



Evaluation of Results Based Aid in Rwandan Education - 2013 Evaluation Report

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upperquartile



Institute of Policy Analysis
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List of Acronyms

6YBE	Six-year basic education
9YBE	Nine-year basic education
12YBE	Twelve-year basic education
CBO Community	based organisation
CG	Capitation grant
CEFR	Common European Framework for Reference
CoE	College of education
CSO	Civil society organisations
DAC	Development Assistance Committee
DfID	Department for International Development
DP	Development partner
ECD	Early childhood development
EDPRS	Economic development and poverty reduction strategy
EfA	Education for All
EICV	Integrated Household and Living Conditions Survey (<i>Enquête Intégrale sur les Conditions de Vie des Ménages</i>)
ESSP	Education Sector Strategic Plan
GDP	Gross domestic product
HEART	Health and Education Advice and Resource Team
HMG	Her Majesty's Government
ICT	Information and communication technology
IF	Innovation Fund
MDG	Millennium Development Goals
MoU	Memorandum of understanding
MINEDUC	Ministry of Education
NGO	Non-governmental organisation
NISR	National Institute of Statistics of Rwanda
OECD	Organisation for Economic Cooperation and Development
P(1-6)	Grades 1-6 of primary education
PBR	Payment by results
PEA	Political economy analysis
PTA	Parent-teacher association
RBA	Results-based aid
RC	Results compact
REB	Rwanda Education Board
RESP	Rwanda Education Sector Programme
RWF	Rwandan francs
S(1-6)	Grades 1-6 of secondary education
SWAp	Sector-wide approach
TOC	Theory of change
TOR	Terms of reference
TSS	Technical secondary school
TTC	Teacher training college
TVET	Technical and vocational education and training
UK	United Kingdom
UNESCO	United Nations Educational, Scientific and Cultural Organization
US\$	United States dollar
VfM	Value for money

Glossary of Terms

The evaluation team has aimed to strike a balance in this report between providing sufficient detail so as to allow an assessment of the quality and breadth of the empirical work undertaken, and providing sufficient clarity so as to allow a non-specialist reader to understand the key messages in the report. In order to aid the non-technical reader a glossary of terms is provided below. Throughout the main body of the text, SMALL CAPITALS are used to denote that a term is explained in the glossary.

- **DIFFERENCED BIVARIATE REGRESSION** – Bivariate means the regression has only two VARIABLES: one DEPENDENT and the other INDEPENDENT. Differenced means that the levels of the variable are not used but rather the change (or difference) from one year to the next.
- **COEFFICIENT**– The estimated COEFFICIENT describes the strength of the effect that a one unit increase in the INDEPENDENT VARIABLE has on the DEPENDENT VARIABLE.
- **DEPENDENT VARIABLE** – In crude terms, the thing we are trying to explain.
- **DUMMY** – A VARIABLE which takes the value one when a condition is met, and zero otherwise. For example, a year DUMMY for 2012 takes the value one when the year is 2012, and zero otherwise. In this example, the COEFFICIENT would measure the effect of it being 2012 relative to the base year.
- **INDEPENDENT VARIABLE(s)** - In crude terms, the thing(s) we are using to explain the DEPENDENT VARIABLE.
- **OBSERVATION** – One data point. If we have data on the population of each Rwandan district for one year, we have 30 OBSERVATIONS. If we have it for two years, we have 60 OBSERVATIONS.
- **OUT-OF-SAMPLE Prediction** – This helps us test the accuracy of our model. We first run the model on a subset of data, deliberately excluding some OBSERVATIONS (specific years or districts). We then use those COEFFICIENTS to ‘predict’ the excluded OBSERVATIONS. We can then compare the prediction with the known outcome.
- **SIGNIFICANT** – The measure of how likely it is to see an effect purely through chance. To be SIGNIFICANT at the 1% level means that once in 100 times you would see the effect and it would purely be due to chance. The other typical significance levels used are 5% and 10%. The smaller the level of significance, the more confidence the evaluator can have in the evidence.
- **SPECIFICATION** – The list of INDEPENDENT VARIABLES included in a specific model and the type of estimation technique used.
- **VARIABLE** – An indicator or measurement, such as population or teacher numbers.

Executive Summary

Introduction

Upper Quartile in association with the Institute of Policy Analysis and Research (IPAR-Rwanda) have been commissioned by the UK Department for International Development (DFID) to undertake a **mixed-methods process and impact evaluation of the results-based aid (RBA) pilot in Rwandan education (2012-2014)**, considering if, how and in what circumstances the RBA pilot has contributed to the results envisaged in the Memorandum of Understanding (MoU) agreed between DFID and the Government of Rwanda (GoR).

The findings presented in this report relate to 2012, the first year of implementation of the three-year RBA pilot.

Purpose of the evaluation

The main purpose of the evaluation is to determine any contribution of the RBA pilot to additional learners completing key stages in primary and secondary education¹ and additional teachers becoming competent in the use of English as the medium of instruction.²

The evaluation considers the response of the recipient and other key actors to RBA; the influence of the various interrelated factors that impact on the achievement of the two agreed results; identifies ‘lessons learned’ about how to improve the RBA pilot in Rwandan education, about the effectiveness of RBA more generally as a funding mechanism and how RBA may be transferred to other contexts.

Methodology

The methodological approach adopted is that of ‘realist evaluation’; setting out to explore key

¹ ‘Completion’ is defined in the RBA agreement between the GoR and DFID in terms of additional learners sitting key stage examinations in the sixth grade of primary school (P6) and the third and sixth grades of secondary school (S3 and S6).

² A baseline survey of teachers’ proficiency was undertaken by the British Council in 2012 and evidence regarding improvement in proficiency in English will be available in 2014. At the time of writing, the level of proficiency that teachers must attain in order for RBA payments to be effected by DFID to the GoR is still to be formally defined.

questions about what works, for whom, in what circumstances and why.

In an agreed departure from the TOR, the framework for research and analysis is provided by a set of seven macro-evaluation questions developed and agreed by key members of the Upper Quartile evaluation team, the DFID Rwanda Education Adviser and the DFID Lead on Payment By Results (PBR) Approaches. The macro evaluation questions are:

Impact-related questions:

- What has been achieved?
- Has the RBA approach contributed to impact in relation to the envisaged results?
- What factors have impacted on the achievement of the RBA results?
- Has value for money been achieved?

Process-related questions:

- How is the RBA approach perceived in Rwandan education?
- How did government respond to RBA?
- What lessons have been learned to inform RBA in Rwanda and elsewhere?

To achieve its purpose, the evaluation has employed a combination of secondary research, in-depth qualitative research and econometric modelling. The mixed-method approach is summarised below:

Method	Purpose
Context mapping and political economy analysis	Detailed look at the context in which RBA is being implemented providing insights into progress and barriers to progress with respect to completion and teachers’ competence in English.
National level key informant interviews	Exploring how RBA is perceived by stakeholders, and how key players, notably MINEDUC and REB, have responded to RBA.
Econometric modelling	Quantitative modelling exercise drawing on national level secondary data sources to identify any effect of RBA over and above what may have been expected (in terms of completion) in the absence of RBA.
Qualitative fieldwork - district, sector and school-level	In-depth structured interviews, focus group discussions and classroom observations to understand what is happening ‘on the ground’ in relation to the agreed RBA results, i.e. opening the ‘black box’.

Introduction to RBA in Rwanda

Results Based Aid (RBA), while far from a new concept, is an innovative approach to development assistance premised on an aid partnership between a donor and a partner government. This approach, essentially a payment by results (PBR) mechanism, is favoured by the UK Government and is apparent across many strands of public policy.

PBR is a form of financing that makes payments contingent on the verification of results achieved. PBR has three defining features:

- Disbursements tied to the achievement of clearly specified results;
- Recipient discretion – the recipient has space to decide how results are achieved; and
- Robust verification of results as the trigger for disbursement.

The RBA pilot in Rwandan education forms part of DFID's Rwanda Education Sector Programme (RESP). RESP is embedded in GoR's Education Sector Strategic Plan (ESSP) which is clearly aligned with Rwanda's Economic Development and Poverty Reduction Strategy (EDPRS), within which sector policies and strategic plans operate, and Vision 2020; the Government vision to transform Rwanda by growing social capital, fostering wealth creation, entrepreneurship, the development of the knowledge economy, regional and international economic integration.

Discussion of key findings and recommendations

Impact-related findings

The evaluation finds that, in year one, the RBA pilot **did not make a significant contribution to the observed increase in completion in 2012** (14,371 additional female students and 3,742 males), for which a payment of approximately £1.16 million was made by DFID to the GoR in May 2013.³

The impact of the RBA pilot on teachers' proficiency in English will be fully evaluated in

³ After a robust and independent assessment of GoR's completion data.

2014. However, at present there is **cause for concern arising from the low level of teachers' English language proficiency**, which is likely to have a detrimental impact on the quality of education and, in turn, on completion. The baseline survey undertaken in 2012 shows that the vast majority of teachers surveyed (93.5%) currently possess only a basic level of English language proficiency. This includes just under 40% who are considered 'beginners'.

In the opinion of the evaluation team it is **too early in the implementation of the RBA pilot to expect results or to assess value for money** of the pilot from DFID's perspective. A possible contributing factor in the lack of impact to date is the late completion of the RBA agreement in October 2012⁴, which may suggest that for most of the first year of implementation the GoR could not take additional actions (above and beyond those already planned) to improve achievement against the two results that were eventually included in the agreement.

Examination of the factors impacting on completion shows that while the provision of free education has led to substantial improvements in access to primary and secondary schooling, the **poor quality of education** is at the heart of factors impacting negatively on completion at key stages of primary and secondary education. At the primary school level the estimate of survival to primary school completion is only 52%, and many children are spending six or more years in primary school but not completing.

Poverty is an indirect cause of non-completion, as parents in the poorer consumption quintiles are only able to pay much smaller financial contributions to schools than those in the wealthiest; this impacts negatively on the quality of education that schools are able to provide.

Increases in the number of teachers have had a positive effect on completion, but

⁴ Throughout the report, the 'RBA agreement' refers to the October 2012 annex to the Memorandum of Understanding signed between the GoR and DFID in August 2011. The October 2012 annex set out the agreed results against which RBA payments would be effected.

attention is needed to improve teacher morale and attendance and their proficiency in English. The positive effect on completion of increases in teacher numbers is in all likelihood weakened by such factors, which impact negatively on the quality of education provided.

Examination of the factors impacting negatively on equity in completion shows that **the category of children at greatest risk of never attending school is the disabled**; specifically the mentally disabled. This factor is likely related to inadequate teacher training and insufficient numbers of teachers specifically trained to cater for learners with disabilities (an aspect of educational quality).

Although the general picture in relation to gender equity in Rwanda is positive, the GoR may need to consider the provision of **targeted support for female learners who are at greater risk of non-completion in certain types of district** – those with low levels of literacy and those with high proportions of schools experiencing problems that are largely related to poor availability of teaching resources. The positive effect of female teachers on female learners' completion at the primary level is another factor to be noted by the GoR.

Process-related findings

GoR's response to the RBA agreement has been very positive, with strong messages being sent down through the system regarding both completion and teachers' proficiency in English. RBA has prompted the strengthening of this message.

The evaluation found a **high level of government ownership** of the RBA agreement and good strategic alignment of the RBA agreement with existing government priorities – in line with the Paris Declaration on Aid Effectiveness (OECD, 2005).

The evaluation considers that the RBA pilot, which is **highly relevant to the target groups** (learners and the broader Rwandan society, the GoR and DFID), should be sustained in its current form.

The key findings are presented in Table E1.

As this report is intended to be a concise account of the year one evaluation, further information is contained in a separate annex for readers who wish to examine the basis for the findings and recommendations in more detail.

The evaluation going forward

A second evaluation report will be produced in 2014 corresponding to the second year of RBA implementation (2013). A final evaluation report will be produced in June 2015 covering the whole RBA implementation period.

In the 2014 report the evaluation team believe that it will be possible to assess value for money for DFID, either in relation to (hypothetically) no aid being provided or in relation to broader sector support.

The evaluation team also believe that it will be possible to increase the accuracy of the econometric model for next year's report by obtaining a small amount of extra data, in particular at the secondary school level for years prior to 2011.

Based on the 2013 findings, new emphases in the evaluation questions are planned for the 2014 evaluation, such as examining more closely the effect on completion of changes in the availability of teaching resources, the effect on the quality of education of reducing repetition and the new GoR strategy to improve teachers' proficiency in English (under development at the time of writing).

Adjustments to the evaluation questions and approach will be presented in the work plan for 2014 and thoroughly discussed with DFID.

Table E1 – Evaluation findings and recommendations

Finding 1	While there has been strong annual growth in completion at all three key stages (P6, S3, S6), in its first year of implementation RBA has not SIGNIFICANTLY increased the number of examination sitters.
Finding 2	While the progressive introduction of free education has increased access to education, repetition is a significant issue to address in Rwanda. Repetition at the primary school level does not simply defer examination sitting but SIGNIFICANTLY diminishes the likelihood that it happens at all.
Finding 3	The poor quality of education (in which inadequate teaching resources are an important factor) is leading to excessive repetition; this is an important factor impacting negatively on completion which requires more in-depth investigation in 2014.
Finding 4	At both the primary and secondary levels, schools in poorer communities are less able to raise financial contributions from parents to supplement the capitation grant, which impacts negatively on the quality of education they can offer; at the secondary school level the econometric modelling exercise found a SIGNIFICANT negative relationship between poverty levels and completion, possibly because implementation of fee-free secondary education is still under way.
Finding 5	There is a SIGNIFICANT negative impact on completion in districts with a higher proportion of schools identified as having problems related to teaching resources and infrastructure, and in districts with lower literacy levels.
Finding 6	The presence of female teachers has a stronger effect on completion for female students than male teachers (perhaps through raising aspirations for female students).
Finding 7	Female students have substantially more serious hurdles to overcome in order to complete in districts that have a higher number of schools identified as having problems related to teaching resources and infrastructure, and in districts with low literacy levels.
Finding 8	Disabled children are in the highest category of risk of never attending school, let alone completing key stages of education.
Finding 9	The RBA agreement between the GoR and DFID is highly relevant in the Rwandan context; the lack of emphasis on the quality of education is understandable given the need to focus on indicators for which it is possible to provide readily available data. It has not been possible at this early stage in the RBA pilot to determine what the distinctive key features of the approach are in the Rwandan context, save to say that it shares the common features of PBR approaches.
Finding 10	Awareness of and government ownership of RBA as a funding mechanism is high at national level, and the mechanism has been very positively received; a minority view is that the emphasis on completion may militate against quality education. There is strong qualitative evidence of a very positive response to RBA on the part of the GoR and an intensification of the RBA message around completion from the GoR to districts and schools; as yet there is no evidence of new policies or strategies as a direct result of RBA or of changes in the organisational culture of the GoR, which was perceived to be results-oriented prior to the introduction of RBA.
Finding 11	There is little awareness of RBA as a funding mechanism at district and school levels, but there is a high degree of awareness of government priorities regarding completion and the importance of teachers' proficiency in English; and evidence of practical strategies at these levels to improve both completion rates and the use of English in the classroom.
Finding 12	GoR has responded to the RBA incentive in a manner that counteracts possible perverse incentives by insisting that students enrol and attend school in order to qualify for sitting the key stage examinations (P6, S3 and S6).

1 Introduction and Background

1.1 Introduction

Upper Quartile in association with the Institute of Policy Analysis and Research (IPAR-Rwanda) are pleased to submit this first year report of the evaluation of the Results Based Aid (RBA) in Education pilot in Rwanda. The findings presented relate to 2012, the first year of implementation of the RBA pilot. This report is presented to the Government of Rwanda (GoR) and the UK Department for International Development (DFID).

1.2 Evaluation purpose and scope of work

1.2.1 Evaluation purpose

Upper Quartile has been tasked with undertaking a rigorous evaluation of the RBA pilot in the Rwandan education sector, with a dual focus on both the process and impact of the pilot. The main purpose of the evaluation is to determine the extent to which the RBA pilot has led to increased levels of educational results in comparison to what would have happened in the absence of the RBA intervention. In addition, the evaluation will identify 'lessons learned' about the processes and approaches employed to achieve the observed results. Specifically, the evaluation involves:

- **A process evaluation** to identify the recipient's, and other key actors', response to RBA; and
- **An impact evaluation** to assess if, and in what ways, the RBA pilot has contributed to increased educational results (any observed increase in the numbers of students completing P6, S3 and S6) and increased numbers of teachers competent to use English as the medium of instruction.

Notwithstanding some minor deviations, agreed in full with DFID and discussed at the relevant points in this report, the evaluation terms of reference (TOR) remain valid in guiding the delivery of the evaluation. These are attached to this report as Appendix 1.

1.2.2 Scope of work

The evaluation focuses specifically on the RBA pilot, considering if, how and in what circumstances the pilot has contributed to observed changes. However, it is noted that RBA is embedded in DFID's wider Rwanda Education Sector Programme (RESP) and, while this is not intended to be an evaluation of the RESP, it is necessary to make some overall assessment of RESP and the contribution of RBA within it. The evaluation adheres to OECD-DAC evaluation criteria and standards.

1.2.3 Evaluation questions

The first substantive task of the work programme was the development of specific questions to be explored through the evaluation. This was an iterative process which took place during the course of the first week of the inception phase in April 2013. It involved key members of the Upper Quartile evaluation team, the DFID Rwanda Education Adviser and the DFID Lead on Payment By Results (PBR) Approaches. A set of seven macro-evaluation questions was agreed. These were supplemented by a number of sub-questions designed to focus on specific aspects of RBA's performance under each of the main questions. The final evaluation question set offers a balance between areas of interest to DFID Rwanda and DFID's central PBR function.

1.2.4 Evaluation timing

The evaluation is being undertaken in two stages. The inception phase was completed between April-July 2013 with the evaluation implementation phase running from July 2013 – June 2015. The second annual report of the evaluation will be submitted in December 2014 and the final report in June 2015.

1.2.5 Evaluation audiences

The evaluation has a number of key audiences and the evaluation findings will be used in different ways by each. It is envisaged it will be used:

- By the **GoR** including, **MINEDUC** to refine education policy, and by the **Rwanda Education Board (REB)** to refine the approach to implementation of the RESP, develop and refine strategies to increase the numbers of learners completing P6, S3 and S6 and to enhance teachers' competence in English;
- By **district and sector officials and village leaders** with responsibility for education 'on the ground' and by **school principals** to refine their approach to achieving the two envisaged RBA results;
- By **development partners of the GoR** in developing and implementing programmes that are likely to impact on the two envisaged RBA results;
- By **DFID-Rwanda (DFID-R)** to learn lessons from the implementation of RBA and thereby to enhance its support to the education sector in Rwanda; and
- By **DFID and the wider development community** globally to improve understanding of how RBA can best be designed and implemented in other contexts.

1.2.6 Transparency and lesson learning

In line with DFID guidelines (DFID, 2013a), which refer to the need to fill knowledge gaps and to improve the effectiveness of aid delivery, the RBA evaluation findings and recommendations are intended to generate lessons to improve RBA in Rwandan education, improve RBA designs more generally and contribute to satisfying the principle of transparency.

1.3 The political and economic context of the RBA agreement

1.3.1 The importance of education in development in Rwanda

Post 1994 the political situation in Rwanda has stabilised and the country has seen substantial economic growth; per capita GDP having increased by more than 160% since 2000 (Abbott *et al* 2013; World Bank 2013).

Vision 2020 (Ministry of Finance and Economic Planning 2000a) was formally adopted by the Government of Rwanda in 2000 with the aim of transforming the country from a poor, post-conflict country into a thriving, socially inclusive middle-income one. Education is one of the pillars of Vision 2020, charged with building the human capital required for economic development. The GoR has taken strong ownership of development support in the education sector, skilfully exerting leverage and bringing its negotiating capital into play. The sector was the first to introduce a sector-wide approach (SWAp), doing so in 2006. As a result Rwanda has made impressive progress in increasing access to basic education and now boasts one of the highest primary school enrolment rates in Africa. This is largely attributable to the progressive introduction of free primary and secondary education.

A succession of documents has set out GoR's approach to education. The most recent of these is the Education Sector Strategic Plan (ESSP) 2013/14 - 2017/18 (Ministry of Education, 2010a). The current ESSP has three strategic objectives:

- Promoting access to education at all levels;
- Improving the quality of education and training; and
- Strengthening the relevance of education and training to meet labour market demands.

In addition, increased access to preschool education is seen as important in ensuring that children are ready for school, thereby reducing repetition rates and drop-out and increasing completion. Improving the quality of education, ensuring that there are well qualified and motivated teachers competent to teach through the medium of English, and increasing equitable access to education for children with special educational needs are also seen as key to improving completion. These factors form the backdrop against which the RBA intervention has been agreed, and illustrate that the results envisaged in the RBA agreement are highly relevant in terms of government policy in education.

1.3.2 Structure of the education sector in Rwanda

In line with GoR policy, management of the education system has been decentralised with many functions transferred to the districts, sectors, schools and communities. At the same time a specialised agency, the Rwanda Education Board (REB), has taken on responsibility for the functions that remain at the central level, and the Workforce Development Authority (WDA) is responsible for addressing the skills development challenges facing the country across all sectors of the economy. The key divisions of responsibility in education are set out in Table 1.

Table 1: Roles and responsibilities in education

Organisation	Responsibility
The Ministry of Education	Policy and strategy formulation; national monitoring and evaluation
The Rwanda Education Board (REB)	Professional teacher management; the organisation of national examinations; curriculum development; higher education student funding
The Workforce Development Authority (WDA)	Strategic response to the skills development challenges facing the country across all sectors of the economy.
Districts	Service delivery and oversight of schools in conjunction with Sector Education Officers (the latter responsible for primary schools)
Cells (administrative units between villages and sectors)	Educational needs assessment; mobilising the community to construct and maintain schools; encouraging parents of out-of school children to send them back to school
Schools	Provision of books, teacher manuals and classroom equipment etc (using capitation grant); administration of the Teacher Motivation Allowance.
Parent Teacher Committees	Oversight of school management, including financial management

Accountability in Rwanda is managed through the *imihigo* performance contracts, which are agreed between districts and the government, and which are monitored and assessed every quarter. As the evaluation of RBA, in subsequent sections, shows, this performance management system is highly relevant to the implementation of the RBA agreement as *imihigo* is the primary results-based policy mechanism of the GoR.⁵

1.3.3 Financing education in Rwanda

To understand the financial context in which RBA is being implemented, it is important to note the budget allocation, and key changes in this allocation, at different levels of the education system. Since 2007 education in Rwanda has been allocated between 15-17% of the government budget. This is lower than the 20% target set by EDPRS-2 (Ministry of Finance and Economic Planning 2013a) and at the lower end of that recommended by the Oslo Declaration (UNESCO, 2008).

Historically primary education has been allocated the largest share of the education budget but recently there has been a sharp decline from approximately 42% in 2010-11 to 26% in 2013-14. Conversely, spending on secondary education has increased from approximately 18% in 2003 to 36% in 2013-14. Over the implementation period of the ESSP (2012-13 to 2017-18) the proportion of the budget allocated to primary education is set to decline to 24%, and for general senior secondary to decline from 14% to 9%. Increases are planned for junior secondary (from 20% to 23%) and TVET (from 11% to 22%). The increase in the proportion of the budget allocated to secondary education is thus largely intended to fund the expansion of junior secondary education (an important element in the RBA agreement) following the introduction of nine-year basic education (9YBE) (Ministry of Education 2013).

⁵ Imihigo is a key planning tool for ensuring that all Rwandans are working to achieve key government priorities. Every year the districts and the government agree performance targets, which are reviewed at the end of the year at a public ceremony chaired by the President. Performance contracts are also agreed between individuals and village leaders, with villagers agreeing how they can, as individuals and working together, achieve government priorities. Village leaders also agree performance contracts with sector leaders. All government employees and all government organisations also sign performance contracts.

