marginalised for other reasons such as language, ethnicity, geography, or HIV/AIDS. Ths is in line with analysis for UNESCO (RB Guijarro, *Conceptual Framework of Inclusive Education*, in UNESCO, *Defining an Inclusive Education Agenda: Reflections around the 48th Session of the International Conference on Education*, 2008).

[63] Access to education for children with disabilities is recognised as a priority in numerous policy and legislative commitments, including the Persons with Disabilities Act, and the draft Special Needs Education Policy.

Better-defined roles and responsibilities for delivering quality education services with incentives and sanctions.	***Help ensure that strategic priorities are adequately planned and realistically budgeted***, within the constraints of public finances, and that those responsible for implementation have the capacity to operationalise programmatic plans and input-based budgets. This would include budgeting for the additional costs of inclusive education.[64] ***Engage with MOESTS (and the Office of the Prime Minister) to identify***: • Key service delivery performance indicators and targets for districts including indicators of equity;[65] • The data needed for monitoring against these targets; • Qualitative performance data that can be triangulated against the quantitative performance indicators, such as feedback from children, including children with disabilities; • The mechanisms needed to generate and analyse these data; and • The capacity building necessary to carry through these activities. ***Assist MOESTS to use these data and develop mechanisms and responsibilities to drive educational improvement***, including: • Capacity building for district staff in selected areas to deliver to higher service delivery standards; • Capacity building for both central and district staff in the monitoring of performance at different levels of the system (schools, districts MOESTS departments); and • Development of a system of rewards and sanctions based on district performance including a pilot system of payment by results to reward districts making progress against key indicators. These indicators may include meeting targets for head teacher/teacher attendance, the substantive filling of vacant posts and the successful completion of specified training (including in inclusive education).

[64] Fully inclusive education programming typically costs somewhat more than programming that excludes some children. This is due, for example, to the costs of ensuring that infrastructure, communications, and staff capacity allow full accessibility and inclusion that children with disabilities have access to assistive devices, and that underlying blockers such as social norms are tackled. The Government currently allocates a proportion of the budget for inclusive education, but this allocation is not implemented [source: meetings with ADD Uganda and with DFID Uganda].

[65] Under the last Education Sector Strategic Plan, data was collected on a number of equity related indicators, including on gender, geography, and disability. However, as DFID recognises in its work on disability data, prevalence rates can be very misleading unless the enumerator has been suitably trained, and organisations of persons with disabilities have expressed concerns about the reliability of current EMIS data on disability.

More efficient and equitable systems for school supervision and teacher management and support.	***Support the development of administrative and human resource management systems and capacity*** in selected districts (including of Chief Administrative Officers [CAOs], DEOs and district service commissions) to improve recruitment, deployment and teacher appraisal and speed up response times for teacher administration ***Build the capacity of district education staff in human resource management*** in the selected districts. This would include training in inclusive education principles and practices. ***Build the capacity of head teachers in human resource management and professional leadership*** in the selected districts. ***Support teacher training colleges and district education staff to recruit and retain teaching staff who reflect the diversity of the children they serve****,* for example teachers with disabilities. Also work with MOESTS to ensure that central and district management includes representation of persons with disabilities, and other disadvantaged groups. ***Support work being undertaken under GPE to strengthen teacher support systems*** to improve the proficiency of CCTs, pre-service tutors and PTC administrators for quality primary teacher training and support supervision. This would include substantial pre-service and in-service refresher training in inclusive education methodology and curriculum differentiation to meet diverse learning needs, as well as in identification and functional assessment of children with different impairments, in line with commitments in the recently expired Education Sector Strategic Plan.[66]
Better-motivated and skilled teachers.	***Strengthen the content and methodologies of pre- and in-service teacher training*** in focal core PTCs and their CCTs network, with particular emphasis on the teaching of the '3Rs' foundation skills. ***Support the development of teacher self-help networks*** in selected districts to improve teacher morale and contribute towards greater professionalism. ***Support civil society organisations*** to sensitise teachers and communities on equity issues, relating to gender, ethnicity and disability.

Management arrangements

A programme aimed at strengthening policy and education management systems would be heavily dependent on contractor-managed technical assistance. A six-month inception period would be required to establish the necessary support in MOESTS and the selected districts. Technical assistance (ideally embedded in the ministry) would be needed to engage in policy dialogue and assist MOESTS to reorient its organisation in line with strategic priorities. Regionally based technical assistance will also be needed to develop systems and capacity at district level. The proposed piloting of results-based funding for high-performing districts introduces an additional modality. The

[66] ESSP Page 50

managing contractor will require the capacity to set up the necessary administrative arrangements and manage and account for the financial flows involved.

Advantages and disadvantages

Although the development of management systems at national and district levels will not have an immediate impact on children's learning, the long-term impact and sustainability will be significant. By taking a 'vertical slice' approach and engaging at national, district and school levels this investment option will aim to pilot better management and coordination practices and demonstrate what could be achieved on a national scale. Effective education management and accountability are essential enabling factors underpinning learning and thus all government and donor efforts to improve it. The increase in efficiency that improved management systems will bring will deliver higher VfM. Clearer accountability and assignment of roles and responsibilities will reduce the current tendency to regard general issues as no one's particular problem and to pass difficult decisions around government. The additional focus on teacher management will have an impact on how teachers approach their jobs, their levels of motivation and ultimately how well they teach. The piloting of results-based financing will provide a useful basis for a future GPE application, as this modality is likely to be an important feature of the next round of GPE funding. By strengthening policy, financing, capacity and data on inclusive education, this option would also improve equity for a range of marginalised groups.

The main risk anticipated with this option is that, in trying to do too much, it will achieve less than it aspires to achieve. The kind of institutional and attitudinal changes required for successful implementation will be challenging, and not without political complications. The breadth of the programme's ambition may be too great for a relatively modest external investment with a limited time span. There is also a risk that changes in education management arrangements become internally self-perpetuating and circular – reform for the sake of reform – divorced from the desired effect on schools and learning. Furthermore, the impact of systemic change may not be observable or measureable in the short term.

Low capacity in some of the poorer performing districts will also present considerable challenges. The approach outlined above will rely heavily on highly skilled technical assistance and competent and flexible programme management. Because of the political sensitivity of the reforms being supported, there may be a need for a relatively high involvement of DFID staff.

5 Appraisal of the feasible options against critical success criteria

The three feasible options, plus the 'do nothing' comparator, have been appraised against critical success criteria (CSCs), identified as critical to achieving the programme outcome. CSC and their ratings are shown in Table 3.

Table 3: CSC ratings and weights

CSC	Description	Rating	Weight
1. Learning	Impact on learning in the classroom in the early grades of primary education	Key	5
2. Contribution to system change / sustainability	Extent to which irreversible change in the system is likely to take place, and ability of activities to be taken up beyond the end of the programme	Key	5
3. Equity	Identification of, and addressing, poverty, gender and disability issues	Very Important	4
4. VfM	Potential to achieve VfM through more economical, efficient and effective implementation	Very Important	4
5. Harmonisation	Complementarity with other donor partner, GPE and government early years learning activities, and other DFID Uganda programme components	Very Important	4
6. Manageability	Feasibility of the option, and extent to which the option is likely to be able to be delivered in practice	Important	3

Each of the three options, and the comparator, was considered against the CSC and rated 'High', 'Medium' and 'Low' (and intermediate classifications e.g. 'Low–Medium') against each criteria. The results are presented in Table 4 overleaf.

Option 1 ('Do nothing' option) is not assessed against CSCs, since it would clearly have no impact on learning, system change or equity. Also, since there would be no programme, the impact on harmonisation, VfM and manageability CSCs could not be assessed.

Option 2 (Extension of the reading programme) scores highest against two CSCs (Equity and Harmonisation), is assessed as 'medium' on the learning, sustainability and VfM criteria, and poorest of the options on manageability.

Option 3 (Testing cost-effective approaches to pre-primary education) scores well against the criteria of manageability and equity, and reasonably well against VfM and learning CSCs, given the acknowledged benefit of pre-primary education on early years learning. It, however, scores relatively poorly on sustainability and harmonisation.

Option 4 (Strengthening the effectiveness of education management systems) scores relatively highly ('Medium–High') against five CSCs (Learning, Sustainability, VfM, Harmonisation and Manageability). The option scores lower on equity, as much of the option is focused on 'back office'

management and system strengthening, which only has a longer-term and more indirect equity impact.

Table 4: Rating of feasible options against CSCs

CSC	Option 2	Option 3	Option 4
1. Learning	Medium	Medium (given the small scale)	Medium–High (in the long term)
2. Contribution to system change / sustainability	Medium	Low	Medium–High
3. Equity	Medium–High	Medium–High	Medium–High
4. VfM	Medium	Medium	Medium–High
5. Harmonisation	High	Low–Medium	Medium–High
6. Manageability	Low	Medium–High	Medium–High

CSC ratings have been scored as follows:

- Nil (the option does not address the criteria) is given a score of '0'.
- Low is given a score of '2' or '3'.
- Low–Medium is given a weight of 4.
- Medium' is assessed as a score of '5' or '6'.
- Medium–High rates a score of '7'.
- High scores '8' or '9'.

Scores against each CSC were then multiplied by the 'weight' of each criterion, as shown in Table 3. The resulting Option scores are shown in Table 5 below:

Table 5: Options analysis

CSC	Weight	Option 2	Option 3	Option 4
1. Learning	**5**	30	30	35
2. Contribution to system change / sustainability	**5**	25	15	35
3. Equity	**4**	28	28	28
4. VfM	**4**	20	24	28
5. Harmonisation	**4**	36	16	28
6. Manageability	**3**	6	21	21
TOTAL SCORE	n/a	**145**	**134**	**175**

Table 5 shows that Option 4 emerges as the highest ranked option with a score of 175 out of a possible maximum of 225 (9 x 25), followed by Option 2 with a score of 145, and Option 3 with a score of 134. Option 4 scores highest as it is likely to generate the most sustainable learning outcomes, and also scores highest for VfM and manageability and well on harmonisation (system change is supported by all donors).

Against the CSCs, Option 4 emerges as the preferred option with at least a 10% higher score than the next option. Options 2 and 3 have not therefore been taken further in the appraisal.

