REPUBLIC OF RWANDA

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THE ASSESSMENT OF THE CATCH-UP PROGRAMME

REPORT

Kigali, September 2005

Contents

Introduction	Pg 2
What are the characteristics of an appropriate response for "hard to reach" children in Rwanda?	Pg 3
Priority children and youth	Pg 3
Methodology and Operation	Pg 6
Summary recommendations (figure 2)	Pg 14
Priorities for Expansion	Pg 14
The costs and benefits of a program for out of school children in Rwanda	Pg 19
Conclusion	Pg 19
References	Pg 26
Key Informants	Pg 27
Appendix 1 – Illustration of cohort method	Pg 29
Appendix 2 – District data	Pg 30
Appendix 3 – Cost calculations notes	Pg 33

Acknowledgements

We wish to express gratitude to various persons and institutions that provided us with information, insights, feedback and advise as we gathered information and put this report together.

Sincere thanks go to MINEDUC officials especially the S.G Mr. Narcisse Musabeyesu, the Director of Non-formal and Vocational Education, Mr. William Ntidedereza, Ms G.Kayitesi Catch-Up Coordinator and Mr. Gerald Bimenyimana, officer Catch-up programme.

Our sincere gratitude also goes to the UNICEF Education Department Team headed by Mr. Charles Nabongo for all the support.

Last but not least special thanks go to the learners, teachers, head-teachers and local authorities in the field and centres visited.

Assessment and Development Plan for a Programme to Meet the Needs of Out of School Children in Rwanda

The objective of the assessment of the catch up program is to provide a set of recommendations for expanding efforts to provide basic education to orphans and other vulnerable children in Rwanda rather than assess the 'success' of this small pilot initiative. Insights from observations and interviews at the existing sites are combined with an analysis of relevant data and policies to develop a set of recommendations for expansion of education to "hard to reach" children.[1] The assessment and the recommendations that emerge from the assessment are intended to reinforce and help operationalise Government of Rwanda policies and plans – especially those contained in the Education Sector Strategic Sector Plan 2005 - 2010.

Efforts to ensure that orphans and vulnerable children enrol and persist in school are by necessity complex and multisectoral. While the recommendations do include observations concerning policies and actions in other sectors that are important compliments to MINEDUC efforts, the primary focus of this assessment and the recommendations is the education sector.

The numbers of out of school children in Rwanda have been variously estimated at …… (We also provide some more geographically disaggregated estimates). A number of previous studies have also attempted to describe and quantify the nature of the vulnerabilities or the obstacles to enrolling and persisting in school in Rwanda. This assessment attempts to describe an initiative for meeting the needs of out of school children that is consistent with our analysis of the types of children best served by an education initiative, their location and their goals and aspirations.

The analysis will: a) describe the characteristics of an initiative for out of school children, b) identify geographical priorities and priority children for expansion of an initiative, and c) depict the necessary enabling environment for reaching out of school children in significant numbers and d) provide a costed scenario for expanding the capacity of the education sector to provide basic education for vulnerable children.

[1] The term used in the Education Sector Strategic Plan

I. What are the characteristics of an appropriate response for "hard to reach" children in Rwanda?

A). Priority children and youth

Findings – Priority Children and youth:

1. *Children in the pilot programme sites are older than contemplated in the original design (13-17 rather than 10-14)*
2. *Fewer children out of school because of being recently displaced – tend to be orphans, child heads of households and siblings of child head of households and children who must work*
3. *Fewer than 1/3 of children interviewed expressed desire of returning to the formal school*
4. *Most recent year's number of children reintegrating to formal school also 1/3 or less*
5. *Participation in level 1 (originally designed for children dropping out of P1 and P2) has fallen to 50 percent of the first year levels in the 3 years of the pilot.*
6. *UPE has been successful with younger children (7-11) but 40-50 percent of 12-16 year olds not attending school*
7. *In year 3 of the catch up pilot girls were underrepresented. The one site with a significant number of girls was a site where school feeding and the cooking oil for girls programme were offered.*

Recommendations:

1. *Focus programme on 12-17 year olds combined with efforts to get recent drop outs among young children reintegrated quickly into formal school without entering a programme for out of school children*
2. *Provide more emphasis on tangible outcomes for children not intending or able to reintegrate into formal school – children must not feel that they just 'sit at home' when they complete the programme (3 levels)*
3. *Enrolling and retaining girls must receive special attention. Program expansion should be designed with specific interventions to increase participation and retention of girls.*

i) Age:

The Government of Rwanda has made significant progress in reaching more children with basic education services. The official NER for children between the ages of 7 and 12 is 93 percent with a slight advantage for girls. An analysis of the actual enrolment figures[2] by school in 2003/2004 suggests that much of the growth in the primary system results from higher levels of enrolment among younger children in the first grades of primary. For more than half of the districts grade 1 to 3 enrolment represents nearly 70 percent of total primary enrolment. If enrolment rates were homogenous across the age groups grade 1 to 3 enrolment would represent somewhere near 50 percent of total primary enrolment. The fact that grade 1 to 3 enrolment for most districts is much more than one half the total primary enrolment suggests that out of school children tend to be concentrated in the ages that would normally be associated with grades 4 through 6[3].

50 percent of the districts analyzed had estimated enrolment rate for the 12-16 years of age cohort of 53 percent or less while the median enrolment rate for the 7 to 16 cohort was over 80 percent. This suggests that successful policies of promoting school attendance have resulted in fewer children in the 7 to 11 cohort being out of school but continuing difficulties in meeting

[2] School level data was provided for about 1,500 of Rwanda's 2,226 primary schools. Due to technical problems 2003/2004 school level data for schools in Ruhengeri and Kibungo was unavailable.

[3] Some of the children in the 12-16 age cohort are enrolled in P1 to P3. These children would be at least two years behind and are likely to fail to complete primary school (P6).

the needs of children 12 and above who may have attended school at one time or perhaps never attended school.

The analysis of enrolment and census data is consistent with trends observed in the 3 pilot government catch up sites. Enrolment of children in the first level of the program originally designed to attend to the needs of children who had left school in the during P1 or P2 has fallen considerably to less than half the number from year one of the programme[4] while enrolment in the second level and third level was higher in year 3 than in year 1.