In the current ESSP budget the proportion of funding allocated to teacher training (at certificate and diploma level) declines from just under 2% in 2012-13 to 1% a year thereafter, but a budget for the pre-service training of TVET trainers is included in the TVET budget from 2014-15 (Ministry of Education 2013).

As a result of budget reallocations, double-shifting will continue in all primary schools and will be extended to TVET schools. This reduces the infrastructure and the number of teachers and trainers required to meet demand. However, MINEDUC acknowledges that this is a reversal of the previous policy of phasing out double-shifting by 2015 (Ministry of Education, 2013) and may reduce the quality of education provided.

Parents are key stakeholders in the Rwandan education system as they incur both direct and indirect costs of education, including labour for the construction of classrooms required to accommodate the increased numbers of pupils, and by supplementing the capitation grant (CG). In 2008 it was estimated that parents met 45% of the costs of education – 29% at primary level; 59% at junior secondary level; 68% at senior secondary level; and 40% at higher education level (World Bank/International Bank for Reconstruction 2011). These averages are however deceptive as parental contributions can form a substantial part of the income for schools in more affluent urban areas. The inability of parents in poor rural areas to make similar contributions has created significant inequalities in the quality of education (Paxton and Mutesi 2012). Schools are under pressure to seek additional funding from parents because the CG (US\$10) is well below the US\$16-19 needed to provide the minimum level of inputs, and the US\$33-37 needed for a desirable level of inputs (UNESCO, 2008⁶). As this evaluation reports in subsequent sections, the difference in income levels between rural and urban schools is an important factor impacting on the quality of education and, in turn, on completion.

1.4 Introduction to Results Based Aid (RBA)

Failure to deliver tangible results is a recurring criticism of development assistance. Indeed there is now international recognition, illustrated by the Paris Declaration on Aid Effectiveness (OECD, 2005), that progression towards the Millennium Development Goals (MDGs) requires *better aid* and *not just more aid*. This, coupled with recent scrutiny of international development budgets, has increased the drive for donors to evidence the impact of their development spend, maximising economy, efficiency and effectiveness and ensuring accountability to tax payers.

Results Based Aid (RBA), while far from a new concept, is an innovative approach to development assistance premised on an aid partnership between a donor and a partner government. This approach, essentially a payment by results (PBR) mechanism, is favoured by the UK Government and is apparent across many strands of public policy (Cabinet Office, 2013).⁷

PBR is a form of financing that makes payments contingent on the verification of results achieved. It may take the form of Results Based Finance (RBF) (which makes payments directly to service providers for results achieved, for example to clinics for an agreed number of vaccinations), or Results Based Aid (RBA) (which makes payments to government for results achieved, as is the case in the RBA pilot in Rwandan education). Whichever form it takes, PBR has three defining features (DFID, 2013b):

- **Disbursements tied to the achievement of clearly specified results** - payment for outcomes, rather than payment for inputs or processes;

⁶ These are global figures (not specific to Rwanda) that exclude the cost of teachers' salaries and are therefore at least roughly comparable to the CG. The difference between the CG in Rwanda and the per capita funding recommended globally by UNESCO (2008) is thus indicative of (but not strictly evidence of) a quite serious shortfall in government funding of Rwandan schools. (The evaluation team acknowledges that the comparison is further complicated by the fact that global estimates are necessarily not attuned to local market prices.)

⁷ DFID is in the process of developing a strategy for PBR; the definition contained in this section, while correct at the time of writing, is therefore subject to change.

- **Recipient discretion** – the recipient has space to decide how results are achieved, thereby increasing the scope for innovation in how results are achieved; and
- **Robust verification** of results as the trigger for disbursement. This should be undertaken independently of the recipient.

The key concepts that underpin Payment By Results (PBR) globally, and DFID's approach to the design and implementation of PBR initiatives (including RBA in Rwandan Education), are presented in detail in the evaluation Inception Report (Upper Quartile, 2013). In the interests of brevity these are not repeated here. Key points from this inception phase discussion are as follows:⁸

- PBR is highly context dependent and is not a suitable aid instrument in all environments;
- One of the main benefits of PBR (and more specifically RBA) from DFID's perspective is that it increases scope for innovation in comparison to traditional funding mechanisms;
- From an evaluative perspective it is important for providers of PBR (such as DFID) to learn about how innovation may translate into incentives, processes, and subsequently, results;
- Given that PBR is a relatively recent aid modality in the development context, the instrument is not without its risks, for example the creation of perverse incentives. Setting the reward at the correct level is a way to mitigate risk;
- Agreeing an optimal incentive is only one part of the value for money (VfM) equation, the other is determining a payment structure that rewards progress in a way that is considered fair by the recipient; and
- Determining the incentive level and payment structure is one of the most technically complex parts of PBR design.

1.5 RBA in Rwandan education

1.5.1 The position of RBA in the wider policy context

The RBA pilot forms part of DFID's £74.98 million Rwanda Education Sector Programme (RESP) (DFID, undated). The RESP is embedded in the GoR's Education Sector Strategic Plan (ESSP) (Ministry of Education, 2013), the sector wide approach (SWAp) that is currently guiding all education sector planning and spending in Rwanda. RBA results are related to the priorities of the ESSP.

Looking at the wider policy context, the ESSP is clearly aligned with Rwanda's Economic Development and Poverty Reduction Strategy (EDPRS-2) (Ministry of Finance and Economic Planning, 2013), within which sector policies and strategic plans operate, and Vision 2020 (Ministry of Finance and Economic Planning, 2000a) – the government's vision to transform Rwanda by growing social capital, fostering wealth creation, entrepreneurship, the development of the knowledge economy, regional and international economic integration.

1.5.2 Development and implementation of the RBA pilot

Development and implementation of the RBA pilot involved complex discussions over the course of 2012. The outcomes of these discussions are encapsulated in the Memorandum of Understanding (MoU) between the GoR and DFID (DFID and the GoR, 2012).

It was agreed in October 2012 that the overall budget for the RBA pilot would be up to a maximum of £9 million and that the expected disbursement schedule would be up to a maximum of £3 million per year for three years from 2013 (with the first payment being allocated to results achieved in 2012). It was later agreed that any shortfall in a given payment year could be rolled over to subsequent years.

The RBA pilot is intended by DFID to help drive change in the education sector in ways that are agreed government priorities. RBA is additional funding for GoR designed to incentivise both improvements in student completion at key stages and improvements in teacher competency in English. The extent to which RBA is able to do this will depend largely on the adequacy of funding

⁸ For further information on PBR see: Center for Global Development (2010), Pearson (2011), Birdsall and Savedoff (2011), Cabinet Office (2013), Perrin (2013) and DFID (2013a, draft).

allocated to the education sector (specifically to schools) and the influence that DFID and others are able to exert on the government to invest in strategies designed to improve completion and teacher competence in English.

The evaluation Inception Report (Upper Quartile, 2013) contains a detailed discussion charting the process by which the RBA was agreed and implemented. The final GoR-DFID agreement (DFID and the GoR, 2012) stipulated that RBA payments would be effected as follows:

- For each additional child sitting the P6 exam above the previous year's results, DFID will pay the GoR £50. In addition to this payment, in years 2014 and 2015, DFID will also pay the GoR £10 for each additional child sitting the P6 examination above 2011 levels;
- For each additional child sitting the S3 exam above the previous year's results, DFID will pay the GoR £100. In addition, in years 2014 and 2015, DFID will also pay the GoR £10 for each additional child sitting the S3 examination above 2011 levels;
- For each additional child sitting the S6 exam above the previous year's results, DFID will pay the GoR £50. In addition, in years 2014 and 2015, DFID will also pay the GoR £10 for each additional child sitting the S6 examination above 2011 levels; and
- In 2015 DFID will pay the GoR £50 per additional teacher competent to use English as the medium of instruction. This will be based on a baseline assessment conducted by the GoR in 2012 and a follow-up assessment conducted by GoR in 2014. Any payment due will be made in 2015 based on independently verified results and subject to available funds within the £9 million three year ceiling.

All of the above payments are subject to the independent verification of the results.⁹ The first verification exercise, undertaken in 2013, produced positive findings related to completion based on examinations data (cross-referencing REB data¹⁰ with school-based data). The first payment to the GoR (for results achieved in 2012) was made in May 2013. The value of the payment was approximately £1.16 million. This is discussed further in Chapter 3, where it is also noted that payments are calculated at the district level and by gender, and that negatives (decreases in numbers of examination sitters) are omitted from the calculation.

The British Council 2012 survey of proficiency in English, involving a sample of 600 teachers, will only become relevant for the purpose of a RBA payment when the 2014 survey is conducted. Subject to the independent verification of results, a payment will be effected by DFID in 2015.

1.6 The structure of the evaluation report

Chapter 2 of this report presents Upper Quartile's mixed-methods approach to the evaluation, setting out the purpose and nature of the quantitative and qualitative research. In Chapter 3 the report presents evaluation findings based on thorough analysis of the datasets obtained through this mixed-methods approach. Chapter 3 concludes by mapping the evaluation findings to the RESP theory of change (TOC). Chapter 4 provides a synthesis of the findings and related recommendations. Chapter 5 presents a brief discussion of issues for the evaluation to consider going forward.

This report is intended to be a concise account of the year one evaluation; further information is contained in appendices and a separate annex report for readers who wish to examine the basis for the findings and recommendations in more detail. Two appendices are contained in this report – Appendix 1 presents the evaluation terms of reference and Appendix 2 the list of persons interviewed in the course of the qualitative fieldwork. Presented in a separate annex report are:

- Annex 1: a political economy analysis;
- Annex 2: the econometric modelling paper;
- Annex 3: the qualitative research instruments;
- Annex 4: the qualitative dataset; and
- Annex 5: in-depth report on the qualitative research.

⁹ Independent verification is being undertaken by Cambridge Education.

¹⁰ Data provided by the Examinations and Accreditation Department of the REB.

2 Methodology

2.1 Introduction

The evaluation Inception Report (Upper Quartile, 2013) submitted in July 2013 provides a detailed description of the methodology adopted. This is summarised below.

2.2 Methodological approach

2.2.1 Realist evaluation

The methodological approach to the evaluation of RBA in Rwandan education is that of 'realist evaluation'. Realist evaluation, drawing on the work of Pawson and Tilley (1997), is grounded in the realist philosophy which posits that the material and the social worlds are 'real' and can have real effects. Realist evaluation recognises the complexity of interventions in the social world and therefore the difficulty of isolating the impact of a single intervention.

Realist evaluation is an explanatory quest, setting out to provide findings for the purpose of refining the intervention, improving it and indicating how it might be transferred to other contexts. It does not assume that there will be a simple answer to the question about whether or not outcomes have been achieved. Instead, it seeks to explore what works, for whom, in what circumstances and why. Three key points to note about the realist approach, which have informed the methods used in the evaluation of RBA are:

- Understanding that the programme is embedded in an on-going social context – RBA may be an effective incentive in some contexts and not in others;
- The intervention requires the active participation of stakeholders – the evaluation approach takes account of the different characteristics of stakeholders, and recognises that outcomes may differ based on these. As programmes only work through stakeholder reasoning, the evaluation must try to understand the way in which the RBA pilot is interpreted by different stakeholders and how this influences their activities and pursuit of outcomes; and
- The programme cannot be isolated or kept constant – the evaluation approach recognises change as a continuous process. The evaluation must seek to understand how observed changes in learner participation and completion come about in a dynamic system.

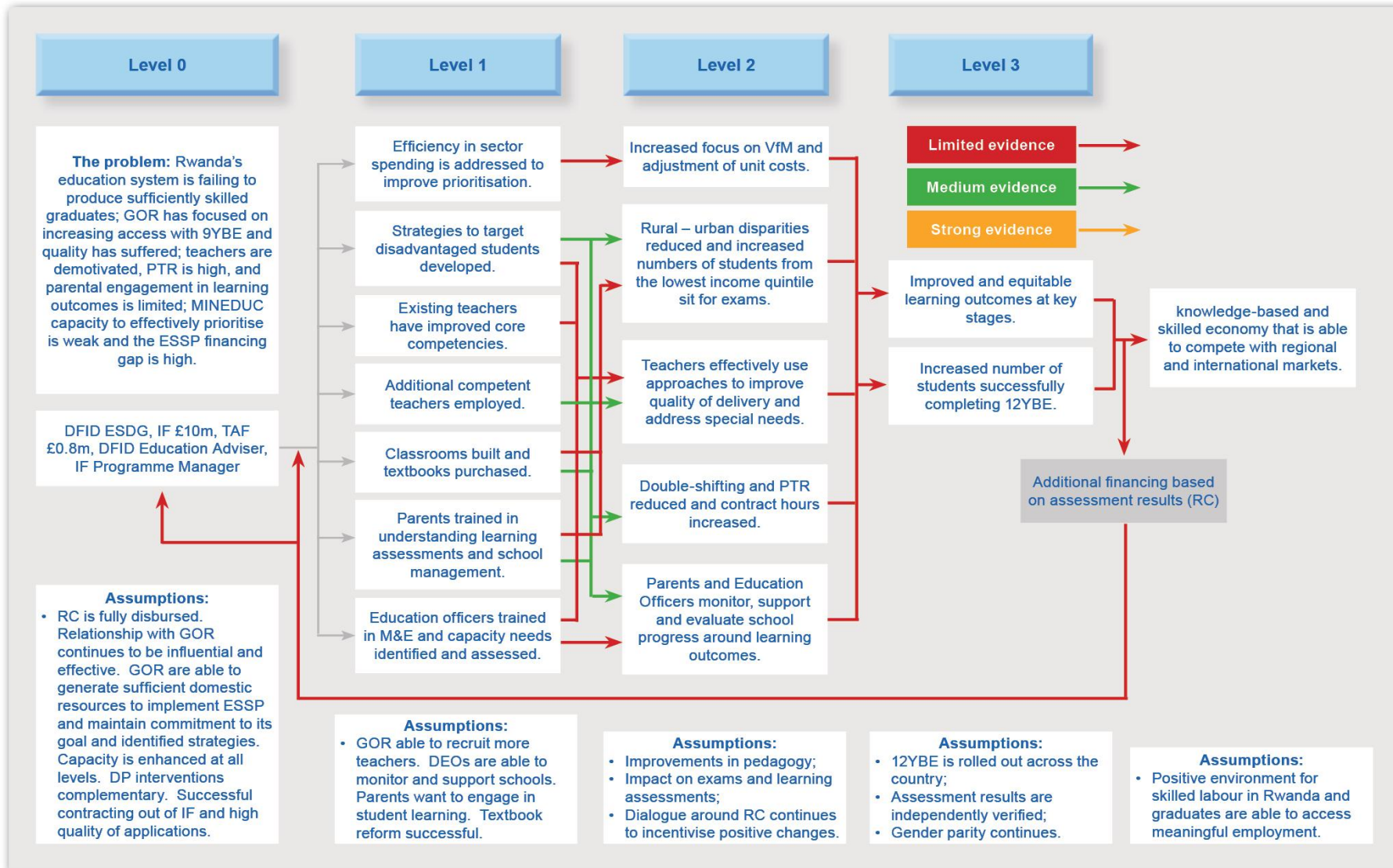
2.2.2 The relevance of the RESP theory of change

The realist approach to evaluation frames programmes as 'theories incarnate'; programmes are essentially testing a theory (or theories) about what might bring about change. In the case of the RBA pilot, the relevant theory of change (TOC) is that of the wider RESP (Figure 1). While this is not an evaluation of the RESP, it is necessary for the evaluation to refer to the RESP TOC when considering context, mechanisms, outcomes and impacts, and to assess if, how and in what circumstances the RBA pilot has contributed to intended RESP outcomes.

The evaluation team notes that the TOR (Appendix 1) require that the evaluation service provider "should use the current RESP theory of change model as a framework as this reflects the Government of Rwanda's thinking on how educational results will be delivered in the country". The approved evaluation inception report modified this requirement, offering seven macro evaluation questions (see section 2.2.3 below) as an alternative framework for analysis. There are two reasons why an alternative framework for analysis is considered necessary:

- There is no RBA-specific TOC; and
- There is a fundamental tension between RBA and the TOC approach as described by DFID (see DFID, 2013a), as PBR interventions are characterised by recipient discretion (the 'black box' referred to in the TOR, included at Appendix 1).

Figure 1 – The RESP Theory of Change



The evaluation questions are preferred as an alternative framework for analysis for reasons related to the points above. Primarily, if there was an RBA specific TOC, it would by definition not contain Level 1 or Level 2 outcomes (see Figure 1), as these are subject to recipient discretion.

For example, in response to RBA, the GoR might decide not to train parents in understanding learning assessments and school management (a Level 1 outcome in the RESP TOC) or to reduce double-shifting (a Level 2 outcome in the RESP TOC) as a means to achieve the agreed results. A radical example of recipient discretion is that the recipient might, hypothetically, find it easier to increase the number of completers (defined in this case as examination sitters) in urban areas, in contrast to the Level 2 outcome in the TOC that relates to reducing rural/urban disparities. This would be an example of a perverse incentive created by RBA.

Nevertheless, it may be deduced that a RBA-specific TOC would contain the following (see also Figure 2):

- The RBA incentives are intended to contribute to the overall RESP outcome: “A knowledge-based and skilled economy that is able to compete with regional and international markets”;
- The RBA incentives are intended to contribute to the RESP Level 3 outcomes: “Improved and equitable learning outcomes at key stages” and “Increased numbers of students successfully completing 12YBE”;
- The RBA incentives are intended to achieve the agreed results (more students completing key stages of education and more teachers competent in the use of English as the medium of instruction, subject to independent verification of results) by whatever means the GoR chooses (the ‘black box’ of recipient discretion in PBR interventions);
- It is assumed that the GoR will respond to the incentives in relevant ways, for example by intensifying the implementation of relevant policies and strategies; if this assumption proves to be false, related risks will be incurred;
- It is assumed that the RBA intervention will be a positive incentive and will not create perverse incentives that undermine GoR objectives in education; if this assumption proves to be false, related risks will be incurred. For example, it is conceivable that if a recipient in such an agreement were to push for ‘completion’ at any cost – using strategies such as pressurising school principals to allow any child to write key stage examinations irrespective of whether she or he has enrolled at school or attended lessons¹¹ – the RBA intervention will impact negatively on broader desired outcomes such as improved learning; and
- It is assumed that robust data are available related to the agreed results that can be independently verified with relative ease; if this assumption proves to be false, related risks will be incurred.

Figure 2 – RBA deduced theory of change



¹¹ The evaluation team note that the GoR seems to have responded to the RBA incentive in a manner that counteracts this possible perverse incentive by insisting that students enrol and attend school in order to qualify for sitting the key stage examinations (P6, S3 and S6).

Table 2 – The evaluation questions

Evaluation of RBA in education in Rwanda – Evaluation Questions	Sources of Evidence	OECD-DAC
Impact related questions:		
<p>What has been achieved?</p> <ul style="list-style-type: none"> Is there evidence of achievement against the envisaged RBA results since the introduction of RBA? 	<ul style="list-style-type: none"> Examinations data 2000-12 Language proficiency data Verification reports 2013 Econometric modelling 	<ul style="list-style-type: none"> Impact
<p>What factors have impacted on the achievement of the RBA results?</p> <ul style="list-style-type: none"> What are the major sectoral and extraneous factors affecting the achievement of the RBA results? What are the major sectoral and extraneous factors affecting achievement of equity in envisaged RBA results? 	<ul style="list-style-type: none"> Context mapping and PEA Qualitative fieldwork EMIS data EICV-2 EICV-3 	<ul style="list-style-type: none"> Effectiveness
<p>Has the RBA approach contributed to impact in relation to the envisaged results?</p> <ul style="list-style-type: none"> To what extent has the RBA approach contributed to the envisaged results? In the context of the relationship between GoR and DFID in Rwanda, would it have been sufficient for DFID to suggest that the envisaged RBA results are a high priority? What is the impact of RBA on GoR budgeting and planning? What is the system-level impact over the evaluation period, if any, of RBA payments made in the post-payment period? 	<ul style="list-style-type: none"> Qualitative fieldwork Econometric modelling 	<ul style="list-style-type: none"> Impact
<p>Has 'value for money' been achieved?</p> <ul style="list-style-type: none"> Has 'value for money' been achieved, in terms of efficiency, effective delivery, economy and cost-effectiveness? Have the RBA incentives been set at an appropriate level? What is the cost to government of any RBA-driven strategies compared to RBA payments? 	<ul style="list-style-type: none"> RBA pilot financial reports Verification reports In-depth interviews at national level 	<ul style="list-style-type: none"> Efficiency
Process related questions:		
<p>How is the RBA approach perceived in Rwandan education?</p> <ul style="list-style-type: none"> What are the key features of the RBA approach in Rwandan education? How is RBA perceived by role players and stakeholders in Rwandan education? 	<ul style="list-style-type: none"> Context mapping and PEA Qualitative fieldwork 	<ul style="list-style-type: none"> Relevance
<p>How did Government respond to RBA?</p> <ul style="list-style-type: none"> What relevant policies, strategies and interventions have been implemented by government since the introduction of RBA? Has the organisational culture of key players such as MINEDUC, REB and district offices changed since the introduction of RBA (including whether key accountability relationships of MINEDUC, the REB, district education offices, schools and school communities have changed)? For example, has RBA promoted a more results-based approach by government? Has the RBA approach resulted in practical changes in policy implementation 'on the ground' that result from perverse incentives and detract from sector-wide government plans? Has the RBA approach resulted in practical changes in policy implementation 'on the ground' (such as intensification of implementation) that complement or enhance sector-wide government plans? How have RBA payments been used by the GoR? 	<ul style="list-style-type: none"> Context mapping and PEA Qualitative fieldwork Econometric modelling 	<ul style="list-style-type: none"> Relevance Effectiveness
<p>Q7 What lessons have been learned to inform RBA in Rwanda and elsewhere?</p> <ul style="list-style-type: none"> Is the RBA approach appropriate in Rwandan education? What were the circumstances that made the RBA approach appropriate or inappropriate? What lessons can be learned to support any future negotiations regarding the level of the RBA incentive? If RBA is renewed in Rwanda or introduced elsewhere, what lessons can be learned in terms of how to design and implement the approach? 	<ul style="list-style-type: none"> Context mapping and PEA Qualitative fieldwork Econometric modelling 	<ul style="list-style-type: none"> Sustainability

2.2.3 Evaluation questions

Table 2 (above) presents the evaluation questions along with the sources of evidence which are likely to yield answers. These have been aligned with OECD-DAC criteria for evaluating development assistance.

2.3 Methods

2.3.1 Context mapping and political economy analysis

The evaluation team undertook a context mapping and political economy analysis (PEA) (see Annex 1) to set out the context in which RBA is being implemented. The context mapping and PEA paper draws heavily on national policy documents, existing research literature, and the evaluation team's analysis of the Integrated Household Living Conditions Survey (Enquête Intégrale sur les Conditions de Vie des ménages) (EICV-3).

2.3.2 Econometric modelling

A key aspect of the evaluation methodology is an econometric modelling exercise exploring if, and to what extent, RBA is associated with and has contributed to increased completion at key stages (2012 – 2014) and increased teacher competence in English as the language of instruction (by 2014). A detailed report on the modelling is provided as Annex 2 in the separate annex report. Two econometric models, using publicly available data, were developed to examine any increase in completion in 2012. These models are summarised in Table 3, with further detail provided in Annex 2. The two models act as a check on each other since a conclusion supported by both models provides a stronger evidence base than a conclusion based on just one set of assumptions.