5.1 A note about Option 3

The comparison of Option 3 against the other options raises a number of conceptual difficulties. The issue of pre-primary education in Uganda is clearly of great significance to improving early grade learning. Many of the challenges of overcrowding, low levels of learning and the churn of repeaters in P1–P3 stem from the lack of quality pre-school provision. However, the relatively small size of the pre-primary sector, the lack of government involvement in pre-primary education and the unlikelihood of this situation changing in the foreseeable future means that any intervention in this field will necessarily be relatively small scale and experimental. Option 3, as described, is research-led and aimed at increasing the knowledge base for possible future large-scale investment. It is an 'appetiser' rather than a 'main course'. Comparison against the other 'bigger' options is misleading and should not preclude future DFID involvement in pre-primary education, should funds be available. In this regard, this option might fit more comfortably in another part of the DFID education programme, namely the component concerned with supporting a mixed economy of state and non-state provision.

6 Assessing the strength of the evidence base for each feasible option

This section assesses the strength of the evidence base against the selected options 2, 3 and 4.

6.1 Evidence to support Option 2: extending the Early Grade Reading programme

USAID's SHRP programme has, as at January 2016, completed a baseline study and two follow-up exercises as part of a process evaluation and impact evaluation.[67] The other USAID education programme in Uganda, LARA, has only recently started. The government's GPE-funded Teacher and School Effectiveness Project, which includes a similar approach to reading, has been going for less than a year.

Comparisons of the SHRP baseline and data from the second follow-up exercise revealed that increases in fundamental reading skills were statistically significantly higher in the programme schools than those in control schools. To compare performance levels, SHRP used a measure of 20 correct words per minute as a point of reference to show improvement in a learner's fluency attainment. In all four local languages, by the end of P2 learners in programme schools were two to three times as likely to read 20 or more words per minute and understand more of what they read than learners in control schools. Learners in programme schools could also read more words in English than learners in control schools.[68]

There is some indicative evidence of the effectiveness of early grade reading in other mother tongue instruction programmes. Research supports the notion that teaching in mother tongue effectively aids a child in acquiring early literacy skills[69], with skills of comprehension strategies, phonemic awareness and word reading transferring across languages[70.] Children learn faster in their mother tongue, since comprehension strategies can be more easily taught orally in a language that they already recognise and understand – thus utilising prior linguistic knowledge in teaching literacy.[71]

There have been several projects on a pilot basis where the effectiveness of early grade reading in mother-tongue programmes have been evaluated. The impact assessment of an independent evaluation of AKF's East Africa Quality in Early Learning (EAQEL) initiative showed a clear effect of treatment on both oral and written literacy throughout P1–P3 cohorts in Uganda, thus indicating a positive impact.[72]

Evidence of the effectiveness of the RTI approach on a large scale is limited. USAID's Girl's Improved Outcomes in Egypt[73] is operating at scale. Although there is a widespread perception that the impact has been sustainable at scale, there does not appear to be any systematic evidence, as yet, to empirically confirm this.[74]

[67] USAID SHRP. http://www.educationinnovations.org/program/uganda-school-health-and-reading-program-shrp.
[68] USAID/Uganda School Health and Reading Program: Early Grade Reading Achievement in Uganda: Cluster 1 Follow Up 2 Report, May 2015.
[69] Piper, B and Miksic E. 2011. "Mother Tongue and Reading: Using Early Grade Reading Assessments to Investigate Language-of-Instruction Policy in East Africa" pp. 139-182 in Grove, A. and Wetterberg, A. (eds.) The Early Grade Reading Assessment: Applications and Interventions to Improve Basic Literacy. NC, USA: RTI Press.
[70] Ibid.
[71] Ibid.
[72] Oketch et al. East Africa Quality in Early Learning (EAQEL) – Impact Evaluation Report". *African Population and Health Research Center.*
[73] Nielsen, H.D. (2013) Going to Scale: the early grade reading program in Egypt: 2008–2012. USAID.
[74] Ibid.

In Mali, the Read-Learn-Lead (RLL) programme demonstrated that the country's new official curriculum could be a viable and effective approach in primary education 'if properly implemented and supported',[75] with instruction in the mother tongue and a specific pedagogical delivery approach.[76] An independent evaluation of the effectiveness of the RLL programme indicated a positive impact of RLL participation at end-line on overall literacy performance in year 1 and year 2. However, no notable difference between treatment and control groups were found in primary 3.[77] It was shown that although RLL had a significant positive impact on children's literacy skills, the skills remained low even after two years of intervention.[78] It also left the possibility that benefits may not last beyond the programme.[79]

The USAID/Kenya Primary Math and Reading (PRIMR) Initiative, which focuses on improving numeracy and reading outcomes in Grades 1 and 2, showed for letter-sound fluency, treatment pupils in PRIMR identified an additional 21.3 correct letters per minute compared to the control/on-PRIMR pupils. In oral reading fluency, the PRIMR effect was 13.7 correct words per minute overall. Reading comprehension scores were more than twice as high in PRIMR as they were in control schools in Grade 1, and the absolute gain in comprehension attributed to PRIMR in Grade 2 was 17.3%.[80]

Ugandan EGRA results are indicative of mother-tongue instruction as facilitating early grade reading.[81] However, there is a lack of empirical data on adherence to 'language of instruction' policies or the extent to which policies match the actual mother tongue of children.[82] A study by Piper and Miksic showed the mother tongue to be used above 70% in early primary in Uganda, with the highest usage at 76.8% in P3.[83]

Transitioning to full instruction in English (a second language) prior to a student developing sufficient literacy skills in a first language could block children from acquiring basic concepts that are key to comprehension.[84] However, scores in one language were shown to correlate positively to scores in other languages. This suggests that, if transition is sufficiently supported in between P3 and P4, children can retain prior skills across languages.[85] However, as seen in the evaluation of RLL in Mali, skills acquired while in the programme were not sustained a year after exiting the programme.[86] Bearing in mind that evidence indicates that literacy levels in Uganda upon completing P3 are still low,[87] there may be a stark adjustment for children entering P4.[88]

Thus, although evidence indicates early grade reading in mother-tongue programmes to be effective there is not enough long-term or widespread evidence to draw a general conclusion, nor to determine

[75] Spratt, J., King, S. and Bulat, J. (2013). *Independent Evaluation of the Effectiveness of Institut pour l'Education Populaire's "Read-Learn-Lead" (RLL) Program in Mali.* Endline Report prepared for William and Flora Hewlett Foundation. North Carolina: RTI International (p. 1).
[76] Ibid.
[77] Ibid.
[78] Ibid.
[79] Ibid.
[80] USAID/Kenya Primary Math and Reading (PRIMR) Initiative: Final Report, July 2014.

[81] Piper, B. (2010). *Uganda Early Grade Reading Assessment – Findings Report: Literacy Acquisition and Mother Tongue.* Research Triangle Institute International.
[82] Ibid.
[83] Ibid.
[84] Ibid.
[85] Ibid.
[86] Spratt, J., King, S. and Bulat, J. (2013). *Independent Evaluation of the Effectiveness of Institut pour l'Education Populaire's "Read-Learn-Lead" (RLL) Program in Mali.* Endline Report prepared for William and Flora Hewlett Foundation. North Carolina: RTI International.
[87] Uwezo Uganda (2012). *Are our children learning?* Annual Learning Assessment Report.
[88] Piper, B and Miksic E. (2011). 'Mother Tongue and Reading: Using Early Grade Reading Assessments to Investigate Language-of-Instruction Policy in East Africa', pp. 139–182 in Grove, A. and Wetterberg, A. (eds.) *The Early Grade Reading Assessment: Applications and Interventions to Improve Basic Literacy*. NC, USA: RTI Press.

which factors are more important than others in intervention design.[89] The quality of instruction and the school (and home) environment may in fact be more critical, meaning the language of instruction may not be the key factor. [90] Other aspects of the RTI approach, such as the structured lesson plans and teacher training, may therefore be more crucial.

Evidence indicates that teacher training is most effective when repeated and directly linked to a specific pedagogical method or tool.[91] The RTI model uses a very structured, prescriptive approach to teacher training. There is evidence that supports the effectiveness of this approach. Evans and Popova (2015) highlight teacher training as producing a positive and significant effect on early grade learning.[92] Similarly, Murnane and Ganiman (2014) emphasise that support tailored to the skill level of teachers is more efficient than general pedagogical guidance, which tends not to improve student learning.[93] In line with this, they argue that variations in the success of interventions are due to low-skilled teachers requiring specific guidance – or 'scaffolding' – in order to reach minimally acceptable levels of instruction.[94] A scripted literacy programme in Mumbai, India, which provided targeted literacy materials, found that the intervention had a much larger impact on literacy when combined with teacher training that prepared teachers on how to use the materials.[95] As such, research shows that improvements may be larger when teacher training overlaps with other interventions, with many of the successful interventions being fairly structured, prescriptive and focusing on training teachers on how to use new methods.[96]

Several evaluations of programmes that involve repeated teacher training have shown statistically significant improvements in literacy.[97] For example, Lucas et al (2014) analysed field experiments from the AKF Reading to Learn (RtL) programme in Kenya and Uganda, an intervention design similar to SHRP,[98] and showed that Ugandan literacy in Lango district increased by around 20% of a standard deviation, while there was a smaller effect of 8% of a standard deviation in Kenya.[99] The findings add to evidence that a coherent instructional model combined with materials and training can improve early grade reading.

Against this, however, there is evidence from the evaluation of the Mango Tree reading programme in northern Uganda. This is in essence a similar (and similarly high unit cost) approach to that used in SHRP. The study showed that reading proficiency gains were significant from the full-cost pilot version, but insignificant when a reduced-cost version, designed to simulate conditions of operating at scale, was used.[100] At this stage, therefore, it is difficult to point to hard evidence that an extension of the national reading programme is likely to be effective at scale.