The age of children attending the catch up program on the day of the visit was gathered in most sites. In general across all levels there were very few children less than twelve years of age. Nearly half of the learners present were older than 13 years of age with a significant minority in the 16 and older group.

The success of efforts to promote formal school participation among younger children and the shift in age profiles in the catch up pilots suggests that the need for an alternative opportunity for access to basic education is relatively more pronounced in the 12 to 17 year old cohort. Our group interviews with students participating in the pilot also indicated that many children did not intend to reintegrate into the formal school and saw the program as an alternative that better fit their life situation. The demand for an alternative expressed in the interviews and in an analysis of the trends in enrolments and demography suggest that a focus on the 12 – 17 year old group is perhaps more appropriate than the focus in the pilot phase.

ii. Vulnerabilities

The initiative to start Catch-up centres as a pilot project was reached by the Ministry of Education after realising that there were a number of obstacles that had/were keeping children out of formal school. Among these were children displaced by war and genocide in the 90s, (returnees and internally displaced children) children heading households, working children, children in very poor households and other kinds of vulnerabilities.

The main objectives of this programme was to provide an education to these children (most of them who were above normal age for starting primary school) that would help them catch-up and reintegrate into formal school. It was also realised that perhaps a smaller number of these children would never reintegrate into formal school but would have to complete their basic education through this programme. The target age was between 9-14 years, although later older children, especially girls were enrolled.

In view of an expanded programme for out of school children, it will be important to re-evaluate the objectives of such a programme and the target group to be served. From the field visits made to the centres, it was observed that other than the different age group that should be targeted for example, the nature of vulnerabilities have also changed slightly. Some of the factors that keep children out of school cited by learners talked to include:

Child labour/Working children
Children stated the need to work and earning a living as an obstacle to joining/keeping in school for most of them whether they have parents or not. MIFOTA estimates that over 170,000 children under age 15 are engaged in substantial work outside their households[5].

[4] 397 children in first year of the program 172 children this year (year 3)
[5] National Policy of Orphans and Other Vulnerable Children, 2003: p. 20

Some of the work that these do is mostly found on the streets, markets, on farms, tea plantations, in households where they are employed as cheap labour etc. these working children are attracted to the Catch-up programme because it is flexible and allows them time to work while they still get an education. Such children do not see reintegration into formal school as they will continue to need to combine study and work,

Children living in households headed by children
Such children are also common in catch-up centres and as some of them pointed out they have to alternate with their siblings in order to attend school. According to the OVC policy (2003), the number of children living in this type of households is unknown and is likely to increase considering the high rates of HIV infection among the adult population.

Children in very poor households
It appears the Catch-up programme has come to be associated with children from very needy families. Some of the learners expressed the need to get even more substantial help such as clothing and food staffs since their households are too poor even to provide this regularly. Such children are also concerned about the future in case they qualify for secondary education since they are helpless financially. They are aware that the little support that they get now does not extend to secondary level. This again points to the need to relate Education for All policy with programmes to promote poverty alleviation so as to improve house holds standards of living.

Other factors to consider:

Gender related issues
Although girls are mentioned specifically as a target for this programme it was observed that they are still fewer in centres than boys.[6] However at one of the centres with a school feeding programme, boys were noticeably absent on that day.[7] The school authorities attributed this to the fact that boys would rather attend the market day to earn some money rather than be in school and that more boys feel left out on the 'oil for girls' programme, as a result some have dropped out of school.

On the other hand at the Kigali centre visited, girls feel marginalised since unlike boys they are not provided with accommodation. Some of those talked to point out that many of them experience problems staying with relatives, friends and employers as they struggle to attend school at the catch-up centre.

This suggests that different interventions may work better for a specific gender and as responses are planned there should to be sensitivity since there could be a risk of alienating one group as we seek to support the other.

Children with disabilities
No children with disabilities were observed in the pilot catch-up centres although this is a programme that would be expected to target such a group that is normally excluded from formal school. According to literature reviewed about 10% of all learners suffer from some form of disability[8] thus their absence from school and more especially from programmes such as catch-up points to the existence of some barriers. It will be important therefore that as the programme is expanded the needs of this group are also considered.

[6] Some informants indicate that as girls grow older most of them are thinking of getting married, and would rather go to attend religious instructions at the churches as they prepare for marriage rather than go back to school.
[7] In Mugina A some of the classes visited, one classroom of 20 learners, had only 5 boys, in another of 22 learners only 2 were boys. Both were level 2 classes and it was a market day.
[8] ESSP 2005-2010, Abagi at el, 2002

B Methodology and Operation

Findings – Methodology and Operation:

- *Pilot sites highly dependent on direct action of MINEDUC Kigali –training, support, securing post programme placement, etc. This has resulted in difficulties in administration, continuity and maintaining momentum of the initiative in the districts. There was also a lack of documentation concerning the program.*
- *Pilot sites have a significant number of children who travel long distances or find accommodation near pilot sites.*
- *Site location in formal schools facilitates supervision and management as well as reintegration into formal school – however the growing number of older learners express a desire for outcomes not focused on reintegration into formal schooling and many learners even in areas near the pilot sites cannot attend because of the need to work.*
- *Links to other opportunities for further training and education are very problematic. Vocational programmes require fees, demand is high and places are few in many areas. Secondary education has significant direct costs that make attendance very difficult for those very few children in the programme who do manage to pass the PLE (even when fees are eliminated).*
- *Teachers have received in-service training in the area of active and participative methods – all teachers in the pilot sites were enthusiastic about 'the approach.*
- *Despite training received classrooms observed had a traditional format with teachers lecturing.*
- *Children feel the program is more welcoming to poor and working children and feel the teachers in the program are approachable.*
- *Despite the training of teachers to relate program content to the lives of the learners the curriculum and approach have an academic (reintegration) focus.*
- *Teachers guides outline content but methodological orientation depends on the in-service training provided. The content is condensed academic curriculum.*
- *Learners had only exercise books. Program relies on willingness of formal school to provide texts when available*
- *Learners expressed concern at the ambiguity of program outcomes for those who do not continue formal study – fear of 'just sitting at home' after completing the program.*