Table 3 – The econometric models

Model	Description
Model 1	<p>Model 1 assumes time trends and district-level influences on completion are stable, such that an effect of RBA must be identified over and above these relationships. The available data (reported at the district level) covers five years (2008-2012). Model 1 adopted two approaches drawing on time trend and district characteristics.</p> <p>The first approach examined whether the first year of RBA implementation (2012) saw a statistically significant change in the number of examination sitters at P6, S3 and S6 - over and above the time trend observed in the whole period. The second approach disaggregated examination sitters into male and female students.</p>
Model 2	<p>Model 2 uses different variables and assumptions, drawing on various data to control for factors that influence completion. Model 2 assumes a stable relationship between the variables included and the number of pupils sitting examinations. For example, it is assumed that the relationship between the number of examination sitters and the number of female teachers is stable; such assumptions have been rigorously tested using OUT-OF-SAMPLE predictions.</p> <p>Model 2 drew on two methods to investigate the effect of RBA using 'DUMMIES'. Firstly, a DUMMY was used for when RBA is active and secondly, year DUMMIES tested whether the year DUMMY for RBA years was significantly different from non-RBA years.</p>

2.3.3 Qualitative research

Qualitative fieldwork complements and helps 'unpack' the findings of the econometric modelling. Qualitative fieldwork was undertaken at three levels – national level, district level and school level – as summarised in Table 4 below. The district and school level fieldwork involved ten districts (including 20 sectors¹² and 20 schools). The research instruments are attached as Annex 3, the

¹² A 'sector' in the Rwandan system is the level of government below the district.

qualitative data are summarised in Annex 4 and a detailed report on the fieldwork is provided as Annex 5 in the separate annex report.

Although the purposive sample for the qualitative research was arguably small, analysis of case study data suggests that theoretical saturation was reached; in other words, case studies analysed towards the end of the process did not provide new findings. It is unlikely that there would have been any additional benefit from increasing the sample size.

Table 4 – The qualitative fieldwork

	Description of qualitative fieldwork	Sample
National level	<p>Semi-structured in-depth interviews were conducted with national level stakeholders to ascertain the practical responses generated by the RBA approach (see list of interviewees in Appendix 2)</p> <p>As RBA is an incentive for GoR, and specifically MINEDUC and REB, it is important to understand, in a decentralised system, whether (and how, with what results and for whose benefit) GoR has attempted to influence behaviour at district and school level.¹³</p>	<ul style="list-style-type: none"> • MINEDUC and REB officials [6] • DFID respondents [5] • NGO respondents [22]
District level	<p>Semi-structured in-depth interviews were conducted with district-level officials to ascertain the practical responses generated by GoR at this level. The purpose was to understand whether, how, with what results and for whose benefit, district education offices and other district-level stakeholders have acted to achieve RBA results.</p>	<ul style="list-style-type: none"> • District Education Officers [8] • Mayors [7] • Vice-mayors (education portfolio) [6] • Sector Education Officers [20]
School level	<p>Structured interviews, focus group discussions and classroom observations were conducted at school level to ascertain the practical measures that have been taken at this level to achieve RBA results.</p> <p>A focus of this aspect of the research was to understand whether (and how, with what results and for whose benefit) schools and other school-level stakeholders and role players have acted to achieve the agreed RBA results; as a result of or irrespective of any RBA-inspired influence.</p>	<ul style="list-style-type: none"> • School principals [20] • Teachers [20 groups] • Parents [19 groups] • PTA chairpersons [20] • Learners [20 groups] • Lesson observations [38 classes]

2.4 Limitations of the research

In year one the evaluation team experienced several challenges and identified various limitations of the evaluation approach. While some of these are associated with programme design, others are due to data availability and the timing of the research. Overall the team feels that these challenges have limited, but not undermined, the robustness of the findings reported. These limitations are however worth highlighting.

- **An ideal scenario for data driven evaluation is one with stable relationships, many observations and an exogenous treatment effect¹⁴ Due to programme design, social and economic effects, this is not the case in this evaluation.** For example the ‘treatment’ of RBA is nationwide, necessitating the development of an artificial counterfactual. Regarding stable relationships, the genocide of 1994 has had significant and lasting effects on the

¹³ Upper Quartile also submitted a separate ‘stand-alone’ National Level Stakeholder Report to DFID-Rwanda as a separate deliverable under the current evaluation contract.

¹⁴ Random allocation to treatment would provide control and treatment groups which were identical before treatment.

demography and population of Rwanda.¹⁵ It may also have been a factor in two other changes: in 2006 the districts were recast, and in 2008-2010 French was replaced by English as the medium of instruction from Grade 4 (with implications for the quality of educational provision). These changes make it more difficult to strongly present a counterfactual.

- **Constraints were imposed on the modelling through lack of data.** For example, some of the publicly available data are only generated by the Education Management Information System data (EMIS) at district level, whereas other data are only available by year and are not disaggregated. Further, data for student enrolments in primary schools were available from 2010 whereas data for secondary school students were only available from 2011.
- **The number of observations is less than ideal.** The team expected to receive data at school level for a greater number of years. In the end however it was only possible to access district level data for a limited number of years meaning fewer observations. This makes it more difficult to identify true effect from normal random variation.
- **OUT-OF-SAMPLE tests¹⁶ show that SPECIFICATIONS which use only the small number of VARIABLES which cover the period from 2008-2011 do not perform well.** The team instead used a greater number of VARIABLES but, due to poor data availability, were limited to the period 2011-2012. This meant that it was only possible to use the number of examination sitters for the baseline and the year corresponding to the first RBA payment. However, in spite of this limitation, when the accuracy of the prediction is tested the model is shown to perform well.
- **The original intention was for the econometric modelling exercise to precede the qualitative fieldwork,** allowing qualitative researchers the opportunity to explore and 'unpack' quantitative findings. Owing to difficulties accessing the educational data required, this was not possible, and the qualitative fieldwork was designed and implemented when the econometric modelling process was still under way. Despite this limitation, the qualitative dataset provides important insights into the findings of the econometric modelling.
- **The fieldwork sample did not include any schools that had taught exclusively through the medium of English before 2009. It also did not include any private schools.** It may have been useful to study both these types of schools as, for example, schools already using English prior to 2009 are unlikely to be facing the same challenges as schools which have had to switch to English; in private schools teacher motivation may be less of an issue because of higher salaries. The sample is however typical of government and government-supported schools; to have included other less typical categories of school would have required a larger sample and would not, in our opinion, have added value to the qualitative research.
- **It is regrettable that qualitative researchers could not interview three mayors and four vice-mayors in the districts visited due to election duties.** The team are however confident that a representative cross-section of district-level officials' views has been captured.

2.5 Research ethics

All research carried out by Upper Quartile and IPAR-Rwanda is subject to the provisions of the Research Governance and Ethics Policy which conforms to best international practice including the

¹⁵ The genocide took place 19 years ago; 19 is the ideal age of an S6 exam sitter in 2013. Therefore, the demographic impact of the genocide affects the maximum number of exam completers for the period in question. The numbers that were killed or migrated in 1994 also affects the numbers being born since that year, and so Rwanda's demographics are not similar to other countries. This is one reason why we control for enrolment as it is closely related to the maximum number of exam completers (as drop-outs tend to be older students who have repeated several times).

¹⁶ See Annex 2 in the separate annex report for detail.

requirements of the UK Economic and Social Research Council. All IPAR researchers who conducted primary research as part of this evaluation have been trained in research ethics and ethical considerations were reviewed during the training before fieldwork commenced. The RBA research was given ethical approval under IPAR's internal ethics policy.

All informants, including children, were required to give verbal informed consent to participate and in the case of the latter, a responsible adult was also asked to give consent. Only children aged 10 years and over were included as informants. No individual is named in the report and the names of both schools and districts have been removed. Once interview data were entered electronically they were stored with restricted access and in a manner which prevents data linking.

All members of the evaluation team and consortium member organisations are fully independent and retained their independence through this first year of the evaluation. IPAR-Rwanda is an independent think tank based in Kigali; Upper Quartile is an independent consulting firm based in the United Kingdom.

3 The Evaluation Findings

3.1 Introduction

This chapter presents the year one (2013) evaluation findings. These correspond to the first year of implementation of the RBA agreement (2012) between the GoR and DFID. Findings are structured around the seven macro level evaluation questions presented in Chapter 2 (see Table 2) and are discussed in turn in relation to impact (section 3.2) and process (section 3.3). The chapter concludes with an examination of the implications of the findings for the RESP TOC (section 3.4).

3.2 Impact-related findings

3.2.1 Introduction

This section presents 2013 evaluation findings related to the impact of the RBA pilot in its first year of implementation (2012). The findings are structured around four of the seven macro level evaluation questions presented in Chapter 2. Specifically:

- What has been achieved since the introduction of RBA?
- Has the RBA approach contributed to impact in relation to the envisaged results?
- What factors impact on achievement of the RBA results?
- Has value for money been achieved?

3.2.2 What has been achieved since the introduction of RBA?

Discussion of year one evaluation findings begins by examining what has been achieved since the introduction of RBA in 2012 in terms of completion and teachers' proficiency in English.

3.2.2.1 Completion at P6, S3 and S6

In 2013 a report independently verifying 2012 completion data at P6, S3 and S6 was produced by the Health and Education Advice and Resource Team (HEART 2013a), commissioned by DFID. The verification team reviewed 2012 national examination data provided by the GoR and recommended to DFID the RBA payment to be made for increased numbers of examinees in 2012 with respect to the previous year (Table 5).

The verification procedures, which the evaluation team has accepted as robust, involved cross-referencing the examination results with independent evidence, such as schools' examination records. The verification was supported by audit reports from a sample of 3,000 students in 100 schools where examination results lists were cross-referenced on site with school records, such as enrolment registers and class lists.

Although random errors in record keeping were found, there were no systematic failings in the REB examinations data system. While finding that there is room for improved coordination between the three agencies responsible for the S6 examination results, to ensure appropriate and consistent breakdowns of data¹⁷, the verification exercise found that there is a rigorous system in place for administering the examinations at all stages from registration to publishing results.

The verification report recommended acceptance of the data provided as reliable (HEART, 2013a). The first annual RBA payment for results achieved in 2012 was calculated at £1,164,150. Payment to the GoR was effected in May 2013.

¹⁷ The three agencies responsible for the S6 examination results are: the Examinations and Accreditation Department of the REB; the Workforce Development Agency and the Kigali Institute of Education.

Table 5 – Completion results in 2011 and 2012

	Province	2011		2012		Improvement		RBA	Payment	
		Male	Female	Male	Female	Male	Female	Tariff	Male	Female
P6	Kigali	7,314	8,228	7,394	8,168	80	-60	£50	£4,000	£0
	South	17,455	21,854	17,756	22,327	301	473	£50	£15,050	£23,650
	West	16,484	19,553	18,242	22,354	1,758	2,801	£50	£87,900	£140,050
	North	13,088	16,892	14,619	19,522	1,531	2,630	£50	£76,550	£131,500
	East	16,207	17,879	16,866	18,905	659	1,026	£50	£32,950	£51,300
S3	Kigali	2,989	3,019	3,155	3,389	166	370	£100	£16,600	£37,000
	South	9,626	10,955	9,468	11,513	-158	558	£100	£0	£55,800
	West	9,919	9,461	9,936	10,802	17	1,341	£100	£1,700	£134,100
	North	6,908	7,518	6,835	8,254	-73	736	£100	£0	£73,600
	East	8,601	8,424	8,360	8,878	-241	454	£100	£0	£45,400
S6	Kigali	4,876	4,555	4,575	4,874	-301	319	£50	£0	£15,950
	South	6,194	6,203	6,392	6,524	198	321	£50	£9,900	£16,050
	West	5,130	4,532	5,468	6,128	338	1,596	£50	£16,900	£79,800
	North	4,030	3,251	3,812	3,851	-218	600	£50	£0	£30,000
	East	4,305	3,482	3,990	4,688	-315	1,206	£50	£0	£60,300
	Total increase S3 and S6 all provinces					Increase in male examinee numbers 3,742	Increase in female examinee numbers 14,371			
Payment by Gender for 2012 Results									£261,550	£894,500
Total Payment for 2012									£1,156,050	

We note that the above calculation is by province and gender, and that negatives have been eliminated. For example, in Kigali City for P6 a payment of £4,000 was made for 80 additional male students, but there was no penalty for 60 fewer female students. The total difference resulting from the elimination of negatives is only £91,900. If calculations had been made at the national level for both genders the GoR would have received £1,064,150. It is also noted that in June 2013 the total RBA payment was recalculated by the verification team (£1,156,050, as presented in the table above) following the release of disaggregated statistics for 2012 Teacher Training College (TTC) candidates (HEART 2013b). It is interesting to note that the increase in female examinee numbers in 2012 (14,371) is greater than the increase in male examinee numbers (3,742); these gender-based totals include the negatives that were eliminated in the payment calculation.

3.2.2.2 Teachers' proficiency in English

At this early stage in the evaluation it is not possible to comment on any changes in teachers' proficiency in English. The following section is presented as a baseline only and will be updated in subsequent years of the evaluation.

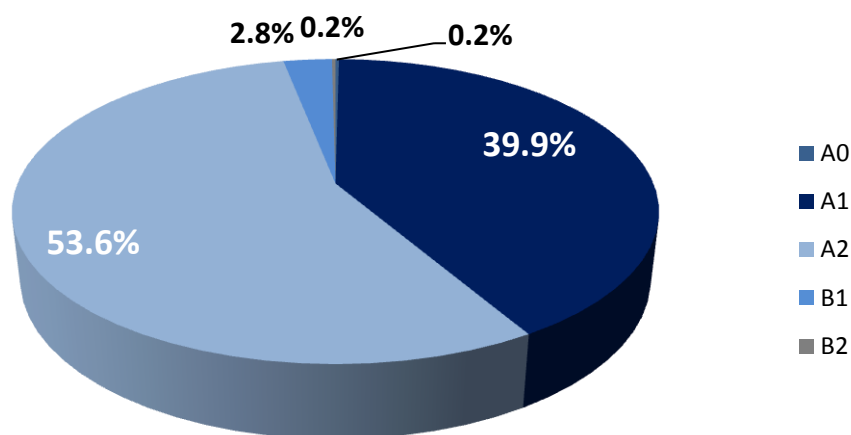
A baseline survey of teachers' proficiency in English, commissioned by DFID, was undertaken by the British Council (British Council 2012). A sample of 557 teachers were assessed using the British Council's Aptis test to determine their proficiency in English in terms of the following six levels of the Common European Framework for Reference (CEFR) (Council of Europe, undated).

Table 6 – The CEFR levels of language proficiency

Level		Summary descriptor
Basic user		
A1	Breakthrough or beginner	Understands and uses familiar everyday expressions and very basic phrases. Interacts in a simple way, provided the other person talks slowly and clearly and is prepared to help.
A2	Waystage or elementary	Understands sentences and frequently used expressions. Communicates routine tasks requiring a simple and direct exchange of information. Can describe in simple terms aspects of his/her background, immediate environment and areas of immediate need.
B Independent user		
B1	Threshold or intermediate	Understands the main points of standard input on familiar matters regularly encountered in work, school, leisure, etc. Can produce simple connected text on topics which are familiar. Can describe experiences and events and briefly give reasons for opinions and plans.
B2	Vantage or upper intermediate	Understands the main ideas of complex text on both concrete and abstract topics. Can produce clear, detailed text on a wide range of subjects and explain a viewpoint on a topical issue.
C Proficient user		
C1	Effective operational proficiency or advanced	Produces clear, well-structured, detailed text on complex subjects, showing controlled use of organisational patterns, connectors and cohesive devices.
C2	Mastery or proficiency	Understands with ease virtually everything heard or read. Can summarise information from different spoken and written sources and can express him/herself spontaneously, very fluently and precisely

The results of the British Council baseline survey (illustrated in Figure 3) show that the vast majority of teachers surveyed (93.5%) currently possess only a basic level of English language proficiency. This includes just under 40% who are considered 'beginners', only able to interact in a simple way with other competent users. Only 3% of teachers have reached an intermediate level and no teachers demonstrated effective operational proficiency in or mastery of English (levels C1 and C2).

Figure 3 - Teachers' proficiency in English (2012 baseline)



Source: British Council Survey of Teachers' Proficiency in English, 2012

Findings of the baseline survey on English proficiency, indicating relatively low levels of English language skills among teachers at primary and secondary level, are in line with the findings of qualitative school-based fieldwork undertaken as part of this evaluation. Findings from 38 lesson

observations (presented in section 3.3) confirm that teachers struggle with English, especially spoken English. At the time of writing the CEFR level that teachers must reach in order for any payment to be effected in 2014 under the RBA agreement has not been agreed.

Given the well established links between teachers' language proficiency in the medium of instruction and the quality of educational provision (see, for example, Nel and Müller, 2010 and Fleisch, 2008)¹⁸ this issue will be a focus of the evaluation in subsequent years, in particular because of the link established in year one of the evaluation between the quality of education and completion.

3.2.3 Has the RBA approach contributed to impact in relation to the envisaged results?

Finding 1: While there has been strong annual growth in completion at all three key stages (P6, S3, S6), in its first year of implementation RBA has not SIGNIFICANTLY increased the number of examination sitters.

The cornerstone of the evaluation's investigation of 'impact' is the econometric modelling exercise. The modelling process is summarised in Chapter 2 of this report with further detailed provided in Annex 2. Findings from the econometric modelling relate only to the first year of RBA implementation (2012) and caveats related to low data availability should be borne in mind in the interpretation of the findings. In spite of these limitations the evaluation team has confidence in the results of the econometric modelling for two reasons. Firstly, OUT-OF-SAMPLE testing shows that the two models perform well and second, the results are unanimous.

As previously stated, the econometric modelling exercise was used to test empirically whether RBA had any effect net of other influences on the numbers of students completing the key grades. Figure 4 below is an extract from the econometric analysis and is presented here to illustrate and explain key findings.

3.2.3.1 Findings from Model 1

The red line in Figure 4 shows the actual number of male P6 examination sitters in 2012. The grey area shows the predicted number of completers (defined as examination sitters) for 2012 generated using Model 1; which assumes that time trends and district-level influences on completion are stable, such that an effect of RBA must be identified over and above these relationships.¹⁹

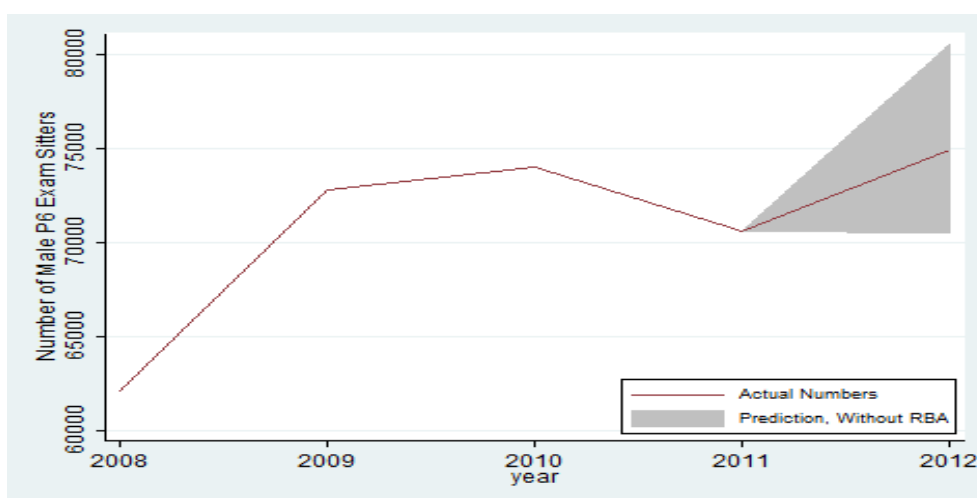
The grey area is the 95% confidence interval, meaning the model is 95% sure that in the absence of RBA the number of male P6 exam sitters would be within this area. If RBA had truly had an effect we would expect to see the actual number of male exam sitters in 2012 (the red line) above the area which is predicted without RBA (the grey area). In practice, the red line is very close to expectations.

Other models (for female completers and other key stages) show a greater degree of certainty, and so their predicted range (the grey area) is smaller. In all cases the number of completers is within the confines of the predictions generated by Model 1.

¹⁸ Fleisch (2008), for example, has identified "poor language teaching by teachers whose own English proficiency is limited" as a factor in poor academic achievement in South African schools, where a transition to a second language as the medium of instruction is typically effected in the fourth grade of primary school, as it is in Rwanda.

¹⁹ Annex 2 in the separate annex report provides further detail on the assumptions underpinning Model 1 and Model 2.

Figure 4 - Actual and predicted numbers of P6 examination sitters



Source: Upper Quartile (2013b) Econometric Modelling Report

The time trends for all three examinations are positive and highly SIGNIFICANT, indicating that there has generally been strong annual growth in completion at all three levels in the period (2008-2012), something that may be difficult to sustain going forward. Indeed, in all tests for Model 1 (all key stages and for both genders) the COEFFICIENTS on RBA are negative (meaning that the year of RBA operation was below the time trend), with significance at the 1% level for males at S3 and S6. This means that while there was an increase in 2012 over and above 2011, the increase was not as large as the time trend would lead us to expect.

Model 2 provides some collaborating evidence for this. For males in secondary school, the one year of RBA operation was below what the circumstances would lead us to expect, with significant effects in some cases (see Table A2.9 of the econometric report in Annex 2).

In the round, the evidence is that there is no SIGNIFICANT change in completion levels in the RBA year (2012) over and above what would have been expected, with very weak evidence suggesting that the numbers of completers may have declined at P6 level relative to the trend.

When the data are considered by gender, the disaggregated analysis shows that in most cases there is no SIGNIFICANT impact of RBA. In two of the six COEFFICIENTS there are indications that the number of male examination sitters at S3 and S6 has declined in 2012 relative to the time trend.

Overall, the analyses of both aggregate and disaggregated data indicate that the RBA year was either worse than might otherwise have been expected (e.g. completion of males at S3 and S6) or no different.

3.2.3.2 Findings from Model 2

To increase confidence in the findings of the econometric modelling, a second model (Model 2) was also developed. As previously stated, Model 2 uses data from various sources to control for factors that influence completion; further detail is provided in Annex 2. Running this model for the period 2010-2011, while deliberately excluding 2012, allows us to use the estimated COEFFICIENTS to predict the numbers of P6 examination sitters by gender and district for 2012, giving an indication of the accuracy of the model by testing its predictions against known data (OUT-OF-SAMPLE testing).

The outcome of these tests provides reassurance of the model's validity. At the district level, for 2012, there is a correlation of between 82-85% for the two genders between the model's predictions and reality. This gives us confidence that the model is able to capture the important determinants of examination sitting, as we would expect some fluctuation. At the aggregate level, the model's prediction for male examination sitting is just 748 students too low. For female examination sitting the

prediction is slightly less accurate, as it underestimates by 2,016. However, this is still a remarkably accurate prediction (within 3%) which gives confidence that the underlying relationships are stable and that the model performs well.

In keeping with the findings from Model 1, Model 2 also provides evidence that RBA has had little effect, as there is little difference between the model's prediction of performance without RBA and actual performance with RBA.

Model 2 employs two methods to investigate the effect of RBA using DUMMIES (see Annex 2). First, a DUMMY is used for when RBA is active. Second, year DUMMIES are used to test whether the year DUMMIES for RBA years are SIGNIFICANTLY different from non-RBA years.

For the former, when the model is estimated for the period 2010-2012, the RBA VARIABLE is INSIGNIFICANT²⁰. For the latter, the COEFFICIENTS for 2012 (male and female) are both INSIGNIFICANT, and slightly negative with respect to 2010; a somewhat troubling result. For 2011, the COEFFICIENTS are SIGNIFICANT and negative: -206.7 and -242.4 for male and female examination completers respectively. This is SIGNIFICANT at the 1% level for male students, and at the 5% level for female students.