[89] Ibid.
[90] Ibid.
[91] Ibid.
[92] Evans, D. K. and Popova, A. (2015). 'What Really Works to Improve Learning in Developing Countries? – An analysis of divergent findings in systematic reviews'. *World Bank Policy Research Working Paper 7203.*
[93] Murnane, R. J. and Ganimian, A. J. (2014a). 'Improving Educational Outcomes in Developing Countries: Lessons from Rigorous Evaluations'. *NBER Working Paper No. 20284*. Cambridge, MA: National Bureau of Economic Research.
[94] Evans, D. K. and Popova, A. (2015). "What Really Works to Improve Learning in Developing Countries? - An analysis of divergent findings in systematic reviews". *World Bank Policy Research Working Paper 7203.*
[95] Ibid.
[96] McEwan, P. (2012). "Improving Learning in Primary Schools of Developing Countries: A Meta-Analysis of Randomized Experiments". *Review of Educational Research* 20 (10): 1–42.
[97] Evans, D. K. and Popova, A. (2015). 'What Really Works to Improve Learning in Developing Countries? – An analysis of divergent findings in systematic reviews'. *World Bank Policy Research Working Paper 7203.*
[98] Lucas et al. (2014). 'Improving Early-Grade Literacy in East Africa: Experimental evidence from Kenya and Uganda'. *Journal of Policy Analysis and Management* 33: 950–976.
[99] Ibid.
[100] Jason T. Kerwin and Rebecca Thornton (August 2015), Making the Grade: Understanding What Works for Teaching Literacy in Rural Uganda.

6.2 Evidence to support Option 3: testing approaches to pre-primary education

There is strong international evidence to suggest that children who attend pre-school centres are better prepared for primary school and do better in the early years than their peers who have not attended pre-school classes. In the Ugandan context, Behrman and van Ravens (2013) model and discuss simulations of the individual, social and economic returns of access to quality pre-primary education. Their findings suggest that providing pre-primary access to low-income children can increase the time these children stay in school by 2.6 years on average. The societal returns are likely to be even higher than private returns given the spill-over effects of a substantial increase in pre-school participation, for example by reducing crime and increasing people's participation. Behrman and van Ravens (2013) estimate the social rates of return as being 10% higher than the private rates. Their simulations also indicate that benefit-to-cost ratios may vary from 1.1 to 8.6 (depending on assumptions of discount rate, etc.). Thus, even under the most conservative assumptions, the potential returns are substantially higher than the initial investment.

Despite the returns of quality pre-primary education in early years, it has been observed that learning gains may fade and learning gaps widen, particularly for children from disadvantaged backgrounds and/or those who go on to study in dysfunctional primary educational systems. Evidence from the India Early Childhood Education Impact study,[101] for instance, attributes school readiness and enormous learning deficits observed among children at the end of primary school more to ex-ante family background/socio-economic differences than to the pre-primary institutions children attend. Intellectual and social fade-out was likewise reported for African-American children in the US Head Start[102] programme given that they usually attended poorer quality primary schools.[103] Other evidence, however, suggests that fade-out at this stage primarily arises from belonging to less supportive and stimulating 'home learning environments'.[104]

The delivery of good quality ECD services in low-resource settings is fraught with infrastructural and other challenges. A review of ECD programmes in Karamoja region (Nakapiripirit District)[105] discusses some of the challenges faced by community-based ECD centres, namely: (i) lack of ownership of the services (district is not directly responsible for their implementation); (ii) caregivers (ECE teachers) have low literacy levels; (iii) low parental support; (iv) the expectation that ECE centres should be feeding centres as well; (v) lack of proper infrastructure and hygiene facilities; and (vi) distance of centre from home.

There is limited evidence relating to the modalities of extending funding to non-state pre-primary providers. NGOs and UNICEF have long been involved in ECD work but their efforts are typically self-evaluated and consequently there is often little independent verification of their success. There is little evidence on unit costs (which could be high in some cases). Conventional approaches for supporting private sector education targeting poor children include subsidies, vouchers, tax incentives, more and better materials and resources, improved school management, public–private partnerships, and improved policy and regulatory frameworks.[106]

[101] The IECEI is an ongoing five-year longitudinal study that tracks the educational trajectories and learning outcomes of a cohort of 13,000 children from age 4. The majority of children in the IECEI study spent between one and two years in an early childhood education programme prior to entering primary school.
[102] Head Start is a national pre-school programme in the US.
[103] Garces, Thomas and Currie (2000).
[104] Home learning environment is thought to have a far greater impact on a child's development than the school he or she attends – at least during the primary phase. Poor home learning environments need not be a direct result of low income and socio-economic background, but a correlation does exist (Wood and Caulier-Grice, 2006).
[105] Yale School of Medicine/Child Study Centre (undated), Early Childhood Development in Karamoja Region (Nakapiripirit District), Angelica Ponguta
[106] Bano, M., Crawfurd, L. and Rai, S. (n.d.). *Can governments make education markets work better for the poor? Insights from a comparative analysis of M4P programmes*, 2015.

Markets for the Poor (M4P) approaches have been less common, although there are two pertinent DFID-supported examples: one for private pre-schools in Dar es Salaam, Tanzania, which is still in its business case stage; and the other, the DEEPEN[107] programme in Lagos, Nigeria. DEEPEN uses an M4P approach to create an enabling environment for private schools, particularly those that educate poor children. It supports innovations to improve learning conditions, and raise performance standards across the sector. In particular, the DEEPEN programme has developed a new school grading system to provide greater clarity to schools on standards, rights and regulations. It also aims to stimulate demand and competition by providing better information to parents, as well as to equip schools to respond to these pressures. It also aims to improve service by providing resources through the development of markets for financial products and stimulating the supply of providers of learning materials.[108]

Although many programmes have used M4P in agriculture, health, finance etc., DEEPEN is a pioneer M4P programme in education. It is, as yet, too early to know if and how DEEPEN is working to enhance learning outcomes and whether any changes in learning can be causally attributed to the programme, since the programme's evaluation is still in its early, baseline survey stage. An ex-ante theory-based review of DEEPEN's M4P approach concluded that while the programme's approach and design were broadly consistent with the eight core principles of M4P interventions (DFID, 2005)[109] there were two key areas for reconsideration: (i) that the programme could increase its focus on targeting the poor[110] and (ii) consider adding an element of direct subsidy to one or more of its interventions.[111]

6.3 Evidence to support Option 4: strengthening education management systems

Option 4 involves a systems approach to improving education management at central and district levels and specific attention to teacher management. There are clearly many factors that influence learning outcomes directly, including class size, pedagogical approach, instructional time, head teacher leadership and teacher competence. The effects on learning of changes in the education superstructure and systems are more difficult to attribute and heavily dependent on context. There is some international evidence supporting a broad approach to improving learning outcomes through interventions at a systems and management level. It points to an indirect causal link between interventions to improve education management systems and capacity and improved learning.[112] Strong and accountable education systems matter. A good education system is one that continually strives for increasing levels of educational excellence and quality assures its activities to drive up standards.

[107] The Developing Effective Private Education in Nigeria (DEEPEN) Programme.

[108] Bano, Crawfurd and Rai. (n.d.). *Can governments make education markets work better for the poor? Insights from a comparative analysis of M4P programmes*, 2015.

[109] DFID (2005) Making Market Systems Work Better for the Poor (M4P): An Introduction to the Concept. Discussion paper prepared for the ADB–DFID 'learning event', ADB Headquarters, Manila.

[110] Crawford et al 2015. The authors further explain, "…DEEPEN could reconsider the relatively low level of emphasis it is currently placing on understanding decisions at the bottom end of the private education market. It could focus more explicitly on reaching the poor either through choosing to focus on geographically poor localities or by designing interventions that have increased chances of reaching the poor. It can also allow for its M&E framework to invest more heavily in measuring the impact of its interventions on the bottom end of the market rather than measuring impact across different segments of the market".

[111] The authors further explain, "There are examples of programmes using direct subsidies strategically and for the short-term by other M4P programmes in order to reach the poorest segment of the market. DEEPEN could potentially consider adding an element of subsidy, for example to facilitate access by low-fee schools to teacher-training facilities, as long as a plan is in place whereby schools can either start to pay for these services after a certain point or the government can come forward to provide a permanent subsidy to that part of the programme."

[112] Institutional issues with educational systems in developing countries such as corruption, lack of transparency, and inefficient use of resources may severely impair the effectiveness of increased school resources. See Glewwe, P. and Kremer, M. (2006). 'Schools, teachers and education outcomes in developing countries'. In E. Hanushek & F. Welch, eds. *Handbook of the Economics of Education*. North Holland.

Conventional wisdom suggests that capacity to formulate policy, set standards, and manage human and financial resources are important for system development right down to the classroom level. Good governance with strong public financial management and effective systems for managing teachers – including the recruitment, training and deployment of good teachers – are all features of effective education systems. Investing at system level enables education reforms to build on pockets of good practice and ensure irreversible gains in learning.[113] An education system's ability to transform educational resources efficiently and effectively into learning outcomes hinges on:

- The capacity of the education system to formulate policy, set standards and implement quality assurance;
- The ability to assess student performance;
- The capacity to manage human and financial resources; and
- The ability to engage in inter-governmental and external partnerships.

There is some evidence that the transfer of responsibilities to the local level can build demand for effective local governance and improve the delivery of public services.[114] However, it appears that the key factor is the extent and nature of devolution as the number of examples of ineffective systems of school governance suggests that extending local responsibility does not work in every case.[115] Uganda is a case in point. Responsibility for primary education is devolved to districts and school management committees exist but few would argue that these arrangements have improved the delivery of education.