Recommendations – Methodology and Operation

1. *Meeting the needs of out of school children will require multiple sites in a district*
2. *Managing an expanded program requires significant investment in strengthening of capacity of the district to, identify sites, implement mobilization campaigns, provide in-service for teachers (via local TTCs), develop linkages to other programs (NGOs and government), and monitor and report on program outcomes.*
3. *MINEDU- Kigali should assume the role of: program direction; leading development of a new curriculum, teacher in-service modules, program documentation and student materials; program evaluation; training district staff and in-service providers; quality assurance and advocacy*
4. *A new curriculum focused on tangible and useful outcomes for children who do not reintegrate into formal schooling should be developed*
5. *Teacher training modules consistent with the new curriculum should be developed. Training should include improving content knowledge of teachers in addition to improving teaching methods*
6. *Student materials that help teachers and students ensure program continuity and ongoing assessment should be developed*

i. Management and organisation

Structure and timing

The structure of the programme was designed in such a way that Level 1 combines what is covered in P1- P2 in formal school, Level 2 covers P3-P4 and Level 3 covers P5-P6 of the formal school programme. Thus the catch-up programme is an accelerated/ condensed 3-year programme of 6 years primary education in formal school. However, as observed earlier Level 1 enrolments are falling partly because of UPE campaign (many have enrolled in school) but

also because most children at this level are still young and their labour is not needed as yet, therefore they are not dropping out.

The learning schedule is divided into morning and afternoon so that learners can choose to study morning or afternoon. However, nearly all centres visited, Level 3 studies morning and afternoon in order to prepare for PLE at end of the year. This flexibility is one other point that attracts learners to the programme since most of them claim to have other responsibilities to take care of the other part of the day. It was also observed that a number of learners on this programme travel long distances to get to the catch-up centres.

Relationship with formal school

The placement of catch up centres in school surroundings is well received in all schools visited. Although it was indicated that at the beginning the rest of the school saw these children as 'different' now they are more accepted. Effort has been made also to place catch up classrooms in between formal classes to facilitate integration in some schools.

It appears that although reintegration into formal school may not be the major focus of the programme in future, the placement of such a programme in existing schools could still be important in terms of accessibility and distribution, management, monitoring and follow up of education provision. This also gives the learners a sense of belonging and sameness with other children. In most centres visited for example, learners expressed the wish to have uniforms "so that they could look like other children". Being in the school setting also still provides an opportunity for those who may wish to reintegrate into formal school to do so with ease. On the other hand given the age these learners and their other vulnerabilities it would be advisable to encourage some variety and locate some sites where they may serve children better. (For example at a tea plantation or any other location where children can easily be reached).

Programme direction

Since the inception of the Catch-up programme as a pilot, MINEDUC Kigali and to some extent UNICEF have had great presence in the programme direction and implementation. A ministry official dealt directly with district authorities, head teachers and teachers. This direct contact no doubt has been beneficial in that centres were quickly set up and started to function avoiding all kinds of typical delays. But this central control has created a dependence on Kigali that has hampered initiative on the part of local officials, communities and schools. Most of they time they have to wait for the Kigali intervention for something to be resolved or decided upon as observed during our talks with people at the centres.

The lack of written guidelines on setting up and implementing catch-up programmes was also an issue that did not improve the situation. It is obvious that there was lack of continuity whenever new district officials or head teachers came in to replace one who started with the programme.[9] It was also not clear on how supervision, follow up and reporting on this programme would be done and by whom. And there seems to be a sense of ambiguity in general on who owns this programme.

This suggests that these areas will need strengthening as the programme expands. It would be problematic for MINEDUC Kigali to co ordinate most of the activities at the central level, and perhaps would rather focus on issues like programme direction, quality assurance, curriculum development and developing a training programme for teachers & other personnel and doing

[9] In 2 of the centres visited district inspectors who came in later knew little about the programme, although this also applies to other Mineduc officials at the central level.

initial training of trainers. The district authorities and communities could play most of the other roles with the support of NGOs and other Rwandan institutions operating within the area.[10]

Relationship with the community
At the at the time of establishing the 3 pilot centres community sensitisation and mobilisation was done by both MINEDUC officials and local authorities and thus they were able to gather support from the community in terms of tangible contributions such as building classrooms in some centres, setting up PTA committees for catch-up centres and massively sending children to this programme.

However as time has passed there seems to be less involvement from the parents/community side. Some people attribute this to the frequent changes in local officials and school heads with new ones not conversant with the programme and cannot provide the necessary leadership. Others suggest that there were no funds to carry out on going training for PTAs and sensitisation of communities as had been promised. What is clear though is that there has to be more of parents/community involvement and participation since it is they that can ensure that these children remain in school. Local authorities should see this programme as a way of promoting government policy on EFA and benefiting to their community.

The issue of community involvement also raises the question of whether it should always be government to provide education for the 'hard to reach' children. So far there has been initiative to start such programmes by FBOs as in CELPAR Kigali and NGOs such as CARE and World Vision KURET programme. (The approaches and target groups may be different in such voluntary initiatives.) These groups should be encouraged to share their experiences and perspectives with MINEDU in developing the content ant methods for an expanded programme.

In view of expanding educational opportunities for these 'hard to reach' children it may be is important to welcome or encourage other providers in order to give basic education to the many out of school children country wide. It will however be important that such initiatives are coordinated supervised and guided by MINEDUC in order to ensure standards.

ii. Curriculum/classroom methods

Classroom approach
The teaching and learning approach for the catch-up programme was designed to be different from what goes on in formal school. According to the teachers trained, trainers and designers of teachers' guides used; the approach is competence-based, with the learner being at the centre of learning and the teacher as just a facilitator. Teaching/learning is also practically organised and intended to draw from examples within the learners' surroundings.

From what the consultants were able to observe given the limited time spent in the classrooms, teachers still tend to be at the centre in the classroom and do more talking and writing of notes on the board for learners to copy. This is mainly because there are no materials such as books for teachers and learners to support the more active approach. Teaching/learning is also mainly geared towards passing PLE as in formal school.