Nationally, this means that the annual variation for 2011 saw 13,467 fewer students than the model would predict. In total there were almost 155,000 students that year, so this annual fluctuation is slightly under 1%. This raises concerns either about dipping the baseline²¹ or that 2011, through ill fortune, was simply a bad year for examination completion.

Either way, this has real effects on aid transfers. The RBA payment for 2012 was based upon 11,199 extra students taking the examination in 2012 than in 2011. Model 2 suggests that this 'additional completion' was merely reverting to the standard trend. Further investigations are however needed before any further conclusions can be drawn, and it should be borne in mind that bad luck does happen. More data would of course help identify the effects more cleanly.

3.2.3.3 Summary of findings from Model 1 and Model 2

Secondary Level: It appears that 2012 was a year of poor performance at the S3 and S6 levels. The degree of underperformance in secondary level examination completion for male students is noteworthy; at S3 the models point to a shortfall of around 2,400 male students, with an even greater effect at S6. Enrolment at the junior secondary level is the reported number of students enrolled in grades S1-S3. The additional effect (over and above the lagged P6 effect²²) of this enrolment is low: only 4 extra examination sitters per 100 extra students enrolled. The DUMMY for 2012, a test of the effectiveness of RBA, is small and INSIGNIFICANT. This implies that RBA had a negligible effect, if any, on the number of S3 examination takers. The 2012 year DUMMY (i.e. when RBA is active) is negative for both genders at the senior secondary level, and while not SIGNIFICANT it is close to significance for male S6 examination sitters.

Primary Level: Models 1 and 2 both find that the number of P6 completers with RBA is indistinguishable from what we would expect to have happened without RBA.

Overall, while performance in recent years has been strong, there is no evidence that RBA has positively affected the number of students completing in 2012. Actual performance was broadly in line with what would be expected in the absence of RBA.

²⁰ For male and female specifications, we found COEFFICIENT estimates (with Z statistics) of 22.61(0.41) and 69.84(0.84) respectively. For the sake of brevity, full regression results are omitted.

²¹ 'Dipping the baseline' refers to a situation where a body or individual deliberately underperforms in one year in order to appear to overperform in subsequent years, even when exerting no extra effort. Given the timeline of RBA agreement, it is highly unlikely to even have been possible in this case.

²² In the regression discussed above, the number of students sitting P6 in a specific district is lagged by 3 years. This means that the number of completing P6 students in 2010 is used to help explain the number of S3 completers in 2013.

3.2.4 What factors have impacted on achievement with regard to completion?

Now that it has been established what has been achieved since the introduction of RBA and that the RBA pilot itself has not impacted on the achievement of observed results in its first year, the evaluation begins to drill down into the factors impacting on completion in Rwanda – this discussion concerns both the factors supporting the increased completion observed in recent years and the factors that are seen to inhibit further increases in completion. Key findings are:

Finding 2: While the progressive introduction of free education has increased access, repetition is a significant issue to address in Rwanda. Repetition at the primary school level does not simply defer examination sitting but SIGNIFICANTLY diminishes the likelihood that it happens at all.

Finding 3: The poor quality of education (in which inadequate teaching resources are an important factor) is leading to excessive repetition; this is an important factor impacting negatively on completion which requires more in-depth investigation in 2014.

Finding 4: At both the primary and secondary levels, schools in poorer communities are less able to raise financial contributions from parents to supplement the capitation grant, which impacts negatively on the quality of education they can offer; at the secondary school level the econometric modelling exercise found a SIGNIFICANT negative relationship between poverty levels and completion, possibly because implementation of fee-free secondary education is still under way.

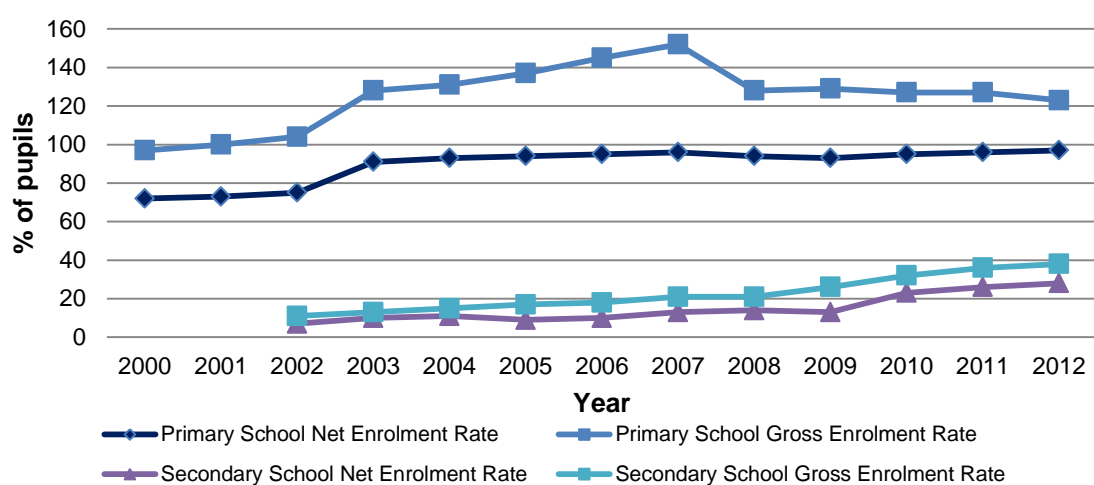
Finding 5: There is a SIGNIFICANT negative impact on completion in districts with a higher proportion of schools identified as ‘having problems’ related to teaching resources and infrastructure, and in districts with lower literacy levels.

The evaluation findings clearly demonstrate the complexity and interplay of factors that impact on completion at key stages of education. There is no simple cause and effect answer but rather, as one national level stakeholder noted, there are “*many intervening factors*” which impact on completion. Contextual understanding is therefore critical; this section begins with an overview of the national picture regarding enrolment and completion.

3.2.4.1 Overview of enrolment and completion

Figure 5 illustrates that the GoR has achieved substantial improvement in enrolment in both primary and secondary education. This has been fuelled by the introduction of free primary education in 2003 and the extension of free education to 9YBE in 2009. Gender differences, it should be noted, have been eliminated (see section 3.2.5.1 for a more detailed discussion of gender equity).

Figure 5 – Gross and net primary and secondary school enrolment 2000-2012



Source: MINEDUC EMIS data

Completion, however, is a different matter. A combination of late entry²³, temporary withdrawal and repetition means that a high proportion of children leave school before they have completed the primary phase (EICV-3). The evaluation team's estimate of survival to primary school completion is approximately 52%, based on 2010-11 data (EICV-3)²⁴. While the drop-out rate has declined, analysis of the data clearly shows that many children are spending six or more years in primary school but not completing. At the secondary level the drop-out rate is lower, especially at senior secondary; in 2011 the drop-out rate was 13% in junior secondary and 2.4% in senior secondary.

The on-time completion rate in both primary and secondary education is very low. Only 6.2% of 13-year-olds had completed primary school in 2010-11. On-time completion of junior secondary school (by 16 years of age) is just 2.6% and of senior secondary school (by 19 years of age) 1.5%.

Factors impacting on completion, the key element in the RBA agreement, can be divided into two broad groups; **educational factors** (including strategic priorities, issues of teaching quality and school resources) and **child and community-based factors** (including socioeconomic, demographic and motivational factors). The discussion begins with educational factors.

3.2.4.2 Educational factor 1: Free education

A positive factor impacting on enrolment has been the progressive introduction of free education, potentially giving all children the opportunity to complete a full cycle of primary and secondary education. Net enrolment in primary school reached 96.5% in 2012, up from 72% in 2000. Gross enrolment in secondary schools reached 38% in 2012, exceeding the EDPRS-1 target by eight percentage points. As the evaluation will show, however, increases in enrolment will only have a substantial positive impact on completion if repetition is reduced and the quality of education increased (see sections below).

3.2.4.3 Educational factor 2: Drop out and repetition

Drop out and repetitions are factors affecting completion at both primary and secondary level.

Primary education: Quantitative data analysis undertaken for this evaluation shows that students who repeat are much more likely to drop out, and hence not complete, in future. The repetition rate at the primary level has declined from around 34% in 2000 to 12% in 2011; the national average number of repetitions for current primary school students is 1.6 (EICV-3). The econometric modelling (Model 2) estimates that moving from the average number of repetitions to the district maximum (Ruhango's 1.83) implies a decrease in the number of male and female examination sitters per district of 191 and 222 respectively.

Further, promotion rates are lower for P1-P5 than they are for P6; the EICV-3 thematic report for education (National Institute of Statistics and Research, 2012) states that while children in P3 to P5 have repeated a class an average of 1.3-1.4 times, those in P6 have an average repetition of 0.9.²⁵

It follows therefore that for P6 examination sitting to increase (a focus of the RBA pilot), preceding promotion rates must increase. These rates are currently lowest at the earlier years (typically P1 and P2). This finding is reinforced by the econometric modelling exercise (the repetition VARIABLE from the DHS is SIGNIFICANT in both SPECIFICATIONS), indicating that repetition does not simply delay completion at primary school, it makes it less likely.²⁶

²³ 24% of seven-year-olds and 10% of eight-year-olds were not in school in 2010/11 (EICV-3).

²⁴ This estimate which compares well with the 50% estimated by the International Bank for Reconstruction/World Bank (2011) based on 2008 data.

²⁵ This can be attributed to P6 students not being allowed to repeat.

²⁶ This can easily be inferred. To show the logic a rough calculation is provided. It is known that around 75% of those in P5 make it to P6 – imagine for ease that the remaining 25% drop out. It is also known that average repetition rates for those in P6 is 0.9, and for those in P5 (a mixture of eventual P6 completers and those who will drop out at the end of the year) it is 1.3. It can hence be calculated that those who will drop out must have an

Secondary education: Repetition and drop-out rates are much lower at the secondary school level but there is still room for improvement, especially in the junior secondary phase.

The most recent data (2011) disaggregated for junior and senior secondary school show that the drop-out and repetition rates are much higher at junior secondary level than at senior secondary, with 13% of children dropping out at the junior secondary level in 2011 compared with only 2.4% at senior secondary and 6% repeating at junior secondary level compared with only 1.6% at senior secondary.

As noted in section 3.2.4.1 above, the on-time completion rate in both primary and secondary education is very low, and repetition is one of the key factors in this regard. Qualitative fieldwork, undertaken for the evaluation, shows that national level stakeholders recognise repetition as a key concern for the education system and that some are critical of past performance in this regard. One respondent noted:

The factors that make children fail don't go away the following year when they repeat...Teachers think repetition will improve performance. They need to see that they are part of the problem if there is poor performance – national level stakeholder

Other national level informants reported that there is insufficient emphasis on remedial education to prevent repetition.

Among interviewees at the district and school level there is recognition of a new strategic focus within the education system on reduced repetition and drop-out (indirectly implying a focus on increased completion, although 'completion' was not mentioned specifically by informants). The main strategy mentioned by respondents at this level is increasing the numbers of children promoted by placing a limit on the percentage permitted to repeat, although, as noted by a senior Government official, this is not considered a direct result of the RBA pilot. Quoting a ministerial guideline that no more than 10% of learners can repeat in each grade preceding national examinations, the government official noted:

Learners cannot repeat P6, S3 or S6. We are reviewing the percentage allowed to repeat in other grades because reducing repetition forms part of government plans, not because of results-based aid – national level stakeholder

This approach raises the concern that completion may be emphasised at the expense of educational quality. This concern was expressed multiple times at each of the different levels of the qualitative fieldwork. While automatic promotion may aid the achievement of completion targets, it could also lead to students "*progress[ing] without understanding*", as observed by one NGO informant. The following section therefore proceeds to discuss quality of education as a factor impacting on completion.

3.2.4.4 Educational factor 3: The quality of education

The current evaluation evidence (supported by strong arguments presented by national level stakeholders) is that poor quality education is an important factor impacting negatively on completion, as poorly taught students are more likely to repeat and therefore (as noted above) more likely to drop out. The quality of education is therefore core to any discussion of completion, and this is recognised as a concern in Rwanda. When defined in terms of learner achievement, the quality of education is certainly poor. The *Learning Achievement in Rwandan Schools* survey (Ministry of Education, 2012) found that only just over half of P6 pupils met or exceeded curricular expectations in reading and that the majority did not meet curricular expectations in numeracy. DeStefano and Ralaingita (2012) found poor attainment in Kinyarwanda, English and Mathematics in primary schools.

average repetition rate of 2.5. The real difference will be less stark, as some in P5 will repeat and eventually become P6 completers, but the point is that repetition significantly increases the chance of drop-out.

GoR has a number of input-related strategies in place designed to improve the quality of education, including increased investment in pre-school education; reducing the size of classes; having a higher proportion of qualified teachers (especially at secondary school level); improving the terms and conditions of teacher employment, thereby enhancing teacher motivation; providing in-service development for teachers; and providing one textbook per child together with manuals. Although these strategies predate the RBA agreement, it is possible that RBA funds may prove to be valuable in supporting the implementation of these strategies (many of which are showing slow or negative progress²⁷) to improve the quality of education (and, in turn, completion).

While the importance of improved quality is recognised at national level, the evaluation found that among district and school level informants there is little or no mention of improving quality in order to improve completion. This indicates that there may be further work to do for this message to filter down through the education system.

However, when respondents at the district and school levels were explicitly asked about the factors impacting on the quality of education, the two most commonly cited factors were teachers' motivation and their levels of proficiency in English. The latter is an area for optimism regarding RBA given the emphasis, at GoR's insistence, on improving teacher's English. It is clear however, given the previously reported baseline findings on English proficiency, that it will take time to generate increased quality as a result of improved language skills and realise the anticipated benefits of decreased drop-out and repetition and increased completion.

With regard to teacher motivation, the qualitative data show that this is largely related to poor rates of pay, although a related issue is double-shifting in primary schools resulting in teacher fatigue in the afternoon (noted by school-level respondents).

3.2.4.5 Educational factor 4: Teaching resources

Teaching resources are a factor impacting on completion, as demonstrated by both the quantitative and qualitative strands of the evaluation. Specifically:

- **Teacher numbers** – The econometric modelling exercise found that increases in the number of teachers has a positive effect on completion. The largest effect is from male teachers at secondary level; each extra male teacher is associated with an extra 2.3 female and 2.8 male students taking the S6 examination. However, teacher numbers alone are not enough. In section 3.2.4.4 above it is noted that poor motivation and proficiency in English among teachers are factors impacting negatively on educational quality, thereby increasing the likelihood of repetition and non-completion.
- **The poor quality of textbooks** (including poor sequencing of material) was noted by several respondents at national level as a factor inhibiting completion. Government policy on textbooks was initially to have one textbook to every three children but this later became one textbook to every child. EMIS data for 2012 show that this has only been achieved in mathematics in primary and junior secondary schools, in French and agriculture in TTCs, and in welding and electricity in TSS. Qualitative school based research undertaken for this evaluation found that even where textbooks were available they were rarely used. Other research has found the same (DeStefano and Ralaingita 2012; Results for Development Institute 2013). This seems to be at least in part because teachers have not had sufficient

²⁷ For example, the pupil-classroom ratio stood at 42:1 in 2011 compared to 27:1 in 2008 (Ministry of Education 2012); the ratio of learners to qualified teachers is improving, but only slowly; even with increases in salary since 2008, teachers earn a poverty wage (International Bank for Reconstruction/World Bank 2011); children are still generally sharing textbooks in most subjects in primary and secondary school, although policy stipulates one textbook per child (Results for Development Institute, 2013); and access to in-service training for teachers is poor and funds in the capitation grant that are intended to support in-service training are often diverted to spending on other items that are seen as a greater priority (Results for Development Institute 2012).

pre-and in-service training in using more student-centred methods (Results for Development Institute 2013).²⁸

- **Other resource-related factors** include about 40% of classrooms having insufficient desks, about 20% having insufficient chairs and approximately a third lacking visual stimulation (DeStefano and Ralaingita 2012; Results for Development Institute 2012).

3.2.4.6 Educational factor 5: Districts with higher proportions of schools experiencing problems

The econometric modelling shows that there is a SIGNIFICANT negative relationship between completion and districts having a higher proportion of schools experiencing 'problems'; completion is higher in districts with fewer 'school problems'²⁹. Indeed, it is interesting to note that in the econometric modelling exercise this district characteristic is shown to be statistically SIGNIFICANT in relation to completion at key stages, while socioeconomic status is not always SIGNIFICANT. This is discussed further below in relation to child and community based factors which affect completion.

3.2.4.7 Child-and community-based factor 1: Poverty

The econometric modelling shows that at primary level, districts with greater poverty levels have fewer children completing primary school. However, this relationship is not SIGNIFICANT.

At the secondary school level the econometric modelling shows that there is a SIGNIFICANT negative relationship between poverty levels and completion. In the modelling exercise the ranking of a district in the "poorest" category has a strong effect at secondary level. Moving from the district with the highest degree of "poorest" citizens (Nyamagabe with 0.494) to the district with the lowest degree of "poorest" citizens (Nyaruguru with 0.003) is associated with an implied effect of an increase of 494 male and 431 female S6 examination completers respectively. This is a very large effect in absolute terms, demonstrating that the socioeconomic status of districts has a much greater influence over secondary school completion than over primary school completion. At this point it should be noted that fee-free junior secondary education was only introduced in 2009 and fee-free senior secondary education is currently being introduced, so this negative relationship between poverty and completion may diminish over time.

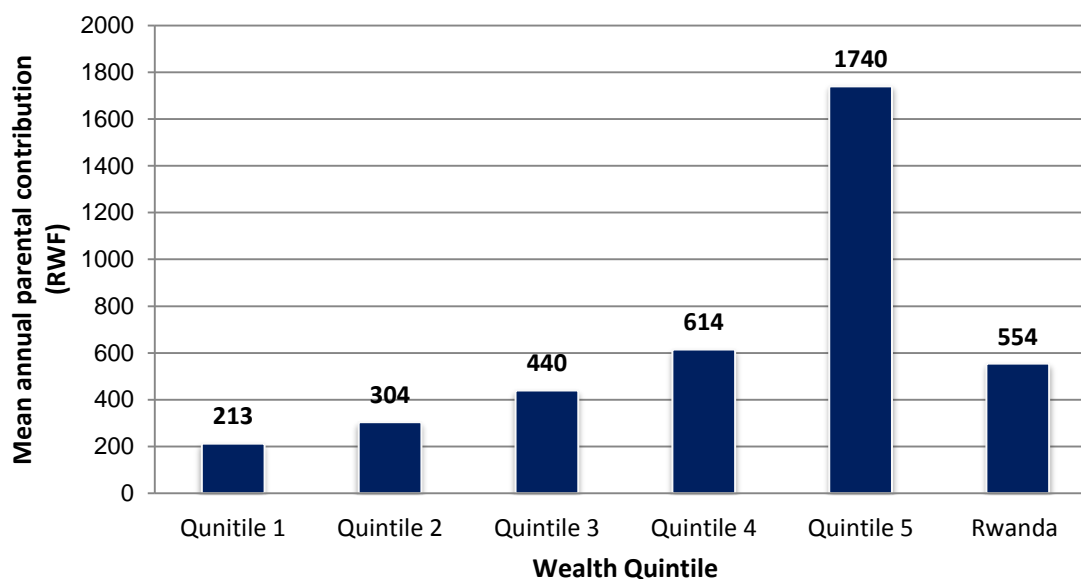
The qualitative fieldwork helps to unpack this evaluation finding and brings the issues of capitation grants and educational quality to the fore. Informants at school level report that the main reason parents do not send their children to school (or withdraw them from school) is poverty and that schools in poorer communities are less able to raise contributions from parents to supplement the government capitation grant (CG). This has a negative impact on the quality of education they can offer; in turn impacting negatively on completion.

As previously noted, the current CG is below the minimum recommended by UNESCO (2008) to provide desirable educational inputs, hence it is necessary for parents to make contributions to the running of schools. These are generally seen as funding to supplement teachers' pay (see e.g. Ministry of Education 2009; Results for Development Institute 2013; Williams 2013). Paxton and Mutesi (2012) found that parental contributions more than doubled the budgets of schools in affluent areas while the low level of contributions to schools in poor locations made no noticeable difference to the schools' budgets. The differences in the levels of contribution that parents are able to make are very stark, with parents in the wealthiest consumption quintile able to pay more than eight times the amount that those in the poorest quintile can contribute, as illustrated in Figure 6.

²⁸ Student-centred teaching and other dimensions of the quality of education require further investigation in 2014.

²⁹ 'Fewer school problems' relates to the fraction of the district reporting 'no school problems' in the EICV3 survey, which measures satisfaction with schools. In total across the country; 16.9% of schools reported problems such as a shortage of books and materials, poor instruction, absent teachers, insufficient teachers, poor facilities and poor toilets. How these and other potential problems impact on completion will be investigated further in 2014.

Figure 6 - Mean annual parental contributions (RWF) for 7- to 17-year-olds attending primary schools by wealth quintiles



Source: EICV-3

3.2.4.8 Child- and community-based factor 2: Rurality

Linked to the above, it is well known that there are spatial differences in repetition in Rwanda, for example the EICV-3 thematic report for Education (National Institute of Statistics and Research, 2012) states that a rural child is 59% more likely to repeat a primary school class than an urban child. Repetition, as previously discussed, is an influential predictor of completion. The evaluation team's logistic regressions on EICV-3 data show that location (urban/rural) has a small but SIGNIFICANT effect after controlling for other factors at the primary school level (but not at the secondary school level).

Poverty is hence a stronger predictor of non-completion than where a child lives. However, poor children are more likely to live in rural areas – 46.9% of school-aged children (7-18 years) living in rural areas are non-poor compared with 74.3% living in urban areas, and 25.4% in rural areas are in the poorest consumption quintile compared with only 9.9% of urban dwellers.

3.2.4.9 Child- and community-based factor 3: Learner motivation

According to EICV-3, the main reason that children aged 7-15 years give for early drop-out is lack of interest (over 40%); a much higher percentage than those citing cost (20%), poor health (10%) and family reasons (16%). With regard to learners' motivation levels, one national level stakeholder noted:

You can't ignore the motivation levels of students. Many are not interested. There is frustration that can be addressed by the teacher, to help students see a bright future – national level stakeholder

Qualitative school-based research undertaken for this evaluation also highlights this issue, showing that children's motivation is damaged by factors such as lack of interest in what is taught (particularly when they are not guaranteed a job as a result of their continued participation in education); by repeated failure at key stages; and the availability of menial jobs that they could usefully and profitably do in place of attending school.³⁰

³⁰ The pull of employment is, however, waning (particularly for younger students) and there has been a decline in children aged 7 to 15 years in productive employment from 21% in 2005 to 6.4% in 2010-11.

The issue of educational quality (teaching quality and educational resources) must also be considered when talking about learner motivation. In keeping with the points reported previously, the qualitative school-based fieldwork found many cases of children sharing textbooks, being taught in large classes with mixed ages and mixed levels of ability by demoralised and poorly remunerated teachers who have a poor command of English, have often never had training in student-centred methods of learning and who were struggling to teach a double shift.

3.2.5 What factors have impacted on equity in completion?

Finding 6: The presence of female teachers has a stronger effect on completion for female students than male teachers (perhaps through raising aspirations for female students).

Finding 7: Female students have substantially more serious hurdles to overcome in order to complete in districts that have a higher number of schools identified as having problems related to teaching resources and infrastructure, and in districts with low literacy levels.

Finding 8: Disabled children are in the highest category of risk for never attending school, let alone completing key stages of education.

3.2.5.1 Gender equity

A central objective of the evaluation is the disaggregation of findings by gender. The general picture in relation to gender in Rwanda is positive, especially so in the earlier years of education.