There is a large evidence base that focuses on the critical role of the teacher in improving student learning and there is a broad consensus on the need to attract, retain, develop and motivate teachers.[116] The evidence relating to the effectiveness of teacher development, as opposed to teacher management, suggests that teacher training alone is not sufficient for improving pupil learning. [117] Various authors[118] point to the questionable impact of much teacher training, arguing that working habits acquired in the early stages of schooling by people who subsequently become teachers are very difficult to change. Teachers tend to replicate how they themselves were taught. Even where teachers have been exposed to child-centred and active learning methods, they abandon them when faced with large class sizes, a lack of resources and sceptical colleagues.[119]

It is difficult to find evidence that distinguishes which aspects of teacher management – e.g. teacher recruitment and supply, deployment and motivation – have the greatest beneficial influence. However, it is apparent that a well-organised process of teacher utilisation, based on analysed data on school locations, teachers and enrolments, can lead to significant cost savings and other efficiencies, including VfM in education delivery systems.[120]

The literature strongly supports the view that teachers who perceive themselves as poorly paid have a direct and negative impact on educational quality.[121] If teaching does not offer opportunities for

[113] DFID: Assessing the evidence, Chapter on learning, 2014.
[114] World Bank (2008a), 'What Do We Know About School-Based management?' Washington, DC: World Bank. World Bank (2008b), 'Guiding Principles for Implementing School-based Management Program', Washington, DC: World Bank (online toolkit).
[115] Barrera-Osorio, F. et al. (2008), *Decision-Making in Schools*. World Bank
[116] See the GMR Report 2013/14, which focused on teachers' training, management and deployment.
[117]The MUSTER Research Project, DFID and the UK Open University TESSA Project (www.tessafrica.net).
[118] Fullan, M. (2009) *The Challenge of Change*; Marlaine Lockheed and Adrian Verspoor, various reports and papers published by the World Bank between 1998 and 2012); Keith Lewin, especially in papers published by the MUSTER Project (Sussex University); Bob Moon (the UK Open University); Robin Alexander (2003 and subsequent papers, reports and articles) and papers published in the International Journal of Education Development (IJED) and Comparative Education Review.
[119] Butler and Moon (2008), *Pride and Light: Female teachers' experience of living and working in rural sub-Saharan Africa*, Open University, UK.
[120] World Bank (2010), World Bank Review on Teacher Policy and Management in Fragile and Conflict Affected Situations, Washington DC.
[121] Daun, H. (1997). 'Teachers' Needs, Culturally Significant Teacher Education and Educational Achievement in an African Context:

advancement or competitive salaries for increased skill levels and work experience, more experienced teachers leave the profession and promising new teachers are not attracted to it. The linkage between salary scales and career advancement is an important factor in teacher morale. The extent to which teachers feel that their community appreciates their work also affects teacher motivation. The World Bank report (2010) cited above points out that where salaries, working conditions and teacher qualifications are particularly low, the status of the teaching profession reflects this and impacts teacher motivation accordingly.[122] The report also cites studies in which stakeholders and teachers consulted considered that primary school teaching was no longer seen as an important profession and that teaching was an 'employment of last resort'. Teachers reported that they would be more interested in the profession and would develop greater resilience in difficult contexts if their role were recognised and valued. [123]

The Case of Guinea Bissau'. International Journal of Educational Development 17(1):59–71.

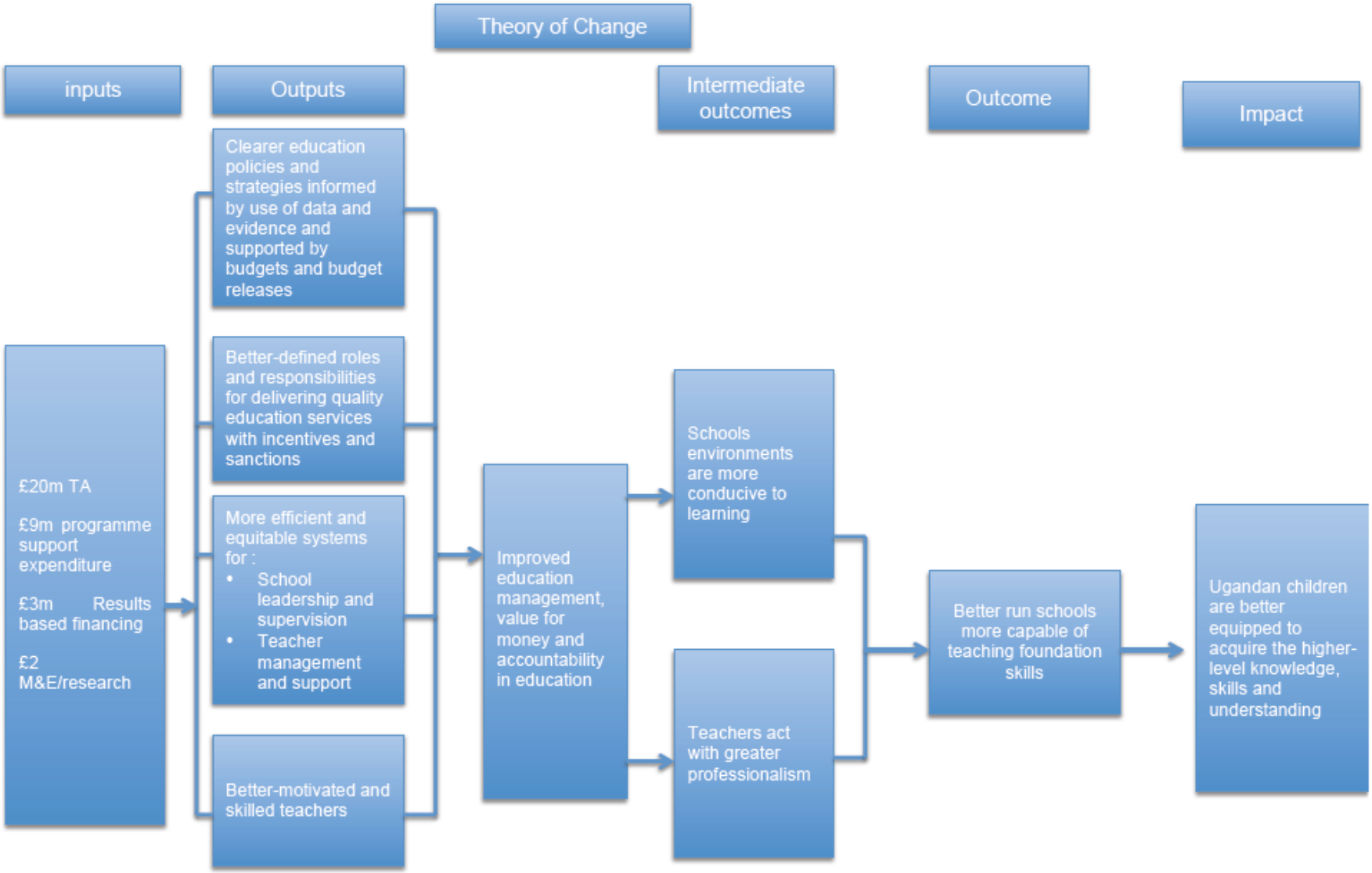
[122] World Bank (2010) World Bank Review on Teacher Policy and Management in Fragile and Conflict Affected Situations, Washington DC.

[123] As DFID's Inclusive Education Topic Guide recognises, there is a need to build the evidence base on the most effective approaches to inclusive education. However, the broad principles outlined here are consistent with the evidence that is available, including that presented in the Topic Guide.

7 Theory of Change

A Theory of Change for the proposed ‘Strengthening the Effectiveness of Education Management’ programme is set out below. Please note that all funding allocations are indicative.

Figure 7 Theory of Change



7.1 Assumptions

7.1.1 Outcome to impact

- Other factors, such as poverty or cultural attitudes, do not limit access beyond lower primary.
- There is sufficient supply of secondary school places to accommodate greater numbers of primary graduates.
- Better foundational skills will lead to higher rates of learning, retention and completion in primary schools and greater progression to higher levels of education.
- Rapid population increase and the greater pressures on education this creates does not outpace the government's efforts to improve the education system.

7.1.2 Outputs to outcome

- Clearer strategic direction and financial management in MOESTS will lead to more effective education management.
- Holding districts to account, through sanctions and rewards (i.e. PBR), will lead to service improvements.
- In a context where overall public funding for education is constrained, improved VfM will provide sufficient funding for service improvement.
- Improved education management and accountability at the central and district levels will contribute to improved learning outcomes.
- The political economy of centre–district relations will allow improvements in education service delivery.
- District education staff and head teachers will be willing and able to improve classroom learning environments.
- Improved teacher management and support will lead to better-motivated teachers.
- Better-motivated teachers will be more willing to respond to training and improve their pedagogical skills.

7.2 Strength of the evidence to support the chain of causality

There is strong evidence that shows that investing in quality education will contribute to the achievement of Sustainable Development Goals: poverty reduction and increased equity of service delivery provision; reduced HIV/AIDS; reduced child mortality;[124] higher uptake of contraceptives and family planning methods;[125] improved birth spacing; and stronger economic growth.[126]

There is some, but not strong evidence that interventions at a systems and management levels can improve learning outcomes through.[127] There is general evidence that better-managed education systems produce better results. However, it is difficult to establish evidence of direct causality. The range of factors that contribute to better learning and the appropriate mix is highly sensitive to

[124] Shultz, P (1993), 'Mortality Decline in the Low-Income World: Causes and Consequences'. *American Economic Review* 83(2).
[125] Hanushek, EA and Wößmann, L. (2007), *The Role of Education Quality for Economic Growth*. Washington, DC, World Bank, Human Development Network (Policy Research Working Paper, 4122); Bledsoe, CH, Casterline, JB, Johnson-Kuhn, JA, and Haaga, JG (eds.) (1999) *Critical Perspectives on Schooling and Fertility in the Developing World*. National Academy Press, Washington, DC; Mensch, B, Lentzner, H. and Preston, S. (1986) *Socio-economic Differentials in Child Mortality in Developing Countries*, New York, United Nations. For other reviews see Colclough (1982); Hannum and Buchmann (2005); UNESCO (2002); Watkins (2001); World Bank (1985).
[126] Bruns, B., Mingat, A and Rakotomalala, R. (2003), 'Achieving Universal Primary Education by 2015 – A Chance for Every Child'. Washington DC: World Bank
[127] Glewwe, P. and Kremer, M. (2006). Schools, teachers and education outcomes in developing countries. In E. Hanushek and F. Welch, eds. *Handbook of the Economics of Education*. North Holland.

context. There is limited evidence from Africa that indicates that changes to teacher deployment policies can make a difference in filling hard-to-fill posts.[128]

For further discussion of the evidence supporting this proposed investment, see Section 6.3 above.