Nevertheless learners and teachers agreed that learners engage much more in group activities and the sitting arrangement (where desks and seats are not fixed) suggests that children are able to work in groups. Teachers and learners talked to are enthusiastic about the

[10] For example NGOs and TTCs/Colleges of Education within the area could carry out in service training for teachers on a regular basis.

teaching/learning approach and learners indicate they are learning better than they would in formal school. However the teaching approach, subject content and assessment should go hand in hand. Examination questions should draw from several areas of the curriculum rather than giving questions which test only a candidate's ability to recall facts as is mainly the practice at PLE (Mc Monagle, 2004). The question of whether a program that focuses on the PLE is consistent with the approach or the needs of the learners.

Classrooms visited also have a number of pictures/writings hang on the walls, either by the teacher or learners. However there were very few of the locally designed/fabricated materials for teaching/learning as was suggested.

Teachers

Teacher selection for the catch-up programme is mainly done through interviews whenever a new centre is to begin. Most of the teachers have a teacher qualification D6 Normare Primaire, although in some centres teachers are S6 leavers with no teaching background. All teachers talked to attest to have undergone at least a two weeks training conducted by MINEDUC officials. Most of the teacher training is focused around the use of active learning skills, classroom techniques and developing materials particularly in the areas of mathematics and science. However all teachers interviewed express the need for more training in subject content, especially languages.

The programmes developed and used as teachers' guides are sketchy with just the main topics and do not have specific references or texts for teachers and learners. It was therefore unclear how learners follow up on what to study although at some centres learners pointed out that they usually plan with the teacher what they want to learn. The lack of teachers and learner's books appears to cause frustration on the side of the teachers in particular since they always have to improvise or borrow the equally limited texts from formal school. The lack of learner texts also creates problems of continuity as these hard to reach children may be likely to have irregular attendance. It will be important therefore that in view of scaling up a defined curriculum with specific references and texts is elaborated to facilitate teaching and learning in catch-up programme.

Teachers in the programme are subject based (a teacher per subject area e.g. mathematics, languages, social studies and science) rather than have a teacher per class for all subjects as is in regular school. This seems to go on well with the teachers and learners in that, teachers tend to specialise in the subject area and perhaps deliver better and learners are happy that they interact almost on a diary basis with all teachers and thus are able to benefit from their different styles/ approaches, competencies and advise. However the use of 4 teachers for the 3 levels makes the program more expensive. It should be possible for teachers in centres to organise themselves in order to capitalize on their individual strengths and provide these older learners variety without the formal division of teachers into 'subject areas.' This is especially true as the content focuses shifts to more of a focus on life skills rather than academics (passing PLE).

Each centre has 3-4 teachers and the average class size is about 30 at any given shift. Teachers indicate that classes are usually smaller due to absences especially on market days as was the case during two of the visits made. Learners however, are not subjected to punishments such as beatings instead teachers try to talk to the learners in order to solve issues they may have. According to the teachers, assessment is done regularly and only a grade is given at the end of the term instead of the usual ranking of learners from first to

bottom. Promotion to next level is also automatic for those who continue on the catch-up programme.

Relevance of curriculum

When the pilot project started, a programme (a condensed form of the primary school curriculum) was put in place as a guide for teachers. The curriculum design serves the same purpose as the primary school curriculum with only the teaching approach being different. As we re-assess the target group for this programme there is a need to re-evaluate learning needs and outcomes in order to link them closely with improving the learner's chances in life rather than just passing the PLE - especially since the majority of learners see this programme as end point as of now. The new curriculum should be outcomes based and designed to have produce specific, lasting results in learners by the time they leave the programme.

Indeed a number of learners interviewed expressed the fear of completing level 3 and 'sitting at home' an indication that the curriculum does not permit learners to complete primary education with knowledge and skills that would make one curve out a living even without necessarily progressing to another level, secondary or vocational.

Examples of essential skills or exit outcomes to improve performance in education, work and life are:

Communication – Ability to communicate, in reading, writing, speaking and listening. Opportunities for developing this key skill are provided through the teaching of languages in particular and through the use of language across the curriculum. (In the case of Rwanda see trilingualism).

Application of number – The skill of application of number includes developing a range mental calculation skills and the ability to apply them within a variety of contexts. Pupils need to be able to apply calculation skills and the understanding of number to problems in other subjects and to real life situations.

Working with others/social skills – This skill includes ability to contribute to small group & whole- group discussions and to work with others to meet a challenge. For pupils to work with others they must develop social skills and a growing awareness & understanding of others needs. All subjects provide opportunities for pupils to cooperate and work effectively with others.

Problem solving – This involves pupils developing skills and strategies that will help them to solve problems they face in learning and in life. All subjects provide pupils with opportunities to respond to the challenge of problems & plan, test, modify and review the progress needed to achieve particular outcomes.

Technology as a tool for learning – (This can be introduced as and when technologies are available in schools, especially ICT) The skill for ICT includes ability to use a range of information sources and tools to find ,analyse, interpret, evaluate and present information for a wide range of purposes. The ability to use ICT sources includes enquiry & decision- making skills, as well as information processing and creative thinking skills & ability to review, modify & evaluate work with ICT.

Creative thinking skills – These enable pupils to generate and extend ideas, to suggest hypotheses, to apply imagination, and to look for alternative innovative outcomes.

(Adapted from Marsh. C.J 1997,Watson et,al 2004)

These and a variety of other skills some practical (in farming, trade etc depending on the context) are skills that learners need both in and outside school. However the out comes-based approach is also questioned in some circles. According to Marsh, 1997,the approach for example, requires teachers to have greater skills and enhanced professional attitudes, student based outcomes are difficult and expensive to assess, many outcomes statements are ambiguous and difficult to measure, they can also be very time demanding in already crowded school time tables. These and other short-comings cited indicate that there should be caution as we attempt prescribe what is the best curriculum approach to adopt for this programme and others. There will be a need therefore for curriculum experts in Rwanda and elsewhere to come together and formulate an appropriate curriculum for our context

There is also need to change attitude both among parents and learners about the importance of completing basic education as an achievement in itself and not just as a preparation for secondary school. However the education system should also avail openings for one to re enter the system at different levels in order to pursue further education when time and conditions permit.

iii. Linkages with complementary programmes within MINEDUC and GOR policies and plans

OVC education as a complimentary programme to help 'hard to reach' children access education should have linkages with other MINEDUC and government policies and plans. In the pilot phase these linkages have not been very strong in that even within MINEDUC itself other departments or units are not very conversant with this programme and are not clear on how to link it with what they do.