The probability of girls' school attending school in 2010-11 (based on EICV-3 data) was 98.6%; marginally higher than that for boys (98%). However, boys are significantly less likely than girls to complete primary school (46% of 19-year-olds having done so in 2010-11 compared with 53.5% of girls). Analysis of MINEDUC data suggests that girls are now outperforming boys at primary school level and are rapidly catching up at secondary level (Ministry of Education 2013).

More girls are now attending secondary school and girls have a greater probability than boys of sitting the junior secondary school examination; although the proportions of boys and girls passing are much the same. Further, girls are as likely as boys to progress to senior secondary but marginally less likely to reach S6. Girls who enter the S6 examination are less likely to pass than boys.

Year one of the evaluation has highlighted some interesting gender-related findings that may be explored further in subsequent years. The econometric modelling has identified three important factors:

- **Teachers' gender** is a factor affecting equity in completion. At primary school level there is evidence (although it is relatively weak) that female teachers have a greater positive effect on eventual completion than male teachers. This effect is stronger for female students with the econometric modelling process (Model 2) showing that the number of male and female teachers in primary school is not a SIGNIFICANT determinant of examination sitting at P6 for male students, but that one extra female teacher in primary school is related to an extra 0.6 female examination sitters in P6. In other words, the presence of female teachers has an effect on the education decisions of girls at the primary level, perhaps through raising aspirations for female students. At the secondary school level, the modelling process identified a positive effect of male teachers for both female and male learners but no effect for female teachers – perhaps because female teachers are outnumbered three to one at this level.
- **Literacy** is a factor affecting equity in completion. There are larger district-level differences for females than males in terms of completion and in the econometric modelling exercise much of the variation between districts is explained by literacy levels. Holding other things constant, districts with greater illiteracy see fewer completers. There is a much larger effect for female students than male students. This is combined with the differential effect of perceived school quality by district, as district-level differences in the number of schools identified as having

'problems' explain some of the variation in female completers. The range for the VARIABLE 'can't read at all' runs from 0.07 to 0.39 by district. Moving from the worst to the best districts in terms of literacy implies an increase in male completion of 940, and in female completion of 1627. This is a SIGNIFICANT finding of the quantitative analysis and provides evidence that female students face more barriers to continuing education to the highest levels in certain districts.

- Finally, **problems at schools** affect equity in completion. The effect of a district having a higher number of 'good schools' (defined as schools that have 'no problems' in EICV-3) is clearly different by gender. The range between different districts in terms of the fraction of children attending schools with 'no problems' is 0.64 to 0.93. Moving from the worst to the best districts in terms of schools experiencing problems implies an increase in female primary completion of around 410, in contrast to only 72 extra male completers. This implies that there are more serious hurdles for female students to overcome in order to complete.

3.2.5.2 Disability

Rwanda has achieved high levels of school enrolment; indeed only 1.7% of children aged 10-17 have never been to school (EICV-3).³¹ The greatest risk factor reported by parents for children never going to school is their being disabled, and specifically being mentally disabled.³² Analysis of EICV-3 shows that a third of children with mental disabilities and 12.4% of children with physical/sensory disabilities have never been to school. This is compared with 1.3% of children with no declared disability. Children living with a disability are also 65% more likely to experience periods of temporary withdrawal than those with no declared disability, and such periods are a factor in non-completion (as noted in section 3.2.4.1 above). It is clear that greater efforts to enrol disabled children and provide appropriate support would help to increase the numbers of learners completing key stages.

The evaluation does not have data on what specific factors favour or hinder completion of key stages for disabled children who *are* in school; this could be a new focus of the 2014 evaluation.

3.2.6 What factors have impacted on achievement with regard to teachers' proficiency in English?

The results of the British Council (2012) survey of teachers' proficiency in English (see section 3.2.2.2 above) are confirmed by the findings of the qualitative fieldwork undertaken for this evaluation. District officials and school-level informants reported that the 'linguistic community' was Kinyarwandan, with English generally spoken only in school or even only in class. Head teachers were concerned about this and clearly felt that greater immersion in English is essential if teachers are to confidently use the spoken language as well as have a good command of the written language.

In the course of the qualitative fieldwork informants of all types, including teachers themselves, reported that teachers are finding it very challenging to develop competency in English and especially in spoken English.

The only teachers who are said to be coping reasonably well are recent graduate teachers in secondary schools, who are able to cope because they did their degrees in English and French or, if they are very recent graduates, in English.

"The farther you go from Kigali the less English is spoken ... Many teachers are hoping that French will come back." – **national level stakeholder**

Observation of 38 lessons in 20 schools (Table A4.9 in Annex 4) suggests that English is generally used as the medium of instruction. In only one lesson was anything other than English used when writing. However, English was only used exclusively in 28% of the lessons observed in primary

³¹ The assumption being made here is that if children have not started school by the age of ten they will not start at all.

³² The terms 'disabled' and 'mentally disabled' are not defined in the EICV-3 questionnaires or reports. Parents are expected to answer the relevant questions without having access to definitions.

schools, 11% of the junior secondary lessons and 57% of the senior secondary lessons. These observations confirm the comments made in the interviews by all informant types that teachers are struggling more with spoken than written English.

There is no clear evidence from the observations that teachers in schools without mentors³³ are less likely to use English when teaching or more likely to use didactic teaching methods, although the two lessons with the lowest use of English were in schools without a mentor (Tables A4.2 and A4.9 in Annex 4).

The evaluation team also notes that the test applied in the British Council survey is not specifically related to the use by teachers of English as the medium of instruction. It may be necessary to focus more on this use of English for specific academic purposes in the future.

3.2.7 Has value for money been achieved?

The evaluation is tasked with determining whether value for money (VfM) has been achieved in terms of economy, efficiency and effectiveness through the RBA pilot. The RBA pilot is not however a simple concept to apply VfM approaches to and there is ongoing discussion about the best, and fairest, way to approach this question. In the opinion of the evaluation team it is too early in the evaluation period (2013-2015) to reach a firm conclusion about the VfM of the RBA pilot, given that the RBA agreement was only signed in October 2012 (the first year of implementation).

3.2.7.1 Economy

Economy concerns the actual amount spent on the intervention; maximising economy concerns achieving the best cost while still maintaining quality. At this early stage of the evaluation it is not possible to comment on this aspect of VfM. For the time being we can, however, report on the anticipated cost of the RBA pilot and expenditure to date. Assuming that the current rate of inflation in the United Kingdom remains constant at the December 2013 rate of 2%³⁴, the relevant cost and expenditure items are contained in Tables 7 and 8 below:

Table 7 - The estimated cost of the RBA pilot

Cost	Amount in pounds sterling
RBA funds for payments 2013-2015	£9,000,000
Cost of verification of 2012 completion results	£84,270
Cost of verification of 2013 completion results	£89,955
Cost of verification of 2014 completion results	£87,675
Cost of 2012 assessment of teachers' proficiency in English	£99,626
Cost of 2014 assessment of teachers' proficiency in English	£103,651
Cost of 3yr evaluation of the RBA pilot	£432,068
Total	£9,897,245

Table 8 - Expenditure to date

Expenditure to date	Amount in pounds sterling
2013 payment to GoR for 2012 completion results	£1,164,150
Verification of 2012 completion results	£84,270
2012 assessment of teachers' proficiency in English	£99,626
Evaluation of the RBA pilot	£252,974
Total	£1,601,020

³³ The School-Based Mentoring Programme, managed by the REB, commenced in 2012 with the aim of providing P1 – S3 teachers with continuous professional development to improve student learning outcomes. The responsibility of the mentors is to improve teachers' English language proficiency and pedagogy. (See <http://www.mineduc.gov.rw/spip.php?article616>.)

³⁴ See <http://www.tradingeconomics.com/united-kingdom/inflation-cpi>.

3.2.7.2 Efficiency

This aspect of VfM is about the achievement of outputs (results). In the case of the RBA pilot this relates to the level of the incentive – is the RBA payment set at the correct level to incentivize a focus on completion?

At this stage it is not possible to assess whether the RBA incentive is set at an appropriate level. Drawing on the evidence from key informants – national and local level – most feel that the RBA incentive levels are appropriate; however, at the national level assessments of the value of the RBA agreement were diverse, ranging from describing the RBA incentives as a “token gesture” to a “valuable asset”.

Importantly, senior government informants argued that “*These programmes first and foremost are ours – we would have done it with or without RBA funding.*” This indicates that DFID may be paying for results that would have been achieved in the absence of RBA. This will be investigated further in subsequent years of the evaluation.

Several respondents argued that VfM would be enhanced if direct incentives are offered to districts and schools. This, according to GoR respondents at national level, is not the intention of government.

3.2.7.3 Effectiveness

This aspect of the VfM equation concerns the achievement of outcomes and impacts. In relation to the RBA pilot, this would include increased numbers of completers at P6, S3 and S6, increased numbers of teachers proficient in the use of English and a contribution to wider outcomes and impacts in the RESP theory of change.

At this early stage of the evaluation (and early stage in the implementation of RBA), the evidence is that RBA has not significantly increased the number of completers at P6, S3 and S6. It is not yet possible to determine any impact of RBA in relation to enhanced teacher proficiency in English. These questions will be considered further in subsequent years of the evaluation.

With regard to wider outcomes and impact of the RESP, it is too early to comment on the impact of RBA, particularly given that (at the time of writing) it is not known how RBA funds will be used by the GoR. At the time of writing the net cost in financial terms to GoR is zero. For example, the town hall meetings (referred to in section 3.3.2.2 below) were not exclusively dedicated to explaining the RBA agreement, and would have been undertaken with or without RBA.

3.3 Process-related findings

This section presents the process-related findings of the 2013 evaluation of the RBA pilot in its first year of implementation (2012). These findings are structured in terms of three of the seven macro-evaluation questions presented in Chapter 2. Specifically:

- How is RBA perceived in Rwandan education?
- What response has there been on the part of GoR to the RBA intervention?
- What lessons have been learned that may improve RBA interventions in the future in Rwanda and elsewhere?

3.3.1 How is the RBA approach perceived in Rwandan education?

Finding 9: The RBA agreement between GoR and DFID is highly relevant in the Rwandan context; the lack of emphasis on the quality of education is understandable given the need to focus on indicators for which it is possible to provide readily available data. It has not been possible at this early stage in the RBA pilot to determine what the distinctive features of the approach are in the Rwandan context, save to say it shares the common features of PBR approaches.

3.3.1.1 *The relevance of the RBA pilot*

As previously noted in relation to the ‘realist’ evaluation approach, as programmes only work through the medium of stakeholder reasoning, it is crucial for the evaluation to understand the perceptions that exist of the RBA pilot among the different stakeholder groups. In order to understand these perceptions, it is first necessary to examine the relevance of the pilot to different groups and the distinctive features of the RBA pilot in Rwanda.

Finding 10: Awareness of and government ownership of RBA as a funding mechanism is high at national level, and the mechanism has been very positively received; a minority view is that the emphasis on completion may militate against quality education. There is strong qualitative evidence of a very positive response to RBA on the part of the GoR and an intensification of the RBA message around completion from the GoR to districts and schools; as yet there is no evidence of new policies or strategies as a direct result of RBA or of changes in the organisational culture of the GoR, which was perceived to be results-oriented prior to the introduction of RBA.

Analysis of findings from the qualitative fieldwork indicate that the RBA agreement between GoR and DFID is highly relevant in the Rwandan context as the two results set out in the RBA agreement were already government priorities prior to the agreement, and are intended to contribute to the development of an educated and skilled workforce (a key element of Vision 2020 (see section 1.3.1))

The RBA pilot is relevant to each of its key stakeholder groups; learners and the broader Rwandan society (as learners’ opportunities for quality education may be enhanced), the recipient (as the GoR is rewarded for achievement in terms of two of its existing policy priorities) and the donor (DFID, which by definition shares the priorities desired by GoR in the RBA MoU and is keen to test PBR approaches to understand what works and how).

It has not been possible at this early stage in the RBA pilot to determine what the distinctive features of it are in the Rwandan context, save to say that it shares the common features of the PBR approaches described in section 1.4 of this report. Distinctive features of the RBA pilot will be examined further in the 2014 and 2015 reports to ascertain what works, for whom and why in the Rwandan context.

3.3.1.2 *Perceptions of the RBA pilot*

The RBA pilot has generally been very positively received by key stakeholders in Rwandan education at the national level. The RBA agreement is deemed to be consistent with GoR policies, and a high degree of GoR ownership is evident at a senior level. Many respondents at national level felt that money is not the only motivator, as GoR is felt to be results oriented and committed to achieving targets.

Exceptions to the generally positive response to the results contained in the RBA agreement include concerns (expressed by informants at all levels) that the emphasis placed by the GoR on completion (a key element of the RBA agreement) may militate against quality education.

Some non-government respondents at national level expressed the concern that increased promotion rates may lead to completion (as defined in the RBA agreement) but not to students passing examinations, especially if the focus is on increased general English proficiency among teachers rather than on the use of English for teaching and learning. An example of a concern expressed at school level (by principals and teachers) is that disruptive children

“I don’t think money is the only motivator – it’s not a huge amount – it’s the prestige. Rwanda has been extremely good at achieving targets. There is a tremendous ‘can do’ attitude, a lot of pride in government, tremendous drive.” – donor

“We believe RBA is a useful tool to reach our targets. It has not been imposed on us, it is our tool. We agreed on the RBA results because we own RBA.” – senior politician

who had dropped out of school may be brought back and hinder the teaching and learning process for others.

With the exception of one district in Kigali City, where informants were familiar with the term 'RBA' and its meaning, district, sector and school level informants were generally not aware of RBA as a funding mechanism. Importantly, however, most informants at all levels were aware of strong encouragement from national government to improve completion and the use of English in the classroom, and that this was GoR policy (even if it was not specifically linked to knowledge of RBA).

At district and school level informants were generally aware of Rwanda's policy of free education for all children, with specific reference made to promoting education for children from poor homes, girls and children with special needs. A number of informants pointed to specific policies and initiatives: the employment of special needs teachers; schools having access for the disabled; separate toilets for boys and girls; provision for girls during menstruation; and the pass mark in examinations being lower for girls than boys.³⁵ There was general awareness of the GoR policy that children may not be excluded from school because they do not have scholastic materials or because their parents had not made a contribution; respondents generally felt that education should be free.

It was noted by GoR and DFID interviewees at national level that the RBA agreement does not reflect the emphasis on quality of education that is evident in the wider RESP TOC, despite sustained efforts in the course of the negotiations to include results related to the quality of student learning. For example, at one stage in the negotiations a result related to numbers of students *passing* rather than *writing* examinations was considered. This was excluded from the agreement because of the need to define readily measurable results; the exclusion of reference to students passing the key stage examinations can therefore be attributed to the fact that the issuing of examination marks is norm-referenced not criterion-referenced.³⁶

3.3.2 How did government respond to RBA?

Finding 11: There is little awareness of RBA as a funding mechanism at district and school levels, but there is a high degree of awareness of government priorities regarding completion and the importance of teachers' proficiency in English; and evidence of practical strategies at these levels to improve both completion rates and the use of English in the classroom.

Finding 12: GoR has responded to the RBA incentive in a manner that counteracts possible perverse incentives by insisting that students enrol and attend school in order to qualify for sitting the key stage examinations (P6, S3 and S6).

The evaluation has sought to explore what relevant policies, strategies and interventions have been implemented by government since the introduction of RBA. This is important because recipient discretion – the 'black box' referred to in the TOR – is a key aspect of PBR approaches. In this section we report on the positive response to RBA by the GoR; strategies adopted to improve completion, teachers' proficiency in English and the quality of education; the improved quality of examinations data; strategies to counteract possible perverse incentives (particularly in relation to improved completion); and the ways in which RBA funds will be used.

3.3.2.1 A positive response on the part of the GoR

Overall the year one evaluation has found that the GoR has responded very positively to the introduction of RBA, largely because, according to all respondent types, both MINEDUC and the REB

³⁵ Although it was mentioned by several respondents, this lower pass mark policy does not appear to be a formal, written policy; this will be further investigated in 2014.

³⁶ Norm-referenced tests compare a student's performance with that of other students in order to rank the examinees – for example, for entrance to college or university. The process of issuing examination marks typically involves statistical adjustment. In criterion-referenced tests each examinee's performance is assessed against a defined set of criteria and no statistical adjustment is required when issuing marks.

were already results-focused and the results envisaged in the RBA agreement already formed part of Government plans. Given this position, it is perhaps unsurprising that the evaluation has found no evidence that additional resources have been made available as a direct result of the RBA agreement to support local authorities and schools to improve completion.

There is however evidence that existing messages around completion have intensified with qualitative interviewees at all levels reporting strong messages sent down through the system to school level to promote achievement of the results. Several government and non-government respondents reported intensive communication of the 'RBA message' regarding completion and proficiency in English by the REB at district level through town hall meetings: *"RBA has contributed to an intensification of the message going out from the centre."*

REB officials stressed, however, that the message to districts and schools was about access and quality learning and was not limited to RBA. The intention was reportedly to ensure that districts and schools do not become excessively focused on the two RBA targets, but rather see them in the wider context of improving access and quality. One official commented:

We have held town hall meetings in 19 districts to discuss the quality of education in general with Vice-Mayors, District Education Officers, Sector Education Officers and School Principals. We discussed how to improve completion, noting that drop-outs are a problem. But the meetings were more general than this, focusing on access and quality. We mentioned RBA as an incentive. We urged them to work harder [to achieve the results envisaged in the RBA agreement]. The reaction was very positive. – REB official

These messages are also reflected in national policy documents. There have been successive strategies designed to progressively implement the 2003 Education Policy in line with national priorities, the MDGs and EfA targets. An analysis of the priorities as they relate to the issue of completion shows both continuity and some shift in emphasis. The introduction first of fee-free education in 2003 and then 9YBE in 2009 has required that the education system plan to meet increased demand across the period. There has been a shift from the main emphasis being on access to school, towards targeting hard-to-reach children and getting them into school and from increasing completion of a cycle of education, to increasing transition between stages (more detail is contained in the political economy analysis contained in Annex 1 which accompanies this report).

3.3.2.2 Strategies to improve completion

At district level informants report that the main strategy for improving completion is to prevent drop-out and encourage out-of-school children to return. District and sector level officials and head teachers report that the official policy is now for no more than 10% of children to be made to repeat a school year; in a few cases informants told us that the figure is 5%. Some head teachers also believe that it is government policy for all children in P6, S3 and S6 to sit the national examinations.

Non-government respondents reported that in the Education Sector Working Group there is *"a new and strong emphasis on completion of P6, S3 and S6"* as a result of the RBA agreement. These

RBA is based on what were already GoR policy priorities. It's a matter of strengthening what was already being done...it helps us to achieve what we want to achieve. - senior MINEDUC official

We wanted to understand how best to use the opportunity. Our issue was not to set easy targets but to use RBA to achieve our targets. It doesn't matter if we don't get that money. RBA is an opportunity among other opportunities. – senior politician

I would not underestimate the importance of communication about the importance of completion – it translates at the micro level into action. Messages about repetition and drop-out have taken the form of Ministerial instructions given to districts. A forum exists for the Minister of State to meet district mayors. – government official

informants reported that completion has replaced access as the priority issue and that drop-out, repetition and completion are now high on the agenda. Others pointed out that education had been at the top of the agenda at the 2013 Government Retreat. Government respondents saw completion rates as a proxy for measuring an improvement in the quality of student learning outcomes.

District officials and school-based informants reported initiatives they have undertaken to reduce drop-out and encourage completion. The actions taken by schools and districts can be divided broadly into those targeted at parents, for example awareness campaigns, those targeted at learners to ensure that they understand their right to education and those aimed at improving the quality of education, for example the formation of English language clubs for teachers. The most frequently mentioned strategy (mentioned as frequently as ensuring that children understand their right to education) was working with parents to encourage them to ensure that their children attend school. At school level at least one informant in every school mentioned working with parents. Other strategies reported at district and school level include:

- Setting up an Educational Advisory Committee in every village;
- Seeking out employers of child labour and bringing charges against them;
- Paying teachers incentives to coach children during the holidays; and
- Having competitions to identify and reward the best performing pupils.

There is no evidence that any of the completion-related strategies mentioned above (or the GoR strategies referred to in section 3.2.4.4 above) were introduced as a direct result of the RBA agreement.

3.3.2.3 Strategies to improve teachers' proficiency in English

At this early stage of the evaluation it is not possible to comment extensively on the response of GoR towards improving the English language skills of teachers. School-based mentors (part of whose duty involves improving teachers' proficiency in English) were in place in all of the primary schools and some of the 9YBE schools visited in year one of the evaluation. The school-based mentoring programme predates the RBA agreement. There is no clear evidence of the effectiveness of the mentors at this stage, and the qualitative dataset shows that English was not better used in class by teachers in schools that had mentors. School-level respondents generally felt that a mentor alone was inadequate to improve language proficiency and that there was a need for more in-service training of teachers. Respondents in secondary schools felt that there was a need for teacher development focused on using English for academic purposes as opposed to general language proficiency. Several non-government respondents at national level were critical of the effectiveness of the mentors, one, for example, noting that "*mentors are not trained teacher trainers*" – the emphasis has rather been on recruiting mentors who are qualified teachers of English, but not, as the same respondent noted, teachers of English as a foreign language. A new strategy to improve teachers' proficiency in English is currently being developed by the REB and this strategy will be examined in the 2014 evaluation report.

3.3.2.4 Improving the quality of education

In spite of the national level recognition of the need to invest in the quality of education (see Educational factor 3 in section 3.2.4 above), analysis of the qualitative dataset collected for the first year of the evaluation shows that districts and schools remain more focused on reducing repetition and preventing drop-out than on improving student learning and thereby potentially improving progression and completion.

3.3.2.5 Improved quality of examinations data

The examinations dataset in Rwanda was praised by several non-government interviewees at national level, and the RBA verification process confirmed its reliability. According to senior

government officials, the quality of the examinations dataset has improved as a direct result of the RBA agreement. One official, for example, reported that “*a benefit from RBA is the hard work to improve the data management system.*” This is a reference to examinations data rather than EMIS data.

3.3.2.6 Counteracting perverse incentives

One process that has been introduced since RBA was implemented is the requirement for school principals to attach students’ reports to the examination marks as evidence of attendance. This was introduced as a result of the RBA agreement and the need for a robust data verification process. In this respect it is noted that the GoR has responded to the RBA incentive in a manner that counteracts possible perverse incentives by insisting that students enrol and attend school in order to qualify for sitting the key stage examinations (P6, S3 and S6). Further, at this early stage it is also positive to note that there is no evidence that the RBA approach has resulted in practical changes in policy implementation ‘on the ground’ that result from perverse incentives and detract from sector-wide government plans.

3.3.2.7 The use of RBA funds

The first RBA payment was effected in May 2013. At this time it is not clear to the evaluation team how RBA funds will be dispersed, although it is apparent that RBA funds have not been made additional to MINEDUC in 2013-14. The end of the GoR financial year was June 2013, so it can be assumed that RBA funds were kept in a consolidated fund for use in the 2013-14 budget. How RBA funds are used by the GoR will be examined further in 2014. This will include consultation with MINECOFIN.

3.3.3 What lessons have been learned to inform RBA in Rwanda and elsewhere?

The RBA approach was considered by all government and non-government respondents at national level to be highly relevant and appropriate in the Rwandan context given the results-oriented approach of the GoR to policy implementation. The RBA approach sits well with the key Rwandan socio-political concept of *imihigo* which manages accountability and involves the drawing up of performance contracts at all levels of Government and society; including for example, parents committing to ensure that their children attend school, and district officials committing to implement GoR policies. As previously stated, the RBA pilot is also relevant to the target group (learners and the broader Rwandan society), the recipient (the GoR) and the donor (DFID, which by definition shares the priorities desired by GoR in the RBA MoU).