7.3 Indicative budget

The figure of £34 million for the cost of the programme is an indicative planning figure. The breakdown of this overall figure is therefore tentative. It is envisaged that the bulk of the expenditure £20 million will be on TA. It is further suggested that a further £9 million will be spent of programme support costs (non-TA expenditure on training, research, materials, communications and knowledge management etc.) £3 million would be earmarked for Results Based Financing. This should be sufficient to provide districts with incentives for better performance, but modest in relation to overall project costs, because of the fiduciary risk considerations of passing funds through government systems. An amount of £2 million (just under 6% of the total) is suggested for monitoring and evaluation.

[128]Mulkeen, A. (2010) *Teachers in Anglophone Africa. Issues in Teacher Supply, Training, and Management*. Washington, DC: The World Bank.

8 Economic Appraisal

This section outlines a cost–benefit analysis (CBA) of the preferred option (Option 4) to implement the programme.

8.1 Option resource costs

The total cost of DFID planned support to the education sector is £46 million over five years to 2020/21. Out of this total, £34 million is assumed to be allocated to spending on the preferred option for improving early years education (strengthening education management systems). It is assumed in this appraisal that the cost is distributed over each of the five years of programme operation as follows (allowing for a six-month inception period in 2016 H2): £ 2 / 6 / 9 / 9 / 6 million.

A number of costs are not captured in the appraisal. These include costs borne by the private sector, including students and families in pursuing their education. The CBA does not take into account the additional costs borne by the Government of Uganda as a result of the programme, for example the implicit cost implied by the use of central and district government facilities and the costs of staff time devoted to programme activities.

8.2 Option benefits

Type of benefits included in the CBA

The main benefits accruing from the preferred option are the **benefits from improved primary student learning outcomes.** Improved outcomes are expected to be derived from the improved professionalism of teachers, due to improved teacher management and support, as well as better use of education resources as a result of programme activities.

A wide range of direct and indirect economic and social benefits can be attributed to improvements in learning outcomes. There is strong evidence that education makes individuals more productive and thus increases their incomes. There are also significant non-pecuniary benefits from primary education, such as improved health and social participation and integration, reduced maternal and child mortality, and reduction in fertility levels, all of which ultimately feed back into higher economic growth.

Educationalists and economists have extensively studied the economic returns to human capital formation through school-based education, in terms of increased individual income and economic growth.[129] Economists calculate the personal rate of return to education by examining – at an individual or micro-economic level – the correlation between a person's income and the education received by that person. The developing country literature on the impact of education quality on earnings is restricted to a relatively limited number of countries: Ghana, Kenya, Morocco, Pakistan, South Africa and Tanzania. Authors of an authoritative recent study of the impact of quality found that the impact of returns in developing countries was more marked than in developed countries, although they noted that estimates should be treated with caution.[130]

The evidence suggests a high correlation between completing a cycle of basic education and acquisition of basic literacy. There is increased evidence that there is a positive impact of educational attainment (such as numeracy and literacy) on earnings: the Uganda GPE Project Appraisal

[129] The bulk of studies examining the connection between education and incomes and growth have used 'years of schooling' rather than literacy or numeracy levels as the education variable studied.
[130] Cameron and Cameron (2005), *The economic benefits of increased literacy*, Background paper prepared for the Education for All Global Monitoring Report 2006, Literacy for Life, UNESCO.

Document (PAD), 2013, includes estimates of the economic returns to primary education based on Uganda's 2009 National Panel Survey. The results show both private and social rates of return of around 30% to primary education.

Beyond benefits captured by students from completion of primary education, there are other benefits such as an increased likelihood of continuing education, and therefore multiplied benefits of increased human capital formation on economic growth: the more people who have access to knowledge – and literacy is undoubtedly a key factor in accessing knowledge – the greater the likely economy-wide benefits.

A typical wage return study[131] notes that '*the evidence on wage returns to education in developing countries shows internationally, one additional year of education adds approximately 10% to a person's wage, at the mean of the earnings distribution'*. These Global Monitoring Report (GMR) findings are backed up by a recent DFID-funded systematic review of the relationship between education, skills and growth.[132] In addition to benefits from increased entrepreneurship, and inter-generational transfers (whereby children of those with higher literacy are more likely to enter school), specific findings[133] on the impact of literacy on employment and income creation include a finding that working adults with primary education in Tanzania were 20% less likely to be poor and working women in Pakistan with good literacy skills earned 95% more than women with few literacy skills.

Calculating the benefits of enhanced rates of return to education

Social benefits are excluded from this CBA since they are difficult to attribute directly to improved education and are notoriously difficult to quantify. The benefits captured in the CBA are therefore likely to only account for a proportion of the likely total societal benefits realised. Any net benefits should therefore be seen as a very cautious estimate.

In the absence of valuing social benefits, the CBA therefore focuses only on two streams of economic benefits: (i) the additional private benefits to individuals gaining improved learning outcomes; and (ii) the benefits of enhanced system efficiency, primarily as a result of reduced dropouts and fewer students repeating classes.

Private benefits are calculated as the additional earnings received by the larger number of primary pupils completing a course of primary education (P1 to P7) and entering the labour market as a result of programme activities. Additionally, a small wage premium is allowed for as a result of improved learning due to improved teacher management and skills. System efficiency benefits are scored as a reduction in the average number of years of primary education each child requires to complete a primary cycle as a result of improved teaching and a lower overall teacher absenteeism rate.

In order to value the benefits of this improved relevance of learning in this CBA, and the share of the benefits attributed to DFID, it is assumed that:

- Programme activities result in a 0.3% a year increase in primary completion rates (a total increase in primary completion rates of 5.5% over 25 years). This represents a modest improvement of around 5% in performance compared to current completion levels.
- It is further conservatively assumed that better literacy and numeracy skills associated with improved teaching and school and district education management will mean that children graduating from primary and secondary schools will be able to earn 5% more than without the

[131] Colclough, Kingdon and Patrinos (2010), 'The changing pattern of wage returns to education', *Development Policy Review* 2010, 28(6), pp. 733–747, citing Psacharopoulos and Patrinos, 'Human Capital and Rates of Return', in *International Handbook of Economics of Education*, 2004, Edward Elgar, pp.1–57

[132] Hawkes and Ugur (2012), Evidence on the relationship between education, skills and economic growth in low-income countries, EPPI-Centre. Available at http://www.dfid.gov.uk/r4d/PDF/Outputs/SystematicReviews/Q2-Education-skills-growth-2012Hawkes-report.pdf

[133] Findings cited in the Global Monitoring Report for 2006, drawing from commissioned research by Patel (2005), Stromquist (2005), Robinson-Pant (2005), Cameron and Cameron (2005) and Farah (2005).

additional DFID inputs from the programme. The rate of return is a conservative assumption based on research, which shows that returns to improved literacy in the developing world have been found to be large. For example, a programme in Indonesia produced rates of return to literacy of 25% compared to 22% for primary education alone, while a Bangladesh programme found an average private rate of return on literacy of 37%.[134]

- The CBA assumes that only 25% of primary school children and 40% of secondary school children completing a cycle of education receive an income (with most remaining as subsistence / family workers). However, again this is a conservative assumption as economic benefits from improved educational attainment will not only be derived from workers who receive a formal sector income but also by those who remain as family/subsistence workers. These benefits will include the benefits of improved literacy in undertaking cultivation, including the ability to follow instructions and written advice on crop planting and husbandry. Earnings of primary school graduates are assumed to be a $348, (data taken from the National Panel Survey in 2009 is used and uprated to 2016 for increases in the GDP deflator). Secondary school graduates are assumed to be able to earn 40% more than those who have simply completed a cycle of primary education.[135]

Calculating system efficiency benefits

Uganda EMIS data reveals an average repetition rate of around 11.5% in primary grades, dropping to half of this level only in the last year of the primary cycle. This average repetition rate translates into each child spending at least one more year than necessary at school simply due to repetition alone. Table 6 shows the average per student expenditure cost in 2012/13 (the latest available) data at primary level is around £32 per student per year.

Table 6: Total expenditure[136] on primary education per student (£)

Per pupil primary costs	2012/2013
Total spending on primary education	254,105,000
Total number of primary pupils	7,968,920
Expenditure per primary pupil	31.9

Source: MOESTS Annual Report

Reducing repetition rates by 20% at the primary level (from an average of 11% to under 9%) would provide at least 0.16 pupil years[137] of spare education at primary level. With 7.97 million primary students, this translates into an efficiency saving of over £40.7 million over a primary school cycle, equal to £5.7 million per annum over the programme duration. Assuming programme efficiency effects last for five years after the programme even if the programme is discontinued and management improvements gradually reversed, this would translate into total efficiency benefits of over £57 million in 2014 prices – well over the undiscounted programme cost – as a result of the programme.

Balance of costs and benefits

A simplified CBA was conducted over a 25-year period for the preferred option (Option 4). The analysis assumes a programme cost of £34 million over five years, with the programme commencing in 2016/17 and continuing until 2020/21.

[134] UNESCO, 2006.
[135] http://data.worldbank.org/country/uganda. Data on per capita income, current US$, Atlas method.
[136] Total expenditure includes both recurrent and development spending.

[137] This is calculated as the reduction in the total number of repeaters as a share of the total number of primary pupils multiplied by the number of primary school years (seven).

Table 7 below shows total costs and benefits, both undiscounted and discounted using a 10% discount rate, by year. It shows the total undiscounted programme costs of £34 million, equating to a discounted cost of just over £27.7 million. Total undiscounted benefits rise steadily from a little under £12 million in 2016/17 to over £42 million after 25 years. The rising level of benefits is due to the growing number of additional students successfully completing end-of-cycle examinations (nearly 35,000 additional end-of-primary completers by 2020/21), of whom 25% are assumed to be able to command an income in the labour market.

The total present value of the difference between benefits and programme costs (the NPV) using the higher discount rate of 10% is calculated as £279 million (£304 million of net benefits and £25 million of net costs over 25 years). The benefit-to-cost ratio for the intervention is 12.2, which indicates that the programme is very clearly VfM.