UPE/Basic Education

With regard to government commitments such as UPE and EFA, such an alternative or complementary system would be seen as an innovation to fulfil the broader objectives rather than a parallel programme. Enrolments and results would be part of MINEDUC's reporting and progress on UPE, EFA, MDG etc. Children count as official enrolment at basic education level and receive same level of capitation grant as the rest of the children in formal education. Expanding the programme is therefore an opportunity for developing innovative practices and delivery that make genuine difference for vulnerable children and serves as a laboratory for the formal sector. An example could be the teaching/learning approach used in this programme that is already popular among teachers and learners that could be used as a basis to revise the existing primary school curriculum and teacher training.[11]

Vocational Education

The need to join vocational training after the catch-up programme was very popular among the learners, teachers and local authorities talked to during the visits made. Most of these people actually suggest that there was a "promise" made during the campaign to send these children to school that many of them would be availed places to vocational training centres CFJs after

[11] In schools where catch-up programmes exist, some of the teachers in the formal school have also been trained alongside the catch-up teachers and most of them appreciate the skills acquired.

completion of level 3. Indeed in the 3 pilot centres visited it was reported that the first cohort of learners who completed 2 years ago, many of them were channelled to vocational training centres. This however was an arrangement reached between some MINEDUC Kigali/UNICEF officials and the particular vocational centres to assist these children and is not a formalised arrangement that will continue. This is evident in the fact that the cohort that completed last year is still waiting for the same arrangement that may never materialise.

Secondary school Education:

The number of children from catch-up centres that has joined secondary education is still very limited (never more than a handful combined from all centres –especially in last 2 years). The PLE pass rate is low as in the formal schools where these centres are situated or even country-wide (28%). However according to teachers and learners interviewed even the few who do pass and join a secondary school find difficulties keeping there because of fees and other related costs since secondary education is not free and there is no arrangement in place to follow-up these children.

The need for measures to reduce secondary school costs as well as setting up more of the Junior secondary day schools (the new ESIs) is apparent in order to expand chances to entry into secondary education country wide and in particular for OVC. This should go hand in hand with making bursaries available for vulnerable children and here the role of government, local authorities, communities and other stakeholders will therefore be important in finding ways to support these children further in their education as more join secondary schools.

Adult literacy

Adult literacy as a new programme in the Ministry of Education is also one of the areas that MINEDUC seeks to strengthen. Currently the target group for this programme is anyone of 15 years and older who wishes to acquire basic literacy skills. However through interviews with officials in the programme, experience shows that at times children as young as 10 years register to study in adult literacy centres. This was said to be discouraged and seen as misguidance on the part of parents/guardians of such children[12], but also this points to the fact that there are fewer educational alternatives for such 'hard to reach' children out there. That is why expansion for of Catch-up centres and other alternative educational programmes to formal school are important. There is also need to strengthen adult literacy programmes (include other skills) in order to provide wider, more diversified and appropriate programmes to meet and expand the diverse needs of youth and adult population. This could cater for those adults who seek to join catch-up centres just because they do not see the present literacy programme as an alternative option[13].

[12] There is attributed to parents who are misguided and seek convenient alternatives but without thinking about the child's future. Literacy classes operate 2 hrs a day twice a week.

[13] In one of the centres visited it was mentioned that a man of 38 years insisted to join the catch-up programme.

Figure 1 summarizes the recommendations regarding the characteristics of an expanded program to meet the needs of out of school children in Rwanda.

Figure 1

Summary of Recommendations:

1. *Focus programme on 12-17 year olds combined with efforts to get recent drop outs among young children reintegrated quickly into formal school without entering a programme for out of school children*

   Efforts to ensure UPE have been successful among 7-11 year olds. Emphasis should be to keep these children in school rather than accept them in an out of school programme.

2. *Meeting the needs of out of school children will require multiple sites in a district*

   The practice of distributing sites for out of school children – one per district – would have very little impact on the number of out of school children completing a P6 equivalent. District officials should receive training and support for developing creative solutions to providing multiple sites in a district.

3. *A new curriculum focused on tangible and useful outcomes for children who do not reintegrate into formal schooling should be developed*

   PLE focus in not appropriate for most children who would enroll in an out of school program (see main text for suggestions). Their need is for a program that will provide them meaningful literacy, numeracy and life skills. The quality of the content, methods and materials is the crucial element in the development of an expanded initiative. The programme should include well supported teachers guides and basic consumable learner texts to ensure that continuity can be maintained even if learner attendance is irregular.

4. *Managing an expanded program requires significant investment in strengthening of capacity of the district to, identify sites, implement mobilization campaigns, provide in-service for teachers (via local TTCs), develop linkages to other programs (NGOs and government), and monitor and report on program outcomes.*

   Districts will play a key role in an expanded, decentralized programme. Officials need training and clear documentation of programme objectives, how the programme functions, reporting, etcetera.

5. *Teacher training modules consistent with the new curriculum should be developed. Training should include improving content knowledge of teachers in addition to improving teaching methods*

   In-service for teachers must not overlook developing better content knowledge as well as improving teaching skills.

6. *Enrolling and retaining girls must receive special attention. Program expansion should be designed with specific interventions to increase participation and retention of girls.*

7. *MINEDU- Kigali should assume the role of: program direction; leading development of a new curriculum, teacher in-service modules, program documentation and student materials; program evaluation; training district staff and in-service providers; quality assurance and advocacy*

   Clear lead role for MINEDUC is important for providing programme identity, continuity and links to other GOR poverty reduction and development strategies. MINEDUC will be unable to continue direct management of centres and must equip and train districts to effectively administer the programme. This includes training as well as the development of documentation and guides to support district efforts.

II. Priorities for expansion

A. Targeting (children and youth)

In the analysis of the available data and from visits to the pilot centres the recommendation was made to focus on older children than those in the original pilot design. This is not to say that 9 and 10 and 11 year old children should be ignored, rather that other interventions be put in place to support those

children to return directly to the formal school. Only as a very last resort should this group participate in the expanded program and only then if they have a specific vulnerability that precludes participation in formal schooling.