Lesson 1: There is strong evidence that the GoR is results-oriented and that the RBA agreement is being implemented in a favourable environment. Subject to further research in 2014 and 2015, a key emerging lesson for transferability is that socio-political context (including accountability systems) may be key to the smooth introduction of an RBA approach.

The evaluation notes the willingness of the GoR to facilitate the measurement of results; the GoR facilitated access to teachers for the English proficiency baseline (British Council 2012), improved the quality of the examinations dataset to support robust verification of completion data and tightened the requirements related to school attendance as a pre-requisite for learners writing examinations (thus counteracting a possible perverse incentive).

Lesson 2: The GoR’s positive approach to the measurement of agreed results is another characteristic that is likely to prove conducive to PBR approaches elsewhere.

In relation to the impact of RBA, the year one evaluation has found no, or negligible, impact on the number of completers at P6, S3 and S6 as a result of the pilot. There is also some weak evidence in the econometric modelling to indicate a negative effect on completion in 2012. However, it is also evident that the RBA negotiations were protracted and the MoU was only signed in October 2012.

Even without the delay in the conclusion of the RBA agreement, it is perhaps unrealistic to expect an observable impact in the first year of implementation; indeed, a senior government respondent argued that the entire RBA period (2013-15) may be too brief to observe any impact.

Lesson 3: An emerging lesson is that ample time should be set aside for RBA-related negotiations to ensure that an agreement is reached as early as possible in (if not prior to) the implementation period to which it will apply.

In order to ensure robust evaluation of RBA approaches, the availability of disaggregated data is crucial. This evaluation report has noted issues related to data availability in year one that have limited the scope of the econometric approach. Indeed, data availability was not at the desired level or at the level initially agreed between the evaluation team and the GoR, the final outcome being that only publicly available data could be used in the econometric modelling process.

Lesson 4: A lesson for the future introduction of RBA approaches is that provision should be made in RBA-related negotiations to ensure that relevant data (for appropriate time periods and with appropriate levels of disaggregation) will be made available by the recipient to support the monitoring and independent evaluation of the intervention.

3.4 Mapping evaluation findings to the RESP theory of change

As previously stated, the evaluation of RBA is not using the RESP TOC as the primary organising framework for analysis. The assumptions of the TOC and the individual links of the results chain have not therefore been systematically tested as part of the evaluation. Year one analysis has however highlighted some areas in which evaluation evidence is aligned with the existing TOC and where there are potential areas for concern and further investigation. It should be noted that the focus of this mapping exercise is on evaluation findings as they relate to the TOC in terms of completion and teacher proficiency in English (the areas of focus of the evaluation of RBA). Figure 7 shows that:

- **At level 1 of the results chain there is strong evaluation evidence to support GoR's theory that strategies to target disadvantaged students and employing additional competent teachers will have a positive influence on delivery of the RESP.** The econometric modelling has shown that districts with lower literacy rates, a greater proportion of schools with problems and poorer residents perform worse in terms of completion. The evidence shows that these districts would benefit from targeted support to enhance educational outcomes (and thereby increase completion) and points to the need for a weighted capitation grant to address issues of teaching quality (which impact on completion) for disadvantaged students. Further, the econometric modelling found that increases in the number of teachers have a positive effect on completion; however, as noted there is a need to ensure that additional teachers are motivated and proficient in English.
- **There is some evidence (although at this early stage of the evaluation it is not conclusive) in support of GoR's theory that improving core competencies of existing teachers and improving educational resources (in terms of new classrooms being built and textbooks purchased) will support delivery of the RESP.** Qualitative evidence from the evaluation shows that the quality of teaching resources remains a concern; particularly among national level respondents. In relation to teaching quality, the focus of the evaluation of RBA is on teachers' proficiency in English as the language of instruction. This will be considered in depth in the 2014 evaluation, but the early evidence is that competence to use in English in the classroom is currently low (demonstrated by the British Council Baseline Survey and classroom observation undertaken as part of this evaluation). The evaluation also notes that children are typically sharing textbooks, which are often not used by teachers who have been poorly trained in student-centred methods.
- **At level 2 of the results chain there is some evaluation evidence to support GoR's theory that a reduction of double shifting is necessary for the successful implementation of the RESP.** Qualitative evaluation evidence shows that double-shifting

impacts negatively on teachers' morale, with a consequent impact on teaching quality and completion. However, in spite of the increased number of teaching staff, double shifting is set to continue in all primary schools and will be extended to TVET schools.

Figure 7 – Mapping the evaluation evidence base to the RESP TOC

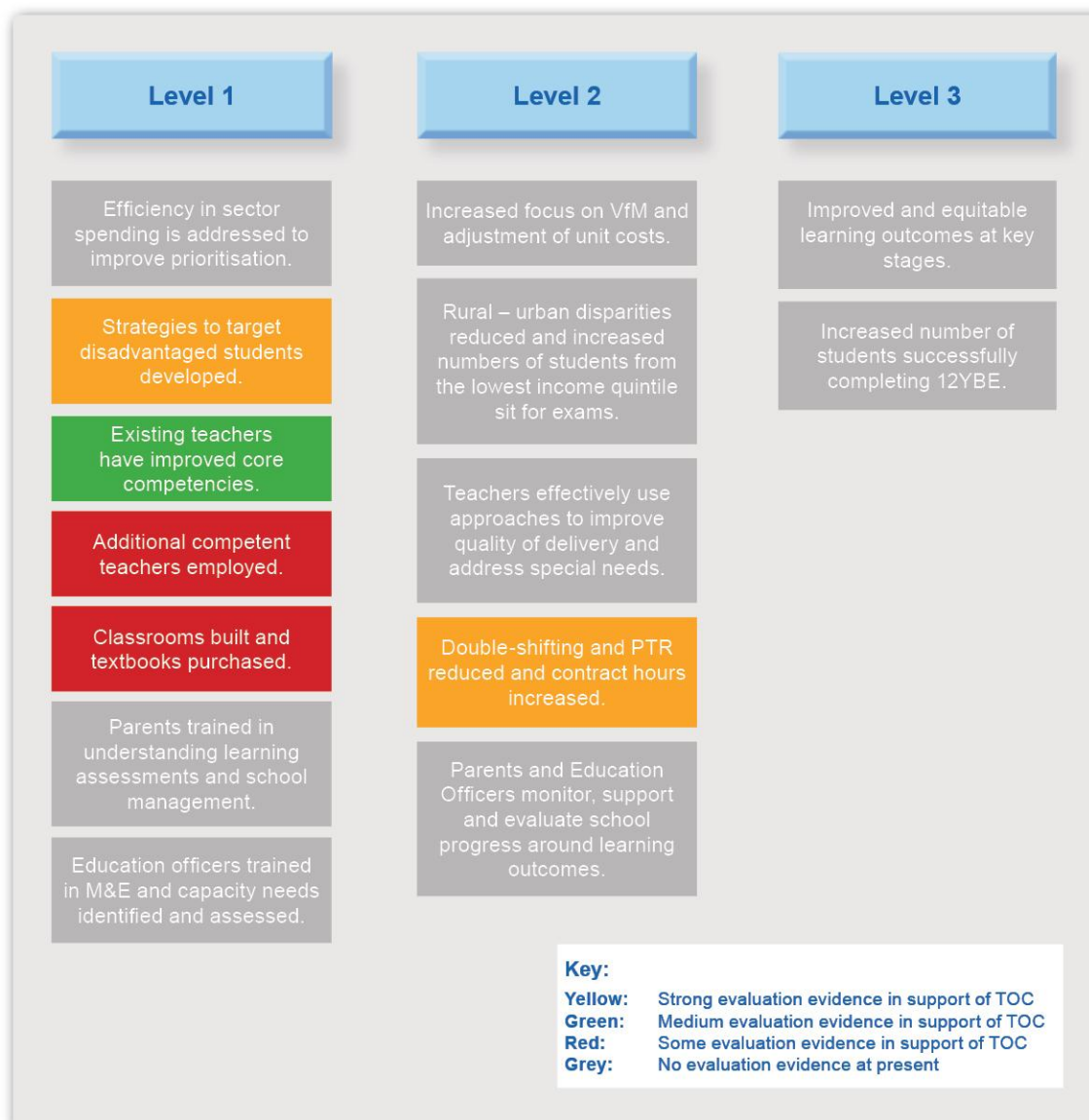


Table 9 presents the RESP TOC assumptions and, where possible, examines whether they are holding true at this early stage of the evaluation.

Table 9 – Assumptions of the RESP TOC

Assumptions	
RBA funds are fully disbursed	In year one 12.9% of the total RBA funds available were disbursed (38.8% of the maximum £3,000,000 envisaged in year one).
Relationship with GoR continues to be influential and effective	DFID's relationship with GoR is influential and effective as demonstrated in many meetings at which members of the evaluation team were present.
GoR is able to generate sufficient domestic resources to implement ESSP and maintain commitment to its goal and identified strategies	As noted in section 3.2.3, GoR has planned ESSP budget reallocations (to support a reduction in repetition at primary schools and increased numbers of students continuing to junior secondary and TVET) but is maintaining its commitment to its goals and identified strategies.
Capacity is enhanced at all levels	No evidence in 2013
DP interventions are complimentary	No evidence in 2013
Successful contracting out of IF and high quality of applications	26 out of 151 applications for Innovation Fund (IF) grants have been approved.
GOR is able to recruit more teachers	GoR has increased the number of teachers, and this has been found to be an important factor in increasing completion. However, teacher numbers alone will not be enough to deliver the commitments of the RESP. Teachers' low levels of proficiency in English, poor motivation and excessive workload arising from double-shifting raise concerns about quality which militate against improved completion.
DEOs are able to monitor and support schools	No evidence in 2013
Parents want to engage in student learning	No evidence in 2013
Textbook reform is successful	Policy stipulates one textbook per child per subject; however, textbook availability was poor in the schools visited by the evaluation team and concerns were raised over the quality of teaching and learning resources.
Improvements in pedagogy impact on exams and learning assessments	Econometric modelling concludes that completion in 2012 may have merely reverted to the existing trend (i.e. 2011 was a bad year), that any observable increase in completion in 2012 is 'modest' at best and is not outside of the bounds of what could reasonably be expected. Further qualitative work raised ongoing concerns over the quality of pedagogy (concerns that are recognised at national level) which may not be easily reduced over the short term
Dialogue around RBA continues to incentivise positive changes	There is evidence at the national level that dialogue around RBA is occurring but, as yet, it does not seem that this dialogue has filtered down to district or school level. There is no evidence that RBA specifically has incentivised positive change as completion was a strategic priority prior to the introduction of RBA. However, the pilot is at an early stage and more evidence will be gathered in subsequent years of the evaluation.
12YBE is rolled out across the country	The GoR has achieved substantial improvement in enrolment in both primary and secondary education, fuelled by the introduction of free primary education in 2003 and the extension of free education to 9YBE in 2009; the extension of free education to 12YBE is under way.
Assessment results are independently verified	The 2012 assessment results were independently and robustly verified
Gender parity continues	Gender parity continues to hold (Ministry of Education 2013 and EICV3 data), but the evaluation has found evidence that in some district types (such as districts with higher levels of illiteracy) girls experience greater barriers to completion; they are also marginally less likely to reach S6 and less likely to pass the S6 examination than boys
Positive environment for skilled labour in Rwanda and graduates are able to access meaningful employment	No evidence in 2013

4 Conclusion and Recommendations

4.1 Introduction

The purpose of this chapter is to weave together the preceding evaluation findings into an interpretive narrative which sets out the conclusions of the evaluation and the evidence base for the resulting recommendations to DFID and GoR. It should be noted that not all of the findings presented above provide a basis for recommendations at this early stage of the evaluation.

4.2 Conclusions

4.2.1 The impact of the RBA pilot in year one of the implementation period

In year one of the evaluation it is concluded that, in terms of anticipated results, RBA in its first year of implementation (2012) has not SIGNIFICANTLY increased the number of examination sitters. This is in spite of an observed increase in completion over 2011 levels. A possible contributing factor in the lack of impact to date is the late completion of the RBA agreement in October 2012, which meant that it was not clear until towards the end of the first year of implementation of the pilot what the agreed results would be. The GoR could therefore not take appropriate actions to improve achievement against the two results that were eventually included in the agreement. It would arguably have been sensible (but perhaps not practically possible) to view 2013 rather than 2012 as the first year of implementation of the pilot.

The impact of the RBA pilot on teachers' proficiency in English will be fully evaluated in 2014. At present, however, there is cause for some concern as a result of the low level of English language skills recorded by the 2012 baseline survey undertaken by the British Council. Among the sample of teachers included in the survey, none were found to be 'proficient' in English. The evaluation highlights that poor command of English among teaching staff is likely to have a detrimental impact on the quality of education provision; and in turn on completion. (The evaluation team has noted that no agreement has yet been formally reached between the GoR and DFID on the level of proficiency that teachers need to attain in order for RBA payments to be effected.) The effectiveness of a new GoR strategy to improve teachers' proficiency in English (under development at the time of writing) will be examined in the 2014 evaluation. For the time being, the evaluation team has noted that the test applied in the British Council survey was not specifically related to the use by teachers of English as the medium of instruction, and that it may be necessary to focus more on this use of English for specific academic purposes in the future.

4.2.2 The factors impacting on completion

The first year of the evaluation has generated important insights into the factors impacting on completion. In the preceding chapter these factors are necessarily presented in a discrete manner, they are however far from discrete and discussion of their interrelatedness is required. The factors are broadly characterised in terms of those related to schools and the education system and those related to learners and their communities.

The progressive introduction of **free education** is a major positive factor that has increased enrolment. Nevertheless, the estimate of survival to primary school completion is approximately 52% (based on EICV-3 data) and it remains the case that many children are spending six or more years in primary school but not completing. Similarly, the evaluation has demonstrated substantial room for improvement in completion at secondary school.

Increases in the number of teachers have had a positive effect on completion, but attention is needed to improve teacher morale and attendance³⁷ as well as their proficiency in English. We can deduce from various sources that teachers are suffering from low morale, probably because of the

³⁷ DeStefano and Ralainaita (2012) report that the head teacher in 71% of the schools they visited said that at least one teacher was absent on the day of the site visits undertaken for their study.

many demands placed on them, such as double-shifting and the need to improve their English in their own time. The positive effect on completion, facilitated by an increase in teacher numbers, is in all likelihood weakened by such factors, as the quality of education is likely to suffer.

The **poor quality of education** (characterised by, for example, poor teaching resources, large classes of mixed age and ability, insufficient teacher training, low teacher morale and limited command of English) is a cause of repetition and non-completion. The results of the baseline survey of teachers' proficiency in English point to alarmingly low levels of proficiency, which are likely to impact negatively on the quality of education and, in turn, on completion.

Repetition, whatever its causes, is itself a major negative factor in relation to completion, as the evaluation has shown that it does not merely defer completion but makes it less likely to happen at all. Further, and not surprisingly, learners in districts with higher proportions of **schools identified as experiencing problems** (such as shortages of learning materials, insufficient or absent teachers, and poor facilities – all no doubt contributing to the **poor quality of education**) are less likely to complete.

An important socioeconomic factor impacting negatively on completion is **poverty**. The quality of education is, however, intimately related to poverty and the analysis strongly suggests that, perhaps surprisingly, that quality of education rather than poverty (per se) is the major factor impacting directly and negatively on completion.

At the primary school level the evaluation found no SIGNIFICANT relationship between poverty and completion. At the secondary school level there is a SIGNIFICANT negative relationship between poverty levels and completion but it is noted that the *direct* effect on completion is actually the ability of families in the poorer consumption quintile to supplement the capitation grant. In other words, poverty does not directly impact on completion but it has a major *indirect* influence as it affects the **quality of education** that can be provided. This is largely because schools in poor communities are less able to raise contributions from parents to improve quality by, for example, supplementing basic educational supplies and infrastructure.

In a related point, **rurality** is shown to have a small but SIGNIFICANT effect on completion after controlling for other factors at the primary school level (but not at the secondary level). It is noted however that **poverty** is a stronger predictor of non-completion than where children live, but that poor children are more likely to live in rural areas. Once again the *direct* negative effect on completion is the **poor quality of education** on offer, with poverty having an *indirect* effect for the reasons noted above.

This discussion shows that while the provision of **free education** has led to significant improvements in access to primary and secondary schooling, the **poor quality of education** (as a result of a range of interrelated factors) is at the heart of non-completion of the key stages (P6, S3 and S6).

4.2.2.1 Equity in completion

The econometric modelling has shown that there are a number of factors that impact negatively on the chances of female learners completing key stages of education. The first is **teachers' gender**: while the presence male teachers impacts positively on completion for both male and female learners at the secondary level (because there are far fewer female teachers at this level), the presence of female teachers has a positive impact on completion for learners of both genders at the primary level and a SIGNIFICANTLY stronger effect for female learners.

The second equity-related factor is **literacy**: holding other things constant, districts with lower literacy levels have fewer children completing key stages, and the effect is SIGNIFICANTLY stronger for female learners.

The third factor is **problems at school**: districts with higher proportions of schools identified as having no problems (with, for example, shortages of books and materials, poor instruction, absent teachers, insufficient teachers, poor facilities and poor toilets) have SIGNIFICANTLY higher levels of

female completion at the primary level. This implies that there are more serious hurdles for female students to overcome in order to complete in some districts.

Among the 1.7% of children aged 10-17 who have never been to school, the greatest risk factor is being **disabled**; specifically being mentally disabled. This factor is likely related to inadequate teacher training and insufficient numbers of teachers in post specifically trained to cater for learners with disabilities (an aspect of the **poor quality of education**). This is recognised as a priority by GoR and strategies are being developed to better support learners with special educational needs.

4.2.3 Process-related findings

4.2.3.1 Government ownership of RBA

A high degree of government ownership of the RBA pilot is evident. This is largely explained by the fact that the envisaged RBA results were already GoR priorities prior to the intervention. This level of ownership is important as the Paris Declaration on Aid Effectiveness (OECD, 2005) set out five principles intended to improve the quality of aid and its impact on development. These include **ownership** (developing countries set their own development strategies) and **alignment** (donor countries and organisations bring their support in line with these strategies and use local systems). In this sense the RBA approach in Rwandan education, contingent on achievement of results that are established government priorities with a focus on 'recipient discretion' as to how to achieve them, is in keeping with HMG's commitments on maximising aid effectiveness.

RBA is highly relevant in the Rwandan context and the national GoR response to the RBA agreement has been very positive, with strong messages having been sent down through the system regarding both completion and teachers' proficiency in English. RBA has prompted the strengthening of this message. In 2014 it will be of interest to examine the *imihigo* performance management system more closely, to ascertain whether the results envisaged in the RBA agreement are included, or included more prominently, in performance contracts at all levels of the education system.

4.2.3.2 Use of RBA funds

It is not currently clear how the RBA incentives will be used, and indeed most district- and school-level respondents were unaware of the existence of the incentives. It is arguably not necessary for district- and school-level stakeholders to be aware of the RBA incentives, but when sustaining the national government messages referred to above it would seem sensible to publicly explain not only the nature of the incentives but the use to which they will be put.

4.3 Recommendations for DFID and GoR

While the RBA pilot did not make a SIGNIFICANT contribution to the increase in completion in 2012, in the opinion of the evaluation team it is too early in the implementation of the pilot to expect results or to assess value for money from DFID's perspective. **Given the high level of government ownership of the agreement and the very positive response by government, the RBA pilot should be sustained in its current form.** The pilot is highly relevant to the target group (learners and the broader Rwandan society), the recipient (the GoR) and the donor (DFID). The key performance management mechanism of *imihigo* is key to the GoR's approach to the pilot and should receive detailed attention in the 2014 evaluation. **The GoR should continue to communicate the 'RBA message' to lower levels of the education system and continue to emphasise the importance of quality education for the reasons summarised in the next paragraph. In communicating the message, the GoR should consider making a public announcement about how the RBA funds will be spent.**

The examination of the factors impacting on completion shows that while the provision of free education has led to substantial improvements in access to primary and secondary schooling, the poor quality of education is at the heart of the factors impacting negatively on completion at key

stages (P6, S3 and S6). Poor quality education is more likely to be prevalent in poor, rural areas where schools are less able to supplement the capitation grant; it leads to increased repetition; it is more likely to be prevalent in schools that are experiencing problems (such as inadequate teaching resources); and it means that disabled learners are at greater risk than any other category of learner of never going to school, let alone completing key stages of education.

The evaluation concludes that it may be difficult to raise quality in the relatively short period envisaged in the RBA agreement (just as it may prove difficult to improve teachers' proficiency in English over the period 2012-2014). **The GoR may need to consider increasing the capitation grant for schools in the poorest communities, as the much smaller financial contributions to schools are a factor impacting negatively on the quality of education. It must also be noted that while increases in the number of teachers have a SIGNIFICANT positive effect on completion, teachers' motivation levels, proficiency in English (for use as the medium of instruction) and motivation levels need to improve to strengthen this positive effect by enhancing the quality of education.**

Further, if completion is seen as a goal in its own right (possibly as a result of messages from national government inspired by RBA), insistence on reduced repetition and on bringing children who have dropped out back into the system may impact negatively on quality and therefore completion, if only by increasing teachers' workloads and impacting negatively on their morale. How the GoR's messages are interpreted 'on the ground', and how they impact on quality and completion, will need to be a focus of the 2014 evaluation.

The examination of factors impacting negatively on equity shows that **the GoR may need to consider the provision of targeted support for female learners** in districts with low levels of literacy and in districts with high proportions of schools experiencing problems. **The importance of the positive effect of the presence of female teachers on female learners' completion at the primary level is also a factor to be noted by the GoR.**

4.4 Summary of evaluation findings and recommendations

Table 10– Findings and recommendations

Finding 1	While there has been strong annual growth in completion at all three key stages (P6, S3, S6), in its first year of implementation RBA has not SIGNIFICANTLY increased the number of examination sitters.
Finding 2	While the progressive introduction of free education has increased access to education, repetition is a significant issue to address in Rwanda. Repetition at the primary school level does not simply defer examination sitting but SIGNIFICANTLY diminishes the likelihood that it happens at all.
Finding 3	The poor quality of education (in which inadequate teaching resources are an important factor) is leading to excessive repetition; this is an important factor impacting negatively on completion which requires more in-depth investigation in 2014. Recommendations related to finding 3: <ul style="list-style-type: none"> • While increases in the number of teachers have a SIGNIFICANT positive effect on completion, teachers' motivation levels, proficiency in English (for use as the medium of instruction) and motivation levels need to improve to strengthen this positive effect by enhancing the quality of education. • Enhancing the quality of education is important to reduce repetition and thereby increase the likelihood of learners completing key stages of education.
Finding 4	At both the primary and secondary levels, schools in poorer communities are less able to raise financial contributions from parents to supplement the capitation grant, which impacts negatively on the quality of education they can offer; at the secondary school level the econometric modelling exercise found a SIGNIFICANT negative relationship between poverty levels and completion, possibly because implementation of fee-free secondary education is still under way. Recommendation related to finding 4: The GoR may need to consider weighting the capitation grant in favour of schools in the poorest communities.
Finding 5	There is a SIGNIFICANT negative impact on completion in districts with a higher proportion of schools identified as having problems related to teaching resources and infrastructure, and in districts with lower literacy levels. Recommendation related to finding 5 (see also finding 7): The GoR should consider the provision of targeted support for districts with high proportions of schools experiencing problems and districts with low levels of literacy.
Finding 6	The presence of female teachers has a stronger effect on completion for female students than male teachers (perhaps through raising aspirations for female students). Recommendation related to finding 6: The importance of the positive effect of the presence of female teachers on female learners' completion at the primary level is a factor to be noted by the GoR.
Finding 7	Female students have substantially more serious hurdles to overcome in order to complete in districts that have a higher number of schools identified as having problems related to teaching resources and infrastructure, and in districts with low literacy levels. Recommendation related to finding 7 (see also finding 5): The GoR should consider the provision of targeted support for female learners in districts with high proportions of schools experiencing problems and in districts with low levels of literacy.
Finding 8	Disabled children are in the highest category of risk of never attending school, let alone completing key stages of education. Recommendation related to finding 8: Emphasis should be placed by the GoR on facilitating access to quality education for disabled children.
Finding 9	The RBA agreement between the GoR and DFID is highly relevant in the Rwandan context; the lack of emphasis on the quality of education is understandable given the need to focus on indicators for which it is possible to provide readily available data. It has not been possible at this early stage in the RBA pilot to determine what the distinctive key features of the approach are in the Rwandan context, save to say that it shares the common features of PBR approaches. Recommendation related to finding 9: At this stage there is no evidence to support adjustments to the RBA agreement, which should be sustained.
Finding 10	Awareness of and government ownership of RBA as a funding mechanism is high at national level, and the mechanism has been very positively received; a minority view is that the emphasis on completion may militate against quality education. There is strong qualitative evidence of a very positive response to RBA on the part of the GoR and an intensification of the RBA message around completion from the GoR to districts and schools; as yet there is no evidence of new policies or strategies as a direct result of RBA or of changes in the organisational culture of the GoR, which was perceived to be results-oriented prior to the introduction of RBA. Recommendations related to finding 10: The GoR should continue to communicate the 'RBA message' to lower levels of the education system and continue to emphasise the importance of quality education. In communicating the message, the GoR should consider making a public announcement about how the RBA funds will be spent.
Finding 11	There is little awareness of RBA as a funding mechanism at district and school levels, but there is a high degree of awareness of government priorities regarding completion and the importance of teachers' proficiency in English; and evidence of practical strategies at these levels to improve both completion rates and the use of English in the classroom.
Finding 12	GoR has responded to the RBA incentive in a manner that counteracts possible perverse incentives by insisting that students enrol and attend school in order to qualify for sitting the key stage examinations (P6, S3 and S6).