Table 7: Option 4: Costs and benefits, discounted and undiscounted, £ million

Year	Undiscounted costs	Undiscounted benefits	Discounted costs	Discounted benefits
2016	2.00	11.96	2.00	11.96
2017	6.00	24.03	5.45	21.85
2018	9.00	26.21	7.45	19.86
2019	9.00	28.52	6.00	19.69
2020	6.00	30.96	4.10	19.48
2021	0	32.19	0	19.21
2022	0	33.44	0	18.17
2023	0	34.69	0	17.16
2024	0	35.94	0	16.19
2025	0	37.20	0	15.24
2026	0	37.52	0	14.34
2027	0	37.84	0	13.15
2028	0	38.36	0	12.06
2029	0	38.48	0	11.05
2030	0	38.80	0	10.13
2031	0	39.12	0	9.29
2032	0	39.44	0	8.52
2033	0	39.76	0	7.80
2034	0	40.08	0	7.15
2035	0	40.40	0	6.55
2036	0	40.72	0	6.00
2037	0	41.04	0	5.50
2038	0	41.36	0	5.04
2039	0	41.68	0	4.62
2040	0	42.00	0	4.23
TOTAL	**34.00**	**891.48**	**25.0**	**304.24**

Sensitivity analysis

The following section describes the sensitivity analysis undertaken against the key assumptions in the CBA.

Variations in pupil completion rate assumptions, the base level of income (a proportion of GDP/capita) chosen as representative of average earnings, the phasing of programme costs, and the level of the discount rate have a limited impact of the level of benefits and the overall benefit-to-cost ratio.

The key assumptions which drive the increased benefits are:

(i) The proportion of primary and secondary school graduates who find work in the formal labour market (here assumed to be 25% and 40% respectively).
(ii) To a much lesser extent, the wage premiums that students who are better taught as a result of the programme can command in the labour market (assumed here to be 5%).

The results are highly sensitive to changes in the proportions of graduates who find paid work: reducing the proportion of primary school graduates finding paid work to 20% (from 25%) reduces the NPV of net benefits from £254 million to £41 million with a discount rate of 10%.

Annex 1 Terms of reference

For Design Consultancy
Education Programme in Uganda

Improving Early Grade Learning Outcomes

16 October 2015

Introduction

1. DFID Uganda is designing a new programme to support the delivery of quality and equitable education outcomes in Uganda. To maximise the impact of DFID's education investment, DFID Uganda is seeking to explore how DFID financing can most effectively add value to existing Government of Uganda and Development Partner efforts. One of the main challenges facing Uganda's education sector is the equity and quality of learning outcomes in foundation skills (reading and maths) at primary level. There are currently a number of initiatives to improve the reading and numeracy abilities of Ugandan girls and boys in the early grades of primary school, including through the Global Partnership for Education (GPE), USAID and civil society. While these initiatives represent a substantial push by both government and its partners to improve the quality of primary education, evidence suggests that significant challenges remain[138]. DFID Uganda therefore has an opportunity to complement these efforts and support a sustainable step change in the learning outcomes of Ugandan girls and boys.

Objectives

2. These terms of reference (ToR) cover the work to be carried out by one or more expert consultants (referred to hereafter as "the Consultant") as part of the design work in preparation for a new DFID education programme in Uganda.

Overall objective

3. To support the preparation of a Business Case for a new DFID programme of support to Uganda's education sector.

Specific objectives

4. To review the status (including fidelity of implementation[139] and evidence of impact to date) of the existing initiatives[140] to improve learning outcomes in lower primary.

5. To develop options for how DFID Uganda could intervene to complement existing government and donor efforts to improve learning outcomes in lower primary.

6. To appraise a limited set of costed-options (2 or 3) up to the identification of a preferred option, including an evidence-based theory of change for the preferred option. The appraisal will assess

[138] Challenges include (i) the fact that coverage of the reading programmes is not yet national; (ii) effective and sustained monitoring, oversight and support from district structures and Centre Coordinating Tutors(CCTs) appears limited (iii) links between current in-service support and initial teacher education are unclear.

[139] It is not expected that the Consultant will conduct an in-depth analysis of "fidelity of implementation" but instead to understand the extent to which programmes are running as intended and the associated challenges

[140] This will primarily focus on government and development partner initiatives but may also include promising smaller scale initiatives (e.g. Mango Tree, Aga Khan). The Consultant will agree with the DFID Uganda education adviser which initiatives should be included.

which option delivers the best value for money and present the strategic case to support such an investment.

Recipient

7. The primary recipient of the work is DFID Uganda.

Statement of Work

8. The main purpose of the work is to identify, consider and make substantiated recommendations regarding how DFID Uganda can most effectively add value to existing efforts to improve the equity and quality of measurable learning outcomes in the early grades of primary in Uganda. This includes but is not limited to considering the effectiveness of existing approaches, current Government of Uganda policy and financing priorities, the capacity of the system to deliver a sustainable quality-enhancing programme, and alternative approaches to unblocking systemic challenges which may pose significant constraints on the effectiveness of teaching and learning in the early grades. This work will be complemented by additional analytical work being prepared concurrently, including on a roadmap for assessment and exam reform as well as analytical work commissioned by partners, notably Irish Aid, UNICEF and the World Bank. The Consultant will be expected to liaise closely with other consultants commissioned both by DFID Uganda and other Education Development Partners (EDPs) for synergies, complementarity and to avoid duplication of effort and information-gathering.

9. As part of the work, the Consultant will be responsible for the following three deliverables:

   A. A short **inception report** setting out approach and work plan.

   B. A **powerpoint slidepack** to enable DFID Uganda and its partners to take a decision on which options to appraise in detail; up to 6 options should be set out.

   C. A **final report** with a detailed appraisal of up to 3 options, including a recommendation on the preferred option with its attendant Theory of Change, indicative budget and a strategic case for investment.

Description of deliverables and related tasks

Deliverable A — A short (max 10 pages including annexes) **inception report** setting out approach and work plan.

10. For the adequate completion of deliverable A, the following content will need to be included and the following tasks completed:

   i. A list of stakeholders to be consulted and school/district visits to be carried out
   ii. A list of reference material to be reviewed, including international evidence
   iii. Summaries of which existing efforts to improve early grade learning outcomes will be reviewed, including those supported by USAID (SHRP, LARA), GPE, Irish Aid, and UNICEF. A note on the availability of impact and cost data for each should be included.
   iv. Detailed information on the proposed methodologies for deliverables B and C
   v. Workplan, including timeline and travel

Deliverable B — A **powerpoint slidepack** to enable DFID Uganda and its partners to take a decision on which options to appraise in detail; up to 6 options should be set out.

11. For the adequate completion of deliverable B, the following content will need to be included and the following tasks completed:

i. **Situational analysis**: through consultation, documentary review and secondary data analysis, a presentation of ongoing constraints to equitable access[141] and quality learning outcomes in lower primary. These may include reference to bottlenecks within the education system at large as well as constraints at pre-primary and/or secondary levels. Analysis should also consider population growth.
ii. An analysis of the status of existing initiatives operating at scale (e.g. at a minimum, district-wide coverage). Where available, this should include information on approach, cost, evidence of impact, fidelity of implementation, sustainability and synergy with related efforts.
iii. Building on (i) and (ii) above, present up to 6 options and analysis to support DFID Uganda and its partners to make a decision on which options to appraise in detail. Options to consider may include but are not limited to:

    a. *Consolidation and ensuring the sustainability of a national reading programme.* Issues to consider: taking stock on current implementation and review of impact to date; are there lessons to be learned from efforts beyond GPE and USAID; language of instruction and P4 to P5 transition; Ministry of Education (MOESTS) capacity for effective management and sustained financing; materials development through the NCDC; District Education Office (DEO) capacity for effective monitoring and support; quality assurance mechanisms (DES); teacher training (TIET); effective use of technology to improve efficiency and effectiveness; language policy for primary; implications of growing private sector provision in both urban and rural areas.
    b. *Expanding existing effort to cover the remaining 27 districts*. Issues to consider: minority languages; MOESTS capacity; technical capacity for training given existing efforts; equity considerations, including additional effort required in disadvantaged areas and/or for disadvantaged pupils (including considerations of poverty, gender and disability); implications of plans to create a further 22 districts in the coming years.
    c. *Addressing readiness for primary school and high levels of enrolment in the early* grades. Issues to consider: pre-primary to primary transition; effectives and equity of pre-primary provision, including language of instruction; repetition and drop out in the early grades; under- and over-age enrolment in Primary 1; pupil to teacher ratio; school leadership
    d. *Adding a focus on numeracy alongside the push on reading.* Issues to consider: system capacity; training materials; sequencing.

    For each option, issues of (unit) cost, sustainability, complementarity, potential delivery channels and value for money should be considered.
iv. The Consultant will present the slidepack of options to DFID, Government and Education Development Partners.

Deliverable C — A **final report** (up to 50 pages incl. annexes) with a detailed appraisal of up to 3 options, including a recommendation on the preferred option with its attendant Theory of Change, indicative budget and a strategic case for investment.

[141] Particular attention should be paid to equity as it relates to gender, disability and poverty

12. For the adequate completion of deliverable C, the following content will need to be included and the following tasks completed:

    i. Following discussion and agreement with DFID Uganda, the Consultant will appraise up to 3 options from those presented in Deliverable B. The options will be appraised alongside the option of DFID "doing nothing" to support improved learning outcomes in lower primary.
    ii. The appraisal will provide greater depth and analysis, building on the case set out in Deliverable B, including, for each option, a consideration of: evidence base to suggest level of impact and the necessary mediating factors; use of technology; equity considerations; cost; sustainability mechanisms; complementarity with existing government and donor effort; delivery channels and economic appraisal/value for money.
    iii. The analysis will lead to a recommendation for a preferred option, for which the following should be developed: an evidence-based theory of change; a proposed delivery channel; an indicative budget; an approach to monitoring and evaluation, ensuring alignment and harmonisation with existing frameworks; management structure.
    iv. Review of the DFID Business Plan template as well as examples of previous bilateral education programme Business Cases so that the Consultant can structure the final report in such a way that its content fits the Business Plan approach.

Approach

13. The Consultant will be required to work closely with the DFID education adviser and the DFID team. A DFID economist will be available to advise the Consultant on the economic appraisal of the options but the consultant(s) will be expected to undertake/lead this work.