It was also suggested that the nature of the obstacles that keep these hard to reach children from successfully completing school tended to those associated with their age and poverty rather than the immediate results of displacement. The most common of these kinds of obstacles is the need to generate income whether that is as a result of household poverty or the result of losing parental and/or other adult support.

B. Geographical priorities

In order to analyze the potential geographic priorities for expanding a program for out of school children a number of indicators were constructed for each of the 70 districts where data was provided by MINEDUC (Census data was also used for population projections). In each district an **estimated P6 completion rate** was estimated from the 2003/04 school census. This estimated completion rate uses a cohort method to estimate the number of P1 entrants who will complete P6 in a period of 8 years. The eight year time period permits the incorporation of potential completers who may have been retained up to two times. The cohort method is explained with the use of one of the districts as an example in appendix 1.

The **percentage of the total enrolment in grades P1 through P3** was also calculated. As discussed previously high percentages of the total enrolment in P1 to P3 suggests that many children in the 12 – 16 year age group are not enrolled in school. A **primary enrolment rate** was calculated for each district. This rate was calculated by dividing the total P1 to P6 enrolment by the population projection for the age 7 – 16 cohort in the district. Finally for each district the **number of out of school children aged 7 – 16** was estimated by subtracting the district's total primary enrolment from the number of children aged 7 to 16 in the district.

Table 1
P6 completion rate as indicator of priority for out of school program

Low Priority			High Priority		
Province	District		Province	District	
KIGALI NGARI	NYAMATA	82.0%	GIKONGORO	Gikongoro-Ville	9.6%
GISENYI	KANAMA	81.0%	GIKONGORO	Kaduha	16.0%
KIGALI NGARI	KABUGA-VILLE	75.0%	GISENYI	NYAMYUMBA	16.1%
KIBUYE	ITABIRE	74.0%	GITARAMA	MUHANGA	17.1%
VILLE DE KIGALI	BUTAMWA	73.0%	UMUTARA	MUVUMBA	18.7%
GISENYI	MUTURA	72.0%	GIKONGORO	NSHILI	19.9%
KIGALI NGARI	BICUMBI	72.0%	GIKONGORO	Mushubi	20.8%
UMUTARA	GABIRO	70.0%	BYUMBA	NGARAMA	23.2%
Kibungo	Muhazi	69.0%	GIKONGORO	Mudasomwa	24.6%
GISENYI	KAGEYO	66.0%	GISENYI	KAYOVE	26.3%

Each of these indicators suggests possible geographical priorities. For example districts with a low P6 completion rates currently produce larger numbers of out of school children than districts with higher completion rates (more children do not successfully complete). Districts with the lowest primary enrolment rates have the highest percentages of out of school children (ages 7 to 16). Some districts with relatively low percentages of out of school children may still

Table 2
Percentage of total district enrolment in P1 to P3 as indicator of priority for out of school program

Low Priority			High Priority		
Province	District		Province	District	
BUTARE	VILLE DE BUTARE	43.0%	GISENYI	CYANZARWE	19.0%
VILLE DE KIGALI	NYAMIRAMBO	42.0%	GIKONGORO	NSHILI	19.0%
VILLE DE KIGALI	KACYIRU	41.0%	UMUTARA	MUVUMBA	23.0%
VILLE DE KIGALI	GIKONDO	41.0%	GISENYI	KANAMA	25.0%
CYANGUGU	VILLE DE CYANGUG	41.0%	GIKONGORO	Mushubi	26.0%
KIGALI NGARI	NYAMATA	40.0%	KIGALI NGARI	BICUMBI	26.0%
UMUTARA	UMUTARA VILLE	40.0%	GISENYI	GASEKE	26.0%
KIGALI NGARI	RULINDO	40.0%	UMUTARA	BUGARAGARA	27.0%
VILLE DE KIGALI	NYARUGENGE	40.0%	GISENYI	NYAMYUMBA	27.0%
VILLE DE KIGALI	BUTAMWA	40.0%	GISENYI	MUTURA	27.0%

have high number of out of school children because they have a greater population.

Each of the 75 districts where reliable information was available was ranked in order on each of these indicators of potential need for an out of school initiative. The rankings place the districts in order from high priority to low priority on each indicator. Table 1 presents the 10 highest and the 10 lowest priority districts when considering the estimated P6 completion rate. The 'High Priority' districts with the lower levels of P6 completion are currently producing more out of school children than the low priority districts.

Table 2 presents a listing of 10 high priority and 10 low priority districts, but this time the indicator used to rank the districts is the percentage of a district's total enrolment that is located in P1, P2 and P3. As indicated previously the percentage of enrolment in P1 to P3 would be in the range of 40 to 50 percent if older children were not out of school. Not many districts appear on both lists but in both tables Kigali city and rural Kigali tend to be low priority areas while districts in Giknongoro and Gisenyi tend to show up as high priority districts.

Table 3

Primary enrollment rate (7 - 16 years of age) as an indicator of priority for out of school program

Low Priority			High Priority		
Province	District		Province	District	
KIGALI NGARI	GASHORA	122.0%	KIGALI NGARI	SHYORONGI	51.0%
UMUTARA	BUGARAGARA	116.0%	BYUMBA	Byumba Ville	54.0%
KIGALI NGARI	NYAMATA	112.0%	BUTARE	KIBINGO	63.0%
GITARAMA	NTENYO	98.0%	BUTARE	MUGOMBWA	66.0%
KIGALI NGARI	NGENDA	97.0%	GISENYI	KANAMA	67.0%
VILLE DE KIGALI	NYARUGENGE	97.0%	VILLE DE KIGALI	GISOZI	68.0%
GITARAMA	KABAGARI	97.0%	BUTARE	VILLE DE BUTARE	68.0%
KIBUYE	ITABIRE	97.0%	GIKONGORO	NSHILI	69.0%
VILLE DE KIGALI	KANOMBE	94.0%	KIBUYE	GISUNZU	69.0%
KIBUYE	VILLE DE KIBUYE	93.0%	VILLE DE KIGALI	NYAMIRAMBO	69.0%

The 10 high and low priority districts in terms of the primary enrolment rates are presented in Table 3. The pattern in Table 3 is inconsistent with that presented in Tables 1 and 2. A number of Kigali city districts and rural Kigali are present in both the high priority and low priority lists. This suggests that not only does vulnerability depend on how it is measured but that districts within a province can vary as much or more than differences between provinces. Note that the enrolment rates greater than 100 percent indicate primary students who are older than 16 years of age.