5 The Evaluation Going Forward

This section presents a brief discussion of issues and learning to inform the evaluation going forward.

5.1 The assessment of value for money (VfM)

There are at least two ways to think about VfM in the RBA pilot as the evaluation progresses:

- In relation to no aid being provided, the comparison should be between the total cost and the total benefit. This would take into account all money disbursed, discount a little for its unpredictability and include in the calculation of benefits the rate of return on education, a rate which is well reported in the relevant literature. However, such calculations are fraught with assumptions such as the discount rate.
- In relation to sector support, the costs are the relative unpredictability of PBR aid, the tangible costs of verification and the non-tangible costs of implementing the agreement, such as staff costs. The benefits are the additional completers and a possible reduction in DFID management time.

The approach to be adopted will be presented in the 2014 work plan for discussion with DFID. This is an area where there is potential to learn from the approach adopted by the evaluation of RBA in Ethiopian education; an intervention which has been running longer than its Rwandan counterpart.

5.2 Planned improvements to the econometric model

Given data limitations in 2013, it is hoped to improve the quality of the econometric model for next year's report by obtaining a small amount of extra data. The need for this is felt most keenly at the secondary school level, where additional data for years prior to 2011 would greatly increase the accuracy and robustness of the model. Only a limited amount of extra data would be required, and the evaluation team believe it is feasible to obtain it in a timely fashion. For example, another year of data relating to the number of P6 examination sitters by district would increase the available data by 50%; when combined with 2013 data on S3 and S6 examination sitting this would mean a doubling of data from a low base. We will begin to seek data as early as possible in 2014 as we develop the work plan.

5.3 Unpicking the issue of educational quality

In the 2014 research more in-depth analysis of the various dimensions of quality education will be undertaken, with an emphasis on how various types of input impact on learning outcomes – and, as this 2013 evaluation has shown – on completion.

5.4 Further analysis of gender issues

In the 2014 research more in-depth analysis of the reasons for drop-out and repetition by gender at key stages will be undertaken.

5.5 New emphases in the evaluation questions

The 2013 evaluation findings suggest that new emphases may be needed in the 2014 research. A list of areas to investigate in greater depth follows:

- How innovative is the GoR's response to RBA?
- Are the GoR's messages interpreted 'on the ground', and how do they impact on completion and teachers' proficiency in English? What changes are schools effecting or experiencing that are relevant to the results envisaged in the RBA agreement?
- What is the effect on completion of changes in the quality of education and the availability of teaching resources? What are the various dimensions of quality that impact on learning outcomes and on completion?

- What are the reasons for drop-out among learners with different poverty levels and by gender?
- What is the effect on the quality of education (as defined by learning outcomes) of reducing repetition? What inputs lead to increased completion – and are these the same as or different from those that would achieve improved and equitable learning outcomes?
- Is the GoR using the performance management mechanism of *imihigo* to achieve the results envisaged in the RBA agreement? Are the results included, or included more prominently, in performance contracts at all levels?
- How effective is the new GoR strategy to improve teachers' proficiency in English (under development at the time of writing)? Does the strategy improve the use by teachers of English as the medium of instruction?
- What has been the effect of school-based mentors on teachers' English proficiency?
- What factors favour or hinder completion of key stages for disabled children in school?
- How does the GoR intend to use the RBA funds?

Adjustments to the evaluation questions will be presented in the work plan for 2014 and thoroughly discussed with DFID.

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APPENDICES

Appendix 1 – Evaluation Terms of Reference

Terms of Reference for Evaluation of Project of Results Based Aid in the Education Sector – Rwanda

Introduction :

1. Enormous progress has been made by the Government of Rwanda in substantially expanding access to education in recent years. The government has ambitious plans to further improve access to and quality of education, articulated in its Education Sector Strategic Plan (ESSP) for 2010-2015. Development partners, including DFID, are committed to supporting the Government of Rwanda in implementing its ESSP.
2. DFID is piloting a programme of results-based aid in the education sector as part of the Education Service Delivery Grant (ESDG) of the Rwanda Education Sector Programme (RESP) which will run from 2011/12 to 2014/15. DFID Rwanda is seeking a team of consultants to conduct an impact and process evaluation of the RBA pilot.

The Objective

3. The objective of the programme is to pilot the provision of additional results-based aid based on (a) improvements in the number of students completing primary (P6), lower secondary (S3) and upper secondary (S6) education; and (b) the competency of teachers in Rwanda to use English as the means of instruction. DFID funding for the proposed RBA pilot is in addition to DFID's existing support to the education sector.
4. Key elements of the RBA pilot have been agreed between DFID and the Government of Rwanda and are summarised in Appendix 1 of this TOR.

Results Based Aid

5. Payment by results (PBR) is a new form of aid financing that makes payments contingent on the independent verification of results. PBR is part of a wider UK government agenda and several other government departments are piloting this approach. PBR is strongly referenced in the UK Government Cabinet Office's [Open Public Services White Paper](#), which sets out the Government agenda for public sector reform.
6. Internationally, definitions vary - DFID makes an important distinction between those that involve payments from funders to partner governments (results-based aid – RBA - including Cash on Delivery³⁸) and those that involve payments from a funder or government to service providers (results-based financing - RBF). RBA is a newer and more innovative instrument.
7. Both RBA and RBF have three key elements:
 - payments based on results;
 - recipient discretion – i.e. the recipient has space to decide *how* results are achieved³⁹; and
 - verification⁴⁰ of results as the trigger for disbursement.
8. DFID has a mandate to pilot test a number of different approaches to PBR, in different sectors. These pilots are expected to focus on outcomes and to build in rigorous verification and evaluation from the beginning⁴¹.

³⁸ This form of RBA was proposed by the Centre for Global Development, see <http://www.cgdev.org/section/initiatives/active/codaaid>

³⁹ As with all UK aid, our partnership commitments will still apply.

⁴⁰ This verification involved checking accuracy of results through quality audit processes to ensure tests are free, fair, and standards are consistent over time.

⁴¹ DFID Primer on Results Based Approaches 2010.

The Recipient

9. The recipients of this service are the Government of Rwanda and DFID Rwanda.

Scope of Work

10. Given that this is a pilot, it is important that the project includes rigorous, independent evaluation. DFID and the Government of Rwanda are particularly committed to learning lessons and identifying best practice from this pilot project.

Aim

11. The aim of this piece of work is to conduct a rigorous evaluation of the pilot programme of results-based aid in the education sector in Rwanda. It is expected that the evaluation will have two main elements:

- A process evaluation which will seek to identify the recipient's, and other key actors', response to the RBA, including establishing processes that led to any increased educational results. Among other objectives, this element of the evaluation will seek to determine any contribution made by any observed increase in the number of teachers competent to use English as the medium of instruction to any observed increase in the numbers of students completing P6, S3 and S6.
- An impact evaluation which will seek to address whether or not the RBA pilot led to increased educational results.

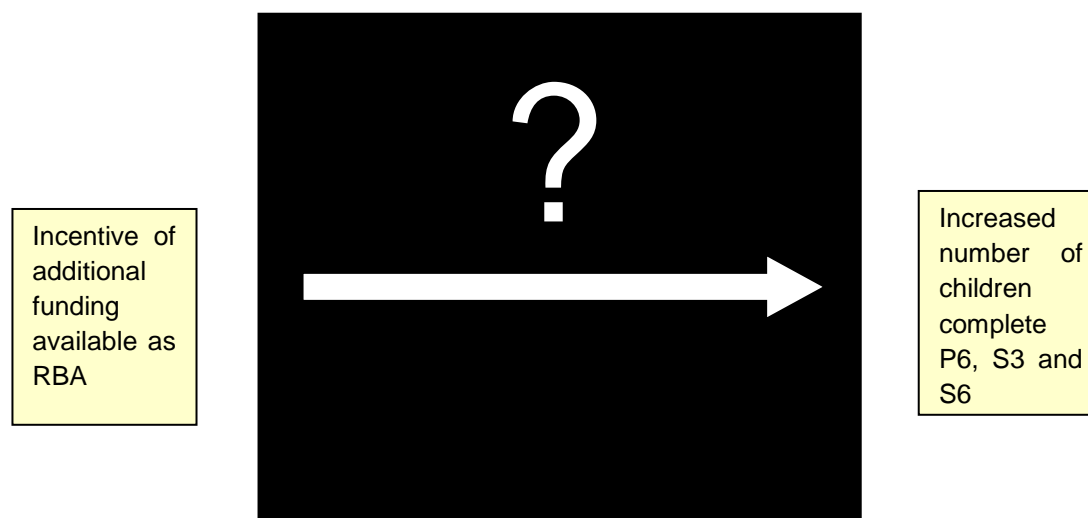
12. In addition, an annual evaluation report will be required. This annual report will serve to provide updates on progress on the evaluation. Further, the annual report will assess how the results-based aid element is working; this will allow for feedback to the design of the pilot and consequent pilot amendments.

13. These two elements of the evaluation are discussed in detail in the sections that follow. Possible questions to be asked under each of these elements are indicated in the relevant sections. However, these are indicative. It is expected that the definitive list of questions would be agreed between DFID-R, the Government of Rwanda and the selected SP through the acceptance of an inception report.

Impact Evaluation

14. The main aim of the impact evaluation element is to determine whether or not the additional incentive of results-based aid had any effect on the number of children completing different levels of education when compared with what would have been achieved without the provision of this results-based aid. This is shown diagrammatically in Figure 1. For the purpose of the evaluation, the comparison is to be between the provision of results-based aid (of up to £9m) and non provision, with all other factors remaining constant, i.e. the counterfactual is non-provision of the RBA pilot rather than provision of a similar value of aid through another modality.

Figure 1: Diagrammatic representation of hypothesis that provision of additional funding as RBA results in more students completing different levels of education (P6, S3 and S6) than would have occurred without RBA payments.



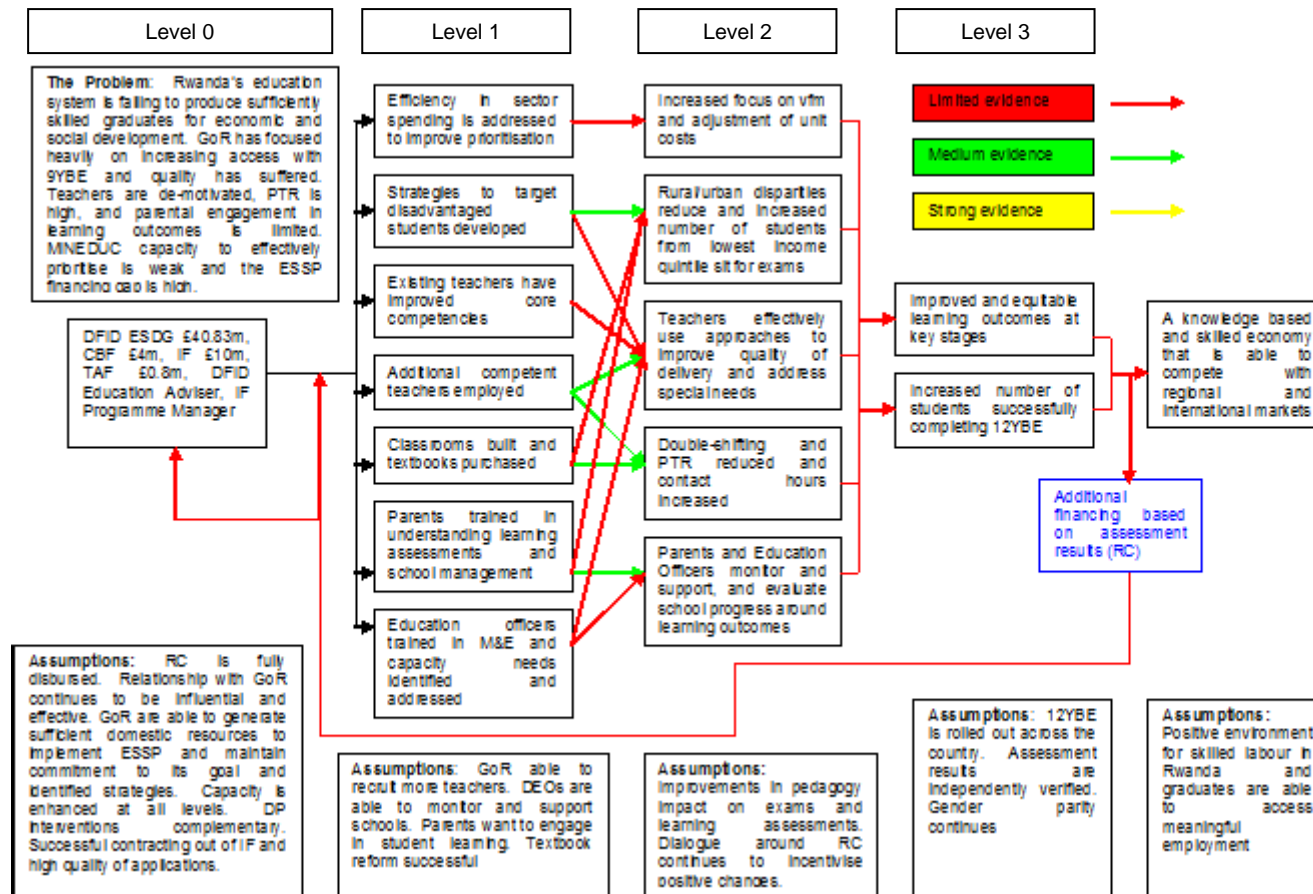
15. The first step in this element will be determining if the number of children completing P6, S3 and S6 has increased. At one level, this is expected to be a simple task based on data reported by MINEDUC and verified by the process outlined above. However, there is another level of more detailed analysis of any observed increases. Relevant questions may include who benefited from these improved results? How equitable are they? Which regions benefitted more/ less? Which socio-economic groups? Boys vs girls?
16. The second step is to determine what the main drivers of the additional results were including what contribution the RBA pilot made to these additional results. For this purpose a counterfactual is required. Experimental and quasi-experimental designs (including phasing designs or pilots at sub-national level) are unlikely to be feasible for the programme due to the barrier of not being able to establish a control group (the pilot is being rolled out nationally).
17. DFID expects the SP to adjust the impact evaluation in response to feedback from the recipient; DFID is open to suggestions about the most appropriate approach and methodology to establish causality in this context. One potential approach that would allow causality to be established is construction of a counterfactual through a prospective mathematical model to predict expected results without the additional results-based aid element. The SP would then be expected to compare actual observed results obtained from all planned elements with inclusion of results-based aid with the mathematical model to see if the observed results fall within or outside the model's parameters. The SP would then analyse these observations to draw conclusions on causal inference between the RBA pilot and the observed results, that is the evidence of whether or not the additional incentive of results-based aid led to a greater level of results than would have been achieved in the absence of this incentive.
18. DFID is open to other appropriate approaches and methodologies to establish a counterfactual, but those identified must be sufficiently robust to allow for causality to be established. In 2012, DFID published a study entitled 'Broadening the Range of Designs and Methods for Impact Evaluation, DFID Working Paper 38' (Stern, E. et al). This study sets out approaches for assessing impact that do not rely on experimental approaches. The study can be found on the DFID website at the following link - <http://www.dfid.gov.uk/r4d/Output/189575/Default.aspx>
19. The SP should also assess the level of results-based aid on offer with respect to the strength of incentive that it creates. For example, an assessment should be made of whether the results-based aid element creates an adequate incentive for improved results. Other questions include: 'Is DFID paying for results that would have been achieved anyway?' 'Are the results stretching enough/too stretching?' The annual evaluation report should recommend whether the thresholds

should be reassessed (up or down) in light of the evidence generated by the evaluation in the previous year.

Process Evaluation

20. The evaluation is also expected to examine the response to the RBA, including the mechanisms through which results-based aid led to any increase in results. This essentially involves 'unpacking the black box' shown in Figure 1.
21. The SP should use the current RESP theory of change model as a framework for this 'unpacking' (Figure 2) as this reflects the Government of Rwanda's thinking on how educational results will be delivered in the country. This has been slightly modified from the version presented in the DFID Business Case to label different levels (0-3) of the results chain and to highlight the importance of teachers' competency to use English as the medium of instruction. Tenders which are not based on this theory of change and/or propose alternate theory of change models will not be considered. The evaluation is expected to assess the extent to which observed changes have occurred as a result of the processes outlined in the RESP theory of change and/ or have occurred as a result of other processes not captured in that model. The evaluation is expected to critically assess the processes by which educational results, such as an increase in the number of students taking examinations, occurs in Rwanda and the extent to which the RESP Theory of Change reflects these processes.
22. Additionally, the SP should gather evidence of the extent to which RESP, in general, and the results-based aid pilot, in particular, have contributed to different elements of the results chain and the extent to which these elements have led to others. Indicative examples of the types of questions that might be asked by the evaluators at different levels of the results chain are presented in Appendix 2. However, bidders may suggest revisions, adjustments or additions to these proposed questions. It is expected that this list of questions would be agreed between DFID-R and the SP through the acceptance of an inception report.
23. It is expected that the SP will also pay particular attention to identifying how any observed changes in the number of teachers competent to use English as the medium of instruction have occurred. For example, this would involve unpacking the extent to which any improvement is as a result of improving the English language skills of existing teachers or as a result key factors including recruiting new teachers already competent in English and the school mentoring programme. Although this approach would involve analysing the contribution made by the school mentoring programme, it is not expected that SP's would conduct a detailed evaluation of that programme.
24. The evaluation team will also be expected to identify any unexpected consequences of RBA including, in particular, any perverse incentives created specifically by RBA.
25. As with the impact evaluation, DFID-R is flexible on the choice of approach and methodologies to underpin the process evaluation. DFID-R considers, however, that there is merit in pursuing a realist evaluation approach. A realist evaluation seeks to collectively understand if an intervention works, (and if the intervention works) for whom the intervention works and under what circumstances the intervention works. In addressing these points, it is critical to explore the context (including economic, social, political, cultural, and historic background, and organisational set-up including resources supporting the intervention). Further, a realist evaluation seeks to explain on a dynamic basis the interaction of context and the intervention, and to test the likely effectiveness of alternative contexts and interventions. Realist evaluation is particularly useful for informing policy, due to the ability to apply findings to other settings.

Figure 2: Proposed RESP Theory of Change (modified from DFID Business Case⁴²)



⁴² The level labels are not part of the original diagram and have been added for ease of reference in these terms of reference.

26. In addition, the evaluation is expected to explore:

- Whether the provision of RBA and the focus on increasing the number of children completing particular levels of schooling had any positive or negative effects on equity issues. Equity issues that the evaluation is expected to explore include whether results-based aid disproportionately benefited:
 - i. One sex more than another?
 - ii. Any geographical area more than another?
 - iii. Those children from higher wealth quintiles?
- Any effect on aid relationships. This element of the evaluation should cover any effects of the RBA pilot on relationships between GoR and DFID, and between GoR, DFID and other development partners. The SP should focus particularly on interactions between the RBA pilot and DFID's policy dialogue with GoR. For example, 'in what way did DFID's policy dialogue contribute to or hinder results achieved?' 'In what way did the RBA pilot increase or reduce DFID's policy dialogue with GoR?'
- Any effect on accountability to citizens. An important theoretical aspect of RBA is its proposed ability to promote citizen empowerment and accountability, for example, through the transparent publication and dissemination of results. The evaluation is expected to explore the extent to which publication has happened and how any observed change was achieved.

Evaluation Scope

27. It is expected that the evaluation would have an initial inception phase in which the SP would:

- Outline their understanding of the evaluation, highlighting how they would address key issues and overcome limitations, in order to ensure that the aim of the evaluation is achieved within the timeframe
- Begin development of the mathematical model or other, alternate approach proposed to be used to generate the counterfactual
- Finalise the method and approach to be used for the process evaluation
- Finalise the indicators to be tracked and the questions to be asked in the process evaluation
- Finalise the timeline and workplan

28. One question that arises in relation to this evaluation is the extent to which the evaluators are being expected to evaluate the whole of RESP or just the RBA component. In principle, the evaluation is focused on the RBA component only. However, as the RBA component is embedded within RESP, in general, and ESDG, in particular, the evaluation will need to make some overall assessment of these instruments.

29. It is expected that the evaluation will adhere to OECD DAC evaluation criteria and standards.

Method

30. For the impact element of the evaluation, the SP will be expected to develop a model for the counterfactual and to compare the verified results reported with expected results generated by this model. This could include mathematical modelling or other robust approaches of establishing impact. Tenders which do not propose a robust approach to impact evaluation and do not include team members with skills in this area will not be considered. It is expected that proposed methods and approaches will be elaborated / finalized during the inception phase.

31. For the process element of the evaluation, it is expected that the method and approach to be used will be finalised during the inception phase. Bidders are however expected to propose methods and approaches in their tenders. Final choice of method to be elaborated at inception and will depend on:

- The indicators to be tracked and the questions to be asked.
- The extent to which relevant primary data is available from MINEDUC

32. In principle, DFID would not expect the SP to have to do large surveys or significant amounts of primary data collection for the process evaluation. However, this would not exclude conducting some primary data collection in focused areas, such as surveys or focus group discussions to assess the degree of citizen empowerment and the perceptions of pupils and parents. This should only be done where it would not be possible/ appropriate for this to be done through national systems. In general, DFID's expectation is that the majority of primary data collection would be done through national data systems, such as EMIS and the system for examinations data. It is expected that data related to the competence of teachers to use English as a medium for instruction would be collected by the Government of Rwanda through surveys of representative samples of teachers in both 2012 and 2014.

Use of Evaluation Findings

33. DFID expects that lessons learned from the evaluation will be used by MINEDUC, DFID and other development partners in a range of different ways, particularly to further improve the education sector in Rwanda and to shape DFID's policy on results-based aid more broadly. Bidders are expected to explain how they would support the process of lesson learning if appointed, including through the provision of policy relevant advice.
34. Also, DFID expects that the SP will include clear and concise recommendations on key lessons concerning the processes and approaches used to achieve intended and unintended results through the RBA incentive.
35. DFID expects the final evaluation report to be formally published, for example, in a peer-reviewed journal. Bidders are expected to outline how they would ensure this in their proposal including suggestions as to where/how this should be done.