14. The Consultant should take a consultative approach and will work closely with key Government of Uganda counterparts and other partners in the education sector, in particular those involved in financing and implementing initiatives to improve learning outcomes in primary, including Irish Aid, USAID, World Bank, Research Triangle International (RTI) and UNICEF. Consultations will take place through both dedicated ad-hoc meetings and through the education sector working group and its sub-committees.

15. The Consultant will build on sector knowledge, documentation and experience. This will require:
    - Collecting and reviewing literature on the current initiatives to improve early grade learning outcomes in Uganda (including information on delivery, impact, programme management, financial management, monitoring and evaluation) as well as the status and efforts to improve pre-primary provision. This will include collecting and analysing global evidence to inform the options appraisal.
    - Meetings with key counterparts in Government of Uganda in MOESTS (in particular with the Basic Education, TIET and DES) and MoFPED.
    - Meetings with key counterparts amongst development partners (Irish Aid, UNICEF, USAID, GPE/World Bank) and civil society organisations (Aga Khan, RTI, STIR, Mango Tree).
    - Familiarisation with the education sector in Uganda through field visits
    - Good communication with key DFID staff to allow adequate discussion of options.

    Where possible the existing sector architecture should be used (ie the Sector Working Group and its sub-committees

16. Completion of the assignment will require presence in country to be agreed with DFID Uganda in order to:

- establish good working relations with key DFID staff in Uganda (Education Adviser, Economist, Programme Manager), key Government of Uganda counterparts and Education Development Partners
- collect relevant data and documentation
- undertake adequate consultation with GoU and Development Partners to generate information for and buy-in to the options
- present Deliverable B at a Basic Education working group meeting and to discuss and agree upon the limited set of options for detailed appraisal with DFID Uganda education adviser

It is not necessary for the Consultant to be based in Uganda for the full period and there will be opportunities for the Consultant to meet with the DFID Uganda education adviser in London.

Timeframe and Key Delivery Dates

17. The design process will run over a maximum 10-week period. The Consultant will be expected to mobilise no later than 20 October 2015 and complete the assignment by 31 January 2016.

18. The main tasks and activities conducted by the Consultant should be completed according to the indicative schedule as follows (this will be finalised during the first mission):

Activity	**Date/milestone**
Contract signed off	15 October
Start of work	20 October
First mission	26 – 30 October
Approval of inception report	5 November
Second Mission	15-28 November
Submission of 1st draft of Deliverable B Appraisal Case	2 December
Third mission and presentation of Deliverable B	6-11December
Submission of 1st draft of final report	5 January
Feedback on 1st draft	12 January
Submission of final draft	22 January

Reporting

19. The Consultant will report to DFID Uganda's Education Advisor. In Government of Uganda the primary counterpart will be the Commissioner for Basic Education.

Inputs

20. The first (Inception) visit will be for up to 5 consultant days plus a further 2 days for preparation and reporting. The international and local consultants' days required for all further inputs will be decided during the inception visit.

Skills and Experience Required

21. The Consultant will be required to demonstrate the following skills and competencies:

Programme development:

- Track record of leading design of DFID funded programmes and experience of DFID's Business Case approach
- Budget preparation

Technical expertise:

- Education expertise to enable meaningful analysis of the options, including sector planning, aid modalities and political economy, accountability mechanisms and education data/systems.
- Experience of supporting design and delivery of improved quality of and equitable access to primary education (early grade reading/numeracy, pre-primary, teacher development, issues on language of instruction and materials development etc.)
- Experience of decentralised service delivery
- Experience of undertaking economic appraisal for DFID, preferably of education programmes

Analytical and influencing skills:

- Strong analytical skills, political awareness and excellent communication skills

Regional and country experience:

- Experience of working in sub Saharan Africa on education issues

DFID Uganda, October 2015

Annex 2 Meetings held

Scoping mission, 26–30 October 2015

Date	Name	Email / phone	Organisation	Time	Location
Monday 26 October	Ambrose Ruyooka	ambrose.ruyooka@gmail.com	GPE Project	0900	Jubilee Insurance Centre
Monday 26 October	Dr Tony Mukusa-Lusambu	lusambuless@yahoo.com	MOESTS	1030	MOESTS, Legacy Towers 3rd Floor
Monday 26 October	DFID Uganda			1200	
Monday 26 October	Elisabeth Nyivuru	enyivuru@fhi360.org 0773255075	Girls' Education Challenge	1430	
Tuesday 27 October	Mary Goretti Nakabugo	gnakabugo@twawezа.org 0772951762	Twawezo	1600	Plot 77, Suwara Rd, Naguru go-down
Tuesday 27 October	George Gena	ggena2000@yahoo.com	Design consultancy	0900	Emin Pasha Hotel
Tuesday 27 October	Teopista Birungi Mayanja	tbirungi@kcca.go.ug 0794661402/ 0204660903	Kampala Capital City Authority	1430	Teachers' Union Office, Teachers' House Plot 28/30 Bombo Rd.
Wednesday 28 October	Luis Crouch	lcrouch@rti.org 0752 129 958.	RTI	1700	Child Summit venue
Wednesday 28 October	Emmi Pakkala	epakkala@unicef.org	UNICEF	0815	Plot 9 George St Nakasero
Thursday 29 October	Emily Akers	eakers@stireducation.org +256 (0) 751147821	STIR	1500	Oxfam Compound, Tank Hill Rd, Muyenga
Thursday 29 October, am	Diana Sekaggya	diana.sekaggya@dfa.ie 0772-744401	Irish Aid	0900	Irish Embassy 25, Yusuf Lule Rd (near golf course)
Thursday 29 October	Saeeda Prew (Chief of Party) Derek Nkata (deputy CoP)	sprew@rti.org dnkata@shrp.rti.org 256 791252525	RTI	1100	19 Yusuf Lule Rd
Friday 30 October	Geri Burkholder	gburkholder@rti.org 0784 177713	LARA	1400	2 Kafu Road, Nakasero (on the road past Fairway Hotel)
Friday 30 October	Martin Prew	martinprew@gmail.com 078 5937645	Consultant	0800	Emin Pasha Hotel
	Maggie Kasiko	mkbaiswike@gmail.com 0772 436 378	MOESTS Gender Unit	1030	Legacy Towers

Main mission, 16 November–2 December 2015

Date	Name	Email / phone	Organisation	Time	Location

Monday 16 November	George Gena	ggena2000@yahoo.com 0772410840	Design consultancy	0900	Emin Pasha Hotel
	Daniel Nkaada	nkaadadaniel@yahoo.com 0772 361 395	Commissioner Primary Education	1400	Legacy Towers Building
	Barbara Radelli	barbara.radelli@btcctb.org 0774699399	BTC Project in TIET	1500	Legacy Towers Building
Tuesday 17 November	Margaret Nsereko	nanserem@yahoo.co.uk 0414 234 445 0772 411 548	Commissioner TIET	0900	Legacy Towers Building
	Elizabeth Ninan Innocent Mulindwa	eninan@worldbank.org 0773 247 618 imulindwa@worldbank.org 0772 510 676	World Bank	1100	World Bank
Wednesday 18 November	Imran Bhuiyan	bhuiyan.imran@brac.net 0758455735	BRAC	0900	Plot 90 Busingiri Zone, Nyanama
	Flavia Bakundana	flavia.bakundana@savethechildren.org	Save the Children	1430	Plot 68/70 Kiira Road PO Box 12018, Kampala
	Kevin Balaba Ambrose Ruyooka	ambrose.ruyooka@gmail.com	DC Planning GPE Project	1600	Embassy House
FIELD TRIP Thursday 19 November	Design Team			0730–1300	Travel to Mobale
	Senior Education Officer Eric Wafuba Lynette ?		EGR Writers Mbale CCT SHRP Field Officer	1400	District Education Office – Mbale
	David		Head teacher	1530	Rongoro Primary school – Mbale
	Rev. Johnston		Head teacher	1600	Nabumali Primary School – Mbale
	Patrick Ginyakol Kamusongwe K. Steven Mutoli Irene		Principal Deputy Principal	1630	Nyondo Core PTC – Mbale
Friday 20 November	Luke Orombi Head Teacher, Caregivers		CCT Head teacher	900	Nampanga Coordinating Centre 930 Nampanga Primary Schools/ECD Centre
	Sarah Mugoosi		District Education Officer – Mbale	1130	District Education Office
	CCTs Irene and David		CCT Deputy Head teacher	1400	Bugunzu Coordinating Centre

	Group discussion - Teachers			1430	Bugunzu Primary School
Saturday 21 November					Travel Back to Kampala
Sunday 22 November					Design team internal discussions
Monday 23 November	Yusuf Nsubuga	yusufnsubuga@hotmail.com 0772 404 296 / 414 348 026	Director Basic and Secondary Education	0830	Legacy Towers
	Hadjara Ndayidde	hndayidde@unicef.org	UNICEF	1000	UNICEF, Plot 9, George Street, Nakasero
	Joyce Ngaiza	J-Ngaiza@DFID.gov.uk	DFID Governance Adviser	1200	DFID
	Innocent Mulindwa	imulindwa@worldbank.org 0772 510 676	World Bank GPE	1600	World Bank
Tuesday 24 November	Mariella Ruiz-Rodriguez	mruiz-rodriguez@usaid.gov		0900	USAID
	Innocent Mulindwa	imulindwa@worldbank.org 0772 510 676	World Bank GPE	1600	World Bank
Wednesday 25 November					Design team internal discussions
Thursday 26 November	Akim Okuni	akim.okuni@akfea.org 0772611881	AKF	0900	Plot 14, Prince Charles Drive, Kololo
	Paul Mullard Rabinah Mulwindwa Ivy	p-mullard@dfid.gov.uk R-Lukwago@dfid.gov.uk	DFID	1200	DFID
	Albert Ssimbwa	albertssimbwa@gmail.com	BRAC	2000	Emin Pasha Hotel