Table 4

Number of children out of school as an indicator of priority for out of school program

Low Priority			High Priority		
Province	District		Province	District	
UMUTARA	UMUTARA VILLE	-4,649	BUTARE	KIBINGO	9,770
UMUTARA	BUGARAGARA	-2,610	BYUMBA	Byumba Ville	8,202
KIGALI NGARI	GASHORA	-2,012	GIKONGORO	NSHILI	8,120
KIGALI NGARI	NYAMATA	184	GISENYI	KANAMA	7,851
VILLE DE KIGALI	KANOMBE	260	CYANGUGU	BUKUNZI	7,641
GITARAMA	NTENYO	443	GIKONGORO	Mushubi	7,333
KIBUYE	VILLE DE KIBUYE	634	KIBUYE	GISUNZU	7,175
GIKONGORO	Gikongoro-Ville	714	KIGALI NGARI	SHYORONGI	7,128
KIGALI NGARI	NGENDA	829	BUTARE	MUGOMBWA	7,057
VILLE DE KIGALI	NYARUGENGE	906	CYANGUGU	BUGARAMA	7,003

The highest and lowest priority districts in terms of the numbers of out of school children are presented in Table 4. The pattern observed is similar to that in Tables 1 and 2 with Kigali districts considered low priorities (smaller number of out of school children) and several Ginkongoro districts falling into the high priority grouping in a number of the tables.

Table 5

Composite ranking of priority districts for out of school program

Low Priority		High Priority	
Province	District	Province	District
UMUTARA	UMUTARA VILLE	BUTARE	KIBINGO
UMUTARA	BUGARAGARA	BYUMBA	Byumba Ville
KIGALI NGARI	GASHORA	GIKONGORO	NSHILI
KIGALI NGARI	NYAMATA	GISENYI	KANAMA
VILLE DE KIGALI	KANOMBE	CYANGUGU	BUKUNZI
GITARAMA	NTENYO	GIKONGORO	Mushubi
KIBUYE	VILLE DE KIBUYE	KIBUYE	GISUNZU
GIKONGORO	Gikongoro-Ville	KIGALI NGARI	SHYORONGI
KIGALI NGARI	NGENDA	BUTARE	MUGOMBWA
VILLE DE KIGALI	NYARUGENGE	CYANGUGU	BUGARAMA

Table 5 presents a list of high and low priority districts based on a composite of the 4 indicators. The composite was constructed by ranking each district from low to high priority in each of the indicators and summing each districts rank on each indicator. This composite view can be thought of as an indication of which districts are low or high priorities using all of the indicators.

The fact that it is difficult to construct a clear indication of a geographic priority for expanding an initiative for hard to reach out of school children is a reflection of the fact that there are significant numbers of out of school children every district. In our interviews district officials, head teachers, teachers and children all concurred that even in the areas where the pilot programs were present there was significant unmet demand for educational opportunities for out of school school-aged children. Across the 75 districts where data was provided the total number of out of school children was about 220,000[14]. Given that the number of districts where data was available is about 75 percent of the districts in Rwanda, a national estimate would put the total at somewhere near 275,000.

Another option for prioritizing attention is to make a determination of where an initiative might make 'the most difference'. A simulation of a catch a program for out of school children was constructed for each of the districts with available data. In this simulation it was assumed that enough centres would be provided to meet the needs of 20 percent of the children 7-16 who are out of school in the first 3 years of an eight year period. A second cohort of catch up students would be provided service in the next 3 years. The size of that cohort was estimated at 80 percent of the original number reflecting that the total number of children out of school would be falling once the original cohort of 20 percent had enrolled in the program.

It was also assumed that because out of school children were the most difficult to reach and retain that only 30 percent of the learners that began the program would finish a P6 equivalency in 3 years (complete level 3). The measure used to determine the how much 'difference' was made by investing in the program was the percentage of additional P6 completers that resulted from implementing the program. The box below illustrates how calculations in the simulations were made using the data from Kibingo District in Butare Province. .

Example of simulation calculations

Butare - Kibingo

P1 entrants = 5,443 — In Kibingo schools in 8 years number of P6 completers = 1,750 (*using cohort method)*

Out of school children (7-16) = 9,770 — Number of Out of School children in 'catch up in 8 yrs = 3,517
(20% of out of school y1 to y 4 = 1,954)
(y5 to y8 = 1,563 = 80% of first 3 years)

P6 equivalent completers from catch up in 8 years = 1,055 (1/3 of children who enter catch up)

P6 completers without catch up = 1,750 — P6 completers with catch up = 2,805

Catch up programme improved number of P6 completers by 37.6% - the 'difference' made by catch up

The results from Kibingo illustrate that over an 8 year period attending 20 percent of the out of school children in the first 3 years and then attending a 20 percent smaller group over the next 3 years would

[14] The number of children enrolled in primary school in the district was subtracted from the number of children aged 7 -16 from population projection in that district. It was also assumed that 40 percent of the 15 and 16 year olds were enrolled in secondary school.

improve the number of children completing a P6 equivalent by almost 38 percent if just 30 percent of the children reached by the catch up program completed all 3 levels.

Table 6 presents the 10 districts where this simulated catch up program made the largest difference in contribution to improving P6 completion. Complete results for all the districts where data was available can be found in appendix 2.

In general the districts where a program reaching 20 percent of the out of school children can make the largest contribution to increasing P6 completion rates are districts with low completion rates in the formal sector, large numbers of out of school children or both. Table 7 provides a summary of the contribution of this simulated program reaching 20 percent of the out of school children and successfully retaining or reintegrating 30 percent of those children who enter the program.