Reporting Requirements

36. It is expected that the evaluation will produce the following deliverables against which payments will be made. Timings are based on the assumption that a SP will be in place by end December 2012

A written inception report within six months of contract signing and submitted to DFID-Rwanda. This report would be expected to present the approach to be used for the impact evaluation including the proposed counterfactual; finalise the method and approach to be used for the process evaluation; finalise the indicators to be tracked and the questions to be asked in the evaluation; and finalise the timeline and workplan.

- Annual reports on the progress of the evaluation, updating baseline data and making recommendations for any adjustments to the project design and implementation. It is proposed that the first written reports should be produced within 12 months of contract signing with a follow up annual report each year.
- A draft and final evaluation report covering the whole evaluation period which presents evaluation findings, challenges and lessons learnt with clear recommendations to DFID, MINEDUC and other stakeholders relating to the design and implementation of results-based approaches in the education sector. This should be no more than 30 pages, excluding annexes and supplementary material. The draft written report is due to be submitted to DFID Rwanda by the 20th May 2015 with the final report due on or before the 30th June 2015.

37. The SP will report through the DFID Education Advisor to the RBA Evaluation Steering Committee, comprised of the Government of Rwanda and DFID Rwanda.

38. The Steering Committee consisting of MINEDUC officials, DFID and an external expert will be constituted ensure the independence of the evaluation, provide technical guidance, address any contentious issues and discuss progress. The Steering Committee will also ensure an effective Communications Strategy is in place to guide communications in relation to the Evaluation process and outcomes. Finally the Steering Committee will undertake quality assurance to ensure technical rigour of deliverables.

Suggested Expertise

39. This consultancy requires a small core team of international experts supported by a small team of national experts. Precise team composition can be proposed by bidders. Staff numbers and cost should be proportionate to the overall size of the RBA project.
40. DFID expects that the team leader would be an evaluation specialist with experience of conducting evaluations of this nature with elements of impact and process evaluation. Experience of the education sector is not considered essential for the team leader. Rather, DFID expects a team leader with high levels of evaluation expertise.
41. DFID also expects that one team member would be an expert in mathematical modelling/ alternative approaches to establish causality with experience of creating counterfactuals for the basis of evaluation. Experience of the education sector is not considered essential for this expert. Rather, DFID expects that this team member has high levels of impact evaluation expertise.
42. DFID envisages some aspects of the evaluation being undertaken by a Rwandan partner. This is in line with priorities of sustainability and enhancing local capacity. Preference will be given to bids which will demonstrate that they will build the capacity of Rwandan nationals to undertake evaluation exercises.
46. DFID intends to manage the provider's performance through a suite of key performance indicators. The draft suite of indicators is contained Appendix 3 of this TOR and tenderers are welcome to propose additional or alternative indicators. These indicators will be agreed after the inception phase and ultimately be incorporated in to the contract.

B Background

Pilot of Results-Based Aid in Education Sector in Rwanda

1. The RBA programme forms part of DFID's Rwanda Education Sector Programme (RESP). RESP runs from 2011/12 to 2014/15 and is worth more than £55m. It includes an Innovation Fund of £10m, a Capacity Building Fund of £4m and a Technical Assistance Fund of £0.8m. The largest component of RESP is an Education Service Delivery Grant (ESDG) of £40.83m.
2. The ESDG is made up of two parts. The largest part will consist of £31.83m of sectoral budget support. In addition, the UK will provide up to an additional £3m per year in the financial years 2013/14, 2014/15 and 2015/16 based on achievement of agreed results above currently-expected levels. This element is termed "results-based aid" and is considered to be an innovative way of providing development aid. Any funds payable as results-based aid will be paid as additional sectoral budget support.
3. The RBA component will be paid in annual tranches of up to £3m per year in UK financial year 2013/14, 2014/14 and 2015/16, based on the number of students completing various stages of schooling (P6, S3 and S6) above the 2011 baseline. Taking a national examination will be used as an indicator of having completed a particular level of education. Payments will be made based on the number of students sitting the examination the previous year above the 2011 baseline multiplied by an agreed unit price, subject to the annual ceiling of £3m. For each examination level (P6, S3 and S6), there will be two different unit prices - a higher price for each additional student above previous year's levels and a lower price for each additional student above the 2011 baseline but below the previous year's performance.

4. An additional payment will be made in 2015, based on the number of teachers in 2014 with improved English language competency over a 2012 baseline. An independent verification will be undertaken to ensure the accuracy and reliability of data being used as the basis for results-based aid payments.

5. The main purpose of the evaluation is to determine the extent to which the RBA led to increased levels of results in comparison to what would have happened had the RBA not been provided. In addition, the evaluation is expected to learn key lessons about the processes and approaches used to achieve the observed results.

6. The same financial incentive will apply to all students completing levels of schooling regardless of gender or geographical location. However, the evaluation will be expected to explore the effect of results-based aid on equity issues.

7. It is proposed that any remaining funds after RBA payments have been made will be retained in Rwanda but used in a sector other than education. The evaluation should explore any effects that this retention of funds in country has on the RBA incentive for the Government of Rwanda (See Appendix 2, Level 0, Question 1).

8. A summary of the RBA project is presented in Appendix 1. This takes the form of a proposed annex to the Memorandum of Understanding concerning DFID's overall support to the education sector in Rwanda.

Results-Based Aid Pilot in the Education Sector: Proposed Annex to Memorandum of Understanding

Results-Based Aid Pilot in the Education Sector: Annex to MOU

A. Parties and purpose

1. This annex outlines key, agreed elements of a pilot of results-based aid (RBA) in the education sector in Rwanda. In this pilot, DFID will make additional Sector Budget Support payments in 2013-2015 to the Government of Rwanda for results achieved in academic years 2012, 2013 and 2014. This is referred to as a Results Compact in the DFID Rwanda Education Sector Programme Business Case (2011-2015). This annex guarantees that DFID will make a fixed payment for each additional unit of progress towards educational outcomes, as stipulated below.
2. The arrangements under which the Grant will be disbursed are set out in the attached MoU and DFID's Partnership Commitments. The Government of Rwanda will decide on the use of any funds received.

B. Term of agreement and possibility of renewal

3. This agreement is from date of signature until May 2015. There is a possibility of renewal and/or expansion of the programme depending on the results of the pilot. Any renewal or expansion would require the agreement of both DFID and the Government of Rwanda.
4. In extreme circumstances, if DFID is concerned that the provisions of this agreement, or partnership commitments made under the arrangement may not have been fulfilled by the Government of Rwanda or if any changes occur which significantly impair the development value of this project/ programme, DFID will discuss with the Government of Rwanda and where appropriate undertake assessment. If warranted, such an assessment could lead to cessation of this agreement.⁴³

⁴³ More details of situations of this nature are provided in the main body of this memorandum of understanding.

C. Results and indicators

5. The main results to be rewarded in this pilot will be the number of children completing key stages of 12 year basic education, namely year 6 primary (P6), year 3 secondary (S3) and year 6 secondary (S6). These results will be measured by the number of children taking the P6, S3 and S6 examinations annually. These results should include all students taking each of these examinations for the first time regardless of the sector in which they are learning, i.e. public or private. However, students who are retaking an examination should be excluded from the figures of those taking the examination in a particular year. Payments will be made for any results achieved above 2011 levels. Payments will only be made after independent verification of the results. Payments will be made as set out in section D and will be an additional DFID contribution to the Government of Rwanda's efforts to meet ambitious education targets as articulated in the Education Sector Strategic Plan (ESSP).
6. In addition, it is agreed that an additional one-off payment will be made in 2015 based on results achieved to improve the English language competency of teachers in the education sector. It is agreed that this payment would be based on assessing the English language skills of a representative sample of Rwandan teachers at baseline (2012) and in 2014, as outlined in the payment schedule below. The level of competence in English required for a primary and secondary school teacher will be agreed by Government of Rwanda in consultation with DFID and will be set out as a further annex to this agreement. Data from this assessment would be used to calculate the number of teachers in Rwanda achieving an agreed level of competency in English. DFID will then pay the Government of Rwanda an agreed amount for every additional teacher with that level of competency in English.

D. Payment schedules

7. It is agreed that DFID will pay the Government of Rwanda additional sums up to a ceiling of £9m in the three year period 2013-2015. Payments will be made annually in 2013, 2014 and 2015 based on verified results of the previous year's exams, i.e. 2012, 2013 and 2014. RBA payments will be made no later than April/May each year.

GoR FY	2011/12	2012/13	2013/14	2014/15
SBS	£8.57m	£6.37m	£7.72m	£9.17m
RBA		Up to £3m	Up to £3m	Up to £3m

Table 1: SBS and RBA Disbursement schedule

8. Payments will be based on independently verified data, as set out in section F below.
9. It is agreed that payments will be calculated as follows.
 - For each additional child sitting the P6 exam above the previous year's results, DFID will pay the Government of Rwanda £50. In addition to this payment, in years 2014 and 2015, DFID will also pay the Government of Rwanda £10 for each additional child sitting the P6 examination above 2011 levels.
 - For each additional child sitting the S3 exam above the previous year's results, DFID will pay the Government of Rwanda £100. In addition, in years 2014 and 2015, DFID will also pay the Government of Rwanda £10 for each additional child sitting the S3 examination above 2011 levels.
 - For each additional child sitting the S6 exam above the previous year's results, DFID will pay the Government of Rwanda £50. In addition, in years 2014 and 2015, DFID will also pay the Government of Rwanda £10 for each additional child sitting the S6 examination above 2011 levels.

10. So for example, if 77,473 students took the S3 exam in 2011 and 85,000 take it in 2012 DFID would pay the Government of Rwanda $(85,000-77,473)*£100 = £752,700$ in 2013. If 93,000 students then took the S3 exam in 2013, DFID would make two payments to the Government of Rwanda in 2014, namely $(93,000-85,000)*£100 = £800,000$ plus $(85,000-77,473)*£10 = £75,270$. This would be a total of £875,270. More details of the calculations involved are available in an Excel calculator developed by DFID.
11. In addition, it is agreed that in 2015 DFID will also pay Government of Rwanda £50 per additional teacher competent to use English as the medium of instruction. This will be based on a baseline assessment conducted by the Government of Rwanda in 2012 and a follow-up assessment conducted by Government of Rwanda in 2014. Any payment due would be made in 2015 based on independently verified results and subject to available funds within the £9m three year ceiling as specified in paragraph 6 of this annex.
12. Payment levels can only be changed with the express written agreement of both DFID and Government of Rwanda. DFID and the GoR will meet to review programme related impact, targets and costs immediately after results have been verified and the annual evaluation report received.

E. Use of funds

13. The funds that will be provided by DFID through the RBA pilot can be used as desired by the Government of Rwanda. DFID will not provide any restrictions for the use of these funds in accordance with the principles of results based aid⁴⁴. It is expected that these will be used to further improve the results being tracked, namely the number of pupils completing key education levels – P6, S3 and S6. Any decisions as to how these funds will be used rests solely with the Government of Rwanda. In line with the overall provisions of this memorandum of understanding, DFID retains the right to access audited financial statements, prepared by the Government of Rwanda, to verify that the income received has been declared and used to support the country expenditure.

F. Data verification, citizen empowerment, transparency and accountability

14. It is essential that data used to trigger payments is accurate and reliable. It is therefore necessary for the data reported for payment purposes to be verified independently. Payments will **only** be made on the basis of independently-verified results. DFID will hire an external contractor to conduct this work. DFID will select the contractor in consultation with the Government of Rwanda. Government of Rwanda agrees to cooperate fully with the work of this contractor which will involve checking the systems for collecting and reporting P6 to S6 exam participation rates and checking a data sample. The external contractor will also verify the Government of Rwanda baseline and end assessment of teacher competence in English language. Data verification needs to be both robust and timely. Government of Rwanda will provide DFID and designated verification and evaluation teams with full access to any necessary data required to validate results achieved. Both DFID and Government of Rwanda recognise and agree that if issues are identified in the data verification process, this may result in funds being delayed and/or withheld.
15. In line with DFID's Transparency commitments, the Government of Rwanda gives consent for this arrangement, and any subsequent amendments, to be published on DFID's website. The Government of Rwanda also agrees to make this agreement and the annual results of the exercise publically known.
16. It is essential that the design of the Results-Based Aid programme be communicated to schools and parent teacher associations (PTAs). Government of Rwanda agrees to ensure that this

⁴⁴ See for example DFID (2010) *Primer on results based aid and results based financing* and Birdsall, Savedoff and Mahgoub (2011) *Cash on Delivery: A New Approach to Foreign Aid*

happens. This will ensure that teachers and parents are aware that the education sector will receive additional funds based on increasing the number of students taking P6, S3 and S6 examinations and the English language competency of teachers.

G. Evaluation and lesson learning

17. As this is a programme to pilot an innovative way of providing aid, both DFID and Government of Rwanda agree that it is essential that lessons are learned from this process. This will be done through a rigorous evaluation. The evaluation will seek to determine the extent to which the results-based aid has had an effect additional to what would have happened without it.
18. In addition, both DFID and the Government of Rwanda are committed to learning lessons about the processes followed to achieve the expected results. This will be done through a rigorous process evaluation based on a causal chain leading from the inputs and processes to expected outputs and outcomes. Indicators and/or evaluation questions will be identified for each of these elements/levels. (These process indicators will not be used as a basis for payments but will be used solely for learning purposes). The evaluation will also explore unexpected consequences of the results-based aid programme. Government of Rwanda agrees to cooperate fully with any evaluations of the RBA pilot project including through allowing access to data that the evaluation team requires and allowing the evaluation team access to MINEDUC/REB staff, schools, teachers and students.

H. Management arrangements

19. It is expected that there will be issues which arise in the course of operations of the RBA pilot which will require discussion, dialogue and resolution. These will be handled through the routine DFID/PS forums which take place on a monthly basis.

I. Amendment, dispute resolution and termination

20. Amendments to this arrangement need to be agreed by both governments in writing.
21. In case of dispute arising, attempts will be made to resolve these through the regular meeting between DFID and the Permanent Secretary of the Ministry of Education.
22. This arrangement may be terminated by three months written notice from either government. Any decision of either government regarding termination of this Arrangement will first be subject to discussion.

J. Duty of Care (DoC)

The Supplier is responsible for the safety and well-being of their Personnel (as defined in Section 2 of the Framework Agreement) and Third Parties affected by their activities under this Call-down Contract, including appropriate security arrangements. They will also be responsible for the provision of suitable security arrangements for their domestic and business property.

DFID will share available information with the Supplier on security status and developments in-country where appropriate. DFID will provide the following:

- All Supplier Personnel will be offered a security briefing by the British High Commission & DFID on arrival. All such Personnel must register with their respective Embassies to ensure that they are included in emergency procedures.
- A copy of the DFID security briefing notes (and a further copy each time these are updated), which the Supplier may use to brief their Personnel on arrival.

The Supplier is responsible for ensuring appropriate safety and security briefings for all of their Personnel working under this Call-down Contract and ensuring that their Personnel register and

receive briefing as outlined above. Travel advice is also available on the FCO website and the Supplier must ensure they (and their Personnel) are up to date with the latest position.

FCO advises against all but essential travel to within 1km of the border with DRC and Burundi, except to the towns of Gisenyi (Rubavu) and Cyangugu (Rusizi), and major border crossings to Burundi. This is because of instability in those countries' border areas. From 22 October, the border crossings between Rwanda and the DRC will be closed from 18:00 hours until 06:00 at Bukavu and Goma. It is likely these restrictions will remain in place for the foreseeable future. The FCO advises against travel to parts of DRC and Burundi. The areas close to the borders with Uganda and Tanzania are less dangerous but we advise travellers to keep to main roads and use recognised border crossings. The Supplier will not be required to work in these areas against FCO advice.

Tenderers must develop their Tender on the basis of being fully responsible for Duty of Care in line with the details provided above and the initial risk assessment matrix developed by DFID (see Appendix 1 of this ToR). They must confirm in their Tender that:

- They fully accept responsibility for Security and Duty of Care.
- They understand the potential risks and have the knowledge and experience to develop an effective risk plan.
- They have the capability to manage their Duty of Care responsibilities throughout the life of the contract.

Further information on Duty of Care is provided in the Supplier Instructions (Volume 1 of the Mini-Competition Invitation to Tender Pack).

TOR Appendix 1 - Summary risk assessment matrix

Project/intervention title: PO – Evaluation of Project of Results Based Aid in the Education Sector – Rwanda

Location: Rwanda

Date of assessment: 06/09/2012

Assessing official: Sifa Uwera

Theme	DFID risk score
OVERALL RATING⁴⁵	2
FCO travel advice	3
Host nation travel advice	Not available
Transportation	2
Security	2
Civil unrest	1
Violence/crime	2
Terrorism	3
War	1
Hurricane	1
Earthquake	3
Flood	2
Medical services	3
Nature of project/intervention	2

1=very low risk	2= low risk	3=medium risk	4=high risk	5=very high risk
Low		Medium	High	

⁴⁵ The overall risk rating is calculated using the MODE function which determines the most frequently occurring value

TOR Appendix 2 - Possible evaluation questions at different levels of the RESP results chain

Results chain element		Possible evaluation questions
LEVEL ZERO		
1	RESP financing	Are there any issues relating to the way DFID provides funds which have affected delivery of RBA pilot? In particular, (i) have there been any positive or negative effects of having an annual financial ceiling; (ii) have there been any positive or negative effects of the way in which funding left over from RBA has been used; (iii) have there been any positive or negative effects of having fixed, annual tranches available rather than a variable amount based solely on results achieved?
LEVEL ONE		
1	Efficiency in sector spending is addressed to improve prioritisation	What evidence is there that (i)RESP (ii)RBA has resulted in (a) more efficient sector spending (b) improved prioritisation? What effect (if any) has there been on value for money?
2	Strategies to target disadvantaged students developed	What strategies does MINEDUC have to target disadvantaged students? How has (i) RESP (ii) RBA contributed to these?
3	Existing teachers have improved core competencies	To what extent have the core competencies of teachers improved, e.g. in using English as the medium of instruction? How has (i) RESP (ii) RBA contributed to these?
4	Additional competent teachers employed	How have patterns of teacher employment changed over the lifetime of RESP? Is there evidence that recently-employed teachers have higher levels of competency, e.g. in using English as the medium of instruction? How has (i) RESP (ii) RBA contributed to these?
5	Classrooms built and textbooks purchased	How many classrooms have been built? How many textbooks purchased? How has (i) RESP (ii) RBA contributed to these?
6	Parents trained in understanding learning assessments and school management	How many parents have been trained to understand learning assessments? How many parents have been trained in school management? How has (i) RESP (ii) RBA contributed to these?
7	Education officers trained in M&E and capacity needs identified and addressed	How many education officers trained in M&E? What capacity needs were identified? How were these addressed? How has (i) RESP (ii) RBA contributed to these?
LEVEL TWO		
1	Increased focus on value for money and adjustment of unit costs	What evidence is there of an increased focus on value for money? What has happened to unit costs? To what extent do these changes reflect (a) increased efficiency in sector spending (b) improved prioritisation
2	Rural/urban disparities reduce and increased number of students from lowest income quintiles sit for exams	Are there any differences/trends in the results observed in terms of children completing different levels of education for (a) boys vs girls; (b) rural vs urban settings; (c) children from highest and lowest wealth quintiles? To what extent are any changes due to: (i) specific strategies to target disadvantaged students; (ii) patterns of classroom construction/textbook distribution; (iii) patterns of training parents?
3	Teachers effectively use approaches to improve quality of delivery and address special needs	What evidence is there of teachers effectively using approaches to (i) improve quality of delivery (ii) address special needs. To what extent are teachers in Rwanda able to use English as a medium of instruction? To what extent are any changes due to (i) specific strategies to target disadvantaged students;(ii) teacher training in learner centred methodologies; (iii) more teachers employed and better remuneration; (iv)

Results chain element		Possible evaluation questions
		better trained education officers
4	Double shifting and PTR reduced and contact hours increased	To what extent has (a) double shifting reduced; (b) pupil teacher ratio reduced; (c) contact hours increased? To what extent are any changes due to (i) more teachers being employed and being better remunerated; (ii) more classrooms being built and more textbooks being distributed?
5	Parents and Education Officers monitor and support, and evaluate school progress around learning outcomes	To what extent do (a) parents; (b) Education Officers (1) monitor; (2) support and (3) evaluate school progress around learning outcomes? To what extent are any changes due to (i) parent training; (ii) Education Officer training?
LEVEL THREE		
1	Improved and equitable learning outcomes at key stages	What evidence is there of improved learning outcomes? How equitable are these? To what extent are any changes due to (i) increased focus on value for money and adjustment of unit costs; (ii) addressing inequalities between (a) rural/urban areas;(b) lowest and highest wealth quintiles; (iii) teachers more effectively using approaches to improve quality of delivery and address special needs; (iv) reduction of double shifting, reduction of PTR and increasing contact hours; (v) increased monitoring, support and evaluation from (a) parents and (b) Education Officers?
2	Increased number of students successfully completing 12YBE	What has happened to numbers of students completing different stages of 12YBE? P6? S3? S6? To what extent are any changes due to (i) increased focus on value for money and adjustment of unit costs; (ii) addressing inequalities between (a) rural/urban areas;(b) lowest and highest wealth quintiles; (iii) teachers more effectively using approaches to improve quality of delivery and address special needs; (iv) reduction of double shifting, reduction of PTR and increasing contact hours; (v) increased monitoring, support and evaluation from (a) parents and (b) Education Officers?

TOR Appendix 3 - Generic Key Performance Indicators

DFID Key Performance Criteria	Sub Criteria
	How do you rate performance against:
Quality & Delivery	Quality and timeliness of milestones/deliverables
	Quality of monitoring, evaluation and reporting
	Project impact / key results on track according to programme logframe
Management, Strategy & Financial	Monthly and quarterly reports submitted to agreed deadlines
	Grants are disbursed within agreed deadlines
	Ability to deliver in line with agreed budget
Personnel	Performance of team leader
	Performance of other team personnel
	Performance of country based teams
	Timeliness in replacing personnel with appropriate level of approval from DFID
	Managing underperformance
Customer Relationship	Risk Management
	Responsiveness to stakeholders
	Impact of outreach and external communications
	Regular communication with DFID and delivery of weekly meeting action points
	Development of new delivery partners
	Attention to DFID policies
Innovation and Continuous Improvement	Provider has sought to improve on the last reporting periods performance
	Provider has delivered new ideas which have benefited the programme
Corporate Social Responsibility	Activities have resulted in a positive effect on sustainable/environmental considerations
	Supply Chain: the amount of local contractors used within the supply chain to deliver the programme
	Employment: Apprenticeships, local opportunities
Overall Performance in terms of Value for Money	

Appendix 2 – List of Interviewees

National level government/ non-government organisations consulted	Number of interviewees
Action Aid Rwanda	X1
British Council	X1
DFID (in the UK and in Rwanda)	X5
Education Development Center Rwanda	X1
FAWE Rwanda	X2
Girl Hub Rwanda	X4
Innovation For Education	X2
MINEDUC	X3
Plan International Rwanda	X2
Rwanda Education Board	X2
Save the Children International Rwanda Programme	X1
Transparency International Rwanda	X2
UNICEF	X1
VSO International	X3
Wellspring Foundation	X1
District and school level informants	Number of interviewees
District education officers	X8
Mayors	X7
Vice- mayors (education portfolio)	X6
Sector education officers	X20
School principals	X20
Groups of teachers	X20
Groups of parents	X19
PTA chairpersons	X20
Groups of learners	X20

upperquartile