Annex 3 Ranking of the worst performing districts and other DP involvement

Uganda districts	Primary net enrolment rate (NER) by district, (2013)	Primary NER ranked (low NER = high rank)	Poverty headcount (2014)	Poverty headcount ranked (high headcount = high rank)	Antenatal care coverage rate (2014)	Antenatal care coverage ranked (low coverage = high rank)	Average rank (highest = worst, lowest = best)	'Orphan'	GPE	SHRP	LARA	UNICEF	QEI
Amudat	30	110	86	107	9	112	110	X				X	X
Kaabong	44	105	95	111	16	104	107			X		X	X
Adjumani	31	109	68	100	15	108	106	X				X	X
Moyo	26	112	62	94	10	111	106	X				X	X
Kotido	35	107	90	110	23	86	101		X			X	X
Nakapiripirit	32	108	85	106	22	89	101			X		X	X
Moroto	29	111	87	109	25	75	98			X		X	X
Napak	38	106	87	109	26	72	96			X		X	X
Amuria	69	97	46	72	12	109	93		X			X	X
Yumbe	48	104	63	95	25	77	92	X				X	X
Koboko	90	79	61	91	22	89	86	X				X	X
Amuru	84	86	76	105	33	46	79		X			X	X
Kitgum	93	74	74	104	30	58	79			X			
Bugiri	100	59	51	80	21	94	78		X				
Kole	112	45	53	83	18	101	76			X			
Kween	99	60	38	61	15	107	76	X				X	
Buvuma	160	6	97	112	10	110	76				X		
Pader	110	48	68	99	24	79	75			X		X	X
Namayingo	97	63	51	80	23	82	75		X			X	X
Ntoroko	62	101	28	31	21	93	75	X				X	
Bundibugyo	67	98	22	21	19	100	73		X				
Lamwo	94	72	67	98	34	44	71		X				
Kiryandongo	72	94	25	27	22	91	71	X					
Mayuge	103	57	45	71	24	79	69		X				
Luuka	112	45	37	56	15	106	69		X				
Alebtong	119	32	62	92	24	80	68		X				
Buhweju	76	91	21	20	21	93	68				X		
Kalangala	60	102	8	2	20	97	67				X		
Dokolo	95	70	56	88	35	42	67		X				
Masindi	64	100	42	64	37	35	66			X			

Source: DFID AND SHRP, December 2015

Annex 4 Calculations of private returns to the Uganda Early Grade Learning Programme

Calculations of private returns to Uganda Early Grade Learning Programme

	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	2036-37	2037-38	2038-39	2039-40	2041-42	TOTAL
P7 PRIMARY population (extrapolating 2013/2010 trend)	972,636	1,013,187	1,055,906	1,100,769	1,147,326	1,194,682	1,194,682	1,194,682	1,194,682	1,194,682	1,194,682	1,194,682	1,194,682	1,194,682	1,194,682	1,194,682	1,194,682	1,194,682	1,194,682	1,194,682	1,194,682	1,194,682	1,194,682	1,194,682	1,194,682	1,194,682	
BASELINE primary completion rate	59.2%	59.5%	59.7%	59.9%	60.1%	60.4%	60.6%	60.8%	61.1%	61.3%	61.5%	61.7%	62.0%	62.2%	62.4%	62.7%	62.9%	63.1%	63.3%	63.6%	63.8%	64.0%	64.3%	64.5%	64.7%	64.9%	
Baseline on numbers completing Primary (to P7)	576,052	602,388	630,204	659,500	690,020	721,236	723,971	726,706	729,441	732,176	734,911	737,646	740,381	743,116	745,851	748,586	751,321	754,055	756,790	759,525	762,260	764,995	767,730	770,465	773,200	775,935	
UEGL primary completion rate		59.5%	60.1%	60.7%	61.3%	61.9%	62.5%	63.1%	63.7%	64.3%	64.9%	65.2%	65.5%	65.8%	66.1%	66.4%	66.7%	67.0%	67.3%	67.6%	67.9%	68.2%	68.5%	68.8%	69.1%	69.4%	
UEGL numbers completing PRIMARY (P7)		602,388	634,122	667,669	702,792	738,968	746,137	753,305	760,473	767,641	774,809	778,393	781,977	785,561	789,145	792,729	796,313	799,897	803,481	807,065	810,649	814,233	817,817	821,402	824,986	828,570	
Additional numbers completing primary WITH UEGL		-	2,586	5,392	8,430	11,703	14,629	17,555	20,481	23,407	26,333	26,893	27,454	28,014	28,574	29,135	29,695	30,256	30,816	31,376	31,937	32,497	33,058	33,618	34,178	34,739	592,756
Baseline Primary graduate earnings (£mn)		38.262	40.029	41.889	43.828	45.811	45.984	46.158	46.332	46.506	46.679	46.853	47.027	47.200	47.374	47.548	47.722	47.895	48.069	48.243	48.416	48.590	48.764	48.938	49.111	49.285	1,162.51
UEGL Baseline Primary graduate earnings (£mn)		50.219	63.437	66.793	70.307	73.926	74.643	75.360	76.077	76.794	77.511	77.870	78.228	78.587	78.945	79.304	79.663	80.021	80.380	80.738	81.097	81.455	81.814	82.172	82.531	82.889	1,910.76
UEGL additional Primary Graduate earnings (£mn)		11.957	23.408	24.904	26.479	28.115	28.658	29.202	29.745	30.289	30.832	31.017	31.202	31.386	31.571	31.756	31.941	32.126	32.311	32.495	32.680	32.865	33.050	33.235	33.420	33.604	748.25
Additional numbers completing Secondary level		-	1,293	2,696	4,215	5,852	7,315	8,778	10,241	11,703	13,166	13,447	13,727	14,007	14,287	14,567	14,848	15,128	15,408	15,688	15,968	16,249	16,529	16,809	17,089	17,369	296,378
UEGL Increased Secondary graduate earnings (£m)		-	0.625	1.303	2.037	2.828	3.535	4.242	4.949	5.656	6.363	6.498	6.634	6.769	6.905	7.040	7.176	7.311	7.446	7.582	7.717	7.853	7.988	8.123	8.259	8.394	143.23
TOTAL UEGL ADDITIONAL BENEFIT		11.96	24.03	26.21	28.52	30.94	32.19	33.44	34.69	35.94	37.20	37.52	37.84	38.16	38.48	38.80	39.12	39.44	39.76	40.08	40.40	40.72	41.04	41.36	41.68	42.00	891.48

	Ass 20% get job						
	Ass 5% higher earnings pa due to better outcomes / learning						
317.58	Income of primary graduates/head						
	Ass 33% of primary graduates carry on to and complete secondary education						
	Ass 5% higher earnings pa						
				2009	**2014**	**2015**	**2016**
			US$	348	469.8	488.592	508.1357
			£	217.5	293.63	305.37	317.58

Annex 5 CBA (workings)

		Years																									
		2016-17	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**	**2024-25**	**2025-26**	**2026-27**	**2027-28**	**2028-29**	**2029-30**	**2030-31**	**2031-32**	**2032-33**	**2033-34**	**2034-35**	**2035-36**	**2036-37**	**2037-38**	**2038-39**	**2040-41**	**2041-42**	**TOTAL**
Cost of UEGL in £ million	**Costs**	2.00	6.00	9.00	8.00	6.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Increase in pupils completing primary (P7)	**Benefits**	602,388	634,122	667,669	702,792	738,968	746,137	753,305	760,473	767,641	774,809	778,393	781,977	785,561	789,145	792,729	796,313	799,897	803,481	807,065	810,649	814,233	817,817	821,402	824,986	828,570	
Increase in pupils completing secondary		-	1,293	2,696	4,215	5,852	7,315	8,778	10,241	11,703	13,166	13,447	13,727	14,007	14,287	14,567	14,848	15,128	15,408	15,688	15,968	16,249	16,529	16,809	17,089	17,369	
Monetary value associated with completing primary (£ mn)		11.96	23.41	24.90	26.48	28.12	28.66	29.20	29.75	30.29	30.83	31.02	31.20	31.39	31.57	31.76	31.94	32.13	32.31	32.50	32.68	32.87	33.05	33.23	33.42	33.60	**748.25**
Monetary value associated with completing secondary (£ mn)		-	0.62	1.30	2.04	2.83	3.54	4.24	4.95	5.66	6.36	6.50	6.63	6.77	6.90	7.04	7.18	7.31	7.45	7.58	7.72	7.85	7.99	8.12	8.26	8.39	**143.23**
Monetary value to completing both primary and secondary education (£mn)		11.96	24.03	26.21	28.52	30.94	32.19	33.44	34.69	35.94	37.20	37.52	37.84	38.16	38.48	38.80	39.12	39.44	39.76	40.08	40.40	40.72	41.04	41.36	41.68	42.00	**891.48**
	Time period	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	
Discount rate		0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	
		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
Discount rate 8%																											
Net present benefits		11.96	22.25	22.47	22.64	22.74	21.91	21.08	20.24	19.42	18.61	17.38	16.23	15.15	14.15	13.21	12.33	11.51	10.75	10.03	9.36	8.74	8.15	7.61	7.10	6.62	**371.62**
Net present costs		2.00	5.56	7.72	6.35	4.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**26.03**
Sum NPB		371.62																									
Sum NPC		26.03																									
NPV of Net benefit		**345.59**																									
Benefit/cost ratio		14.28																									
Net present value		9.96	16.70	14.75	16.29	18.33	21.91	21.08	20.24	19.42	18.61	17.38	16.23	15.15	14.15	13.21	12.33	11.51	10.75	10.03	9.36	8.74	8.15	7.61	7.10	6.62	**345.59**
RoR		0.190																									
Discount rate 10%																											
Net present benefits		11.96	21.85	19.86	19.69	19.48	19.21	18.17	17.16	16.19	15.24	14.34	13.15	12.06	11.05	10.13	9.29	8.51	7.80	7.15	6.55	6.00	5.50	5.04	4.62	4.23	**304.24**
Net present costs		2.00	5.45	7.44	6.01	4.10	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**25.00**
Sum NPB		304.24																									
Sum NPC		25.00																									
NPV of Net benefit		**279.24**																									
Benefit/cost ratio		12.17																									
Net present value		9.96	16.39	12.42	13.68	15.38	19.21	18.17	17.16	16.19	15.24	14.34	13.15	12.06	11.05	10.13	9.29	8.51	7.80	7.15	6.55						
RoR		0.185																									