Table 6
High Priority - Districts Where Program Could Make Largest Contribution to P6 Completion Rates

PROVINCE	DISTRICT	P1 in 2003	Number who will complete P1 in 2011	Percent completing P6 (formal)	Out of School 7-16 in 2003	Centers needed to reach 20% out of school	"Catch up" Completers by 2011	Total P6 Equivalent in 2011	Additional completers as % of total P6
KIGALI NGARI	SHYORONGI	1,762	743	42.2%	7,128	10	770	1,513	50.9%
BYUMBA	Byumba Ville	3,187	860	27.0%	8,202	11	886	1,746	50.7%
GIKONGORO	NSHILI	7,248	1,442	19.9%	8,120	11	877	2,318	37.8%
BUTARE	KIBINGO	5,443	1,750	32.2%	9,770	13	1,055	2,805	37.6%
GIKONGORO	Mushubi	7,347	1,529	20.8%	7,333	10	792	2,321	34.1%
VILLE DE KIGALI	GIKONDO	2,620	925	35.3%	4,355	6	470	1,395	33.7%
CYANGUGU	VILLE DE CYANGUG	2,078	860	41.4%	3,966	5	428	1,289	33.2%
GITARAMA	MUHANGA	5,356	915	17.1%	4,144	6	448	1,362	32.9%
GIKONGORO	Gikongoro-Ville	2,190	210	9.6%	945	1	102	312	32.7%
GISENYI	NYAMYUMBA	5,604	904	16.1%	3,617	5	391	1,295	30.2%

For the 75 districts used in the simulation the overall improvement in the number of children with a P6 equivalent improves by 30,429 children – an increase of nearly 16 percent to the total produced by the formal school sector. Improvements in the efficiency of the formal schools (increasing the percentage or children who complete P6) can affect the magnitude of the contribution of a program for out of school children. For example increasing the efficiency of the formal school in producing P6 completers by 25 percent (from a rate of 44 percent to 55 percent) would increase the number of formal school children completing P6 to 202,645 and reduce the relative contribution of the 30,429 P6 equivalents produced by the program to about 13% of the total number of P6 completers – a still quite significant contribution. It is also likely that a program for out of school children that was perceived as relevant, useful and of high quality would achieve a completion rate higher than the 30 percent used in the simulation. For example, assuming that 40 percent of the program entrants persisted until completion would raise the contribution of the program from 15.8 percent to 20 percent of P6 completers.

Table 7
Summary

Total completers formal school	162,116
Percent of P1 enrollment completing P6	44.0%
Out of school children served	101,430
Additional completers alternative program	30,429
Improvement in completion	15.8%

Perhaps the most arbitrary assumption in simulating the possible effect of a catch up program on the number of P6 completers in a district is the assumption of attending to the needs of just 20 percent of the out of school children. This assumption should in no way be portrayed as 'advice' or 'guidance' that a program should focus on just 20 percent of the out of school children but rather a reflection of the enormity of the challenge when seen from the perspective of the limited resources available. Just meeting the needs of 20 percent of the roughly 275,000 out of school children would require more than 1,800 sites of a size similar to the 3 pilot sites. Even if one assumes that one half of the 275,000 out of school children have been out of school a short time and could be moved directly back to a primary school some 900 sites would still be needed.

Given this reality, expanding a program could very well be pursued on the basis of where conditions were most favourable to expansion rather than where 'need' was the greatest. Even the best managed, best performing districts have out of school children that could benefit from a quality program. Encouraging local and international NGOs to incorporate the MINEDUC program into their ongoing work at the community level could also play an important role in where the program is located.

III. The costs and benefits of a program for out of school children in Rwanda

As highlighted above the benefits of investment in a program that addresses the needs of out of school children can be measured in terms of the increase in the number of children and adolescents that successfully complete a P6 level of education. In addition to the harder to quantify benefits of greater social cohesion increasing the educational level of out of school children result in direct benefits in terms of increased production and earnings.

These benefits must unfortunately always be evaluated in terms of the cost of the investment in a program for out of school children. In this document we provide a set of estimates of the resources necessary to meet the needs of out of school children. These estimates are presented as 'unit costs' – that is the cost of providing one year of the program for one child. This 'unit cost' estimate facilitates determining what a program will cost to reach a given number of children as well as in comparing the benefits of the investment with its costs.

The costs of a programme to reach 20 percent of out of school children

In order to estimate the cost of a program for out of school children it must first be clearly defined in terms of the necessary 'ingredients' or inputs. The list of ingredients below is derived form an analysis of the necessary expenditures for implementing the recommendations in figure 1.

	"ingredients"	Description
1	Classroom	Place to locate class
2	Furniture	For students at the site
3	Teachers (salaries and benefits)	For teachers in out of school programme
4	Supervision at district level	District resources needed for additional work in monitoring programme
5	Training (in service) for teachers	Additional training on program content, approach, methods
6	Reporting, Monitoring at District level	Additional resources required for district level reporting
7	Develop in-service training program/materials	A sound training programme for teachers must be developed
8	Training trainers	A cadre of individuals or institutions who can carry out training of teachers, head teachers, district officials must be developed
9	Identify/mobilize children	Resources/materials for sensitisation/mobilisation of children and the community will be required
10	Materials & guidance (mobilixation, site selection, etc.)	Documents and guides concerning community mobilization available for district officials
11	Develop guides and materials for districts	District, community and school leaders need helpful guides
12	Train district teams	District officials (inspector, mayor, vice mayor) need training and orientation to the program
13	Student texts	Learners need consumable texts with clear sequence of learning outcomes
14	Teacher guides	Teachers need guides to methods and content
15	Cash	The 'life orientation' focus of the curriculum requires some use of funds at programme site
16	Develop Program of Study, Guides and Student Materials	Programme of study, Teachers guides and Student materials must be designed and tested

The list will be used to generate three unit cost estimates. The first will be an estimate of the true economic cost of meeting the needs of an out of school child. This 'true' cost represents the monetary value of all the resources necessary for meeting the needs of an out of school child. The second estimate will provide an estimate of the 'additional cost' of meeting the needs of an out of school child. This 'additional cost' considers that portions of the cost for meeting the needs of out of school children consistent with the recommendations presented may already be included in current or planned

MINECUC spending. This spending would include things like infrastructure (available classrooms, or appropriate facilities in other sites) etc. The assumptions about how current and planned spending impacts on this 'additional' cost estimate will be clearly identified.

The final cost estimate will be the 'efficient' cost estimate for meeting the needs of out of school children. This estimate includes the considerations of how current MINEDUC spending is or can be utilised for addressing the needs of out of school children as well as considerations of how potential non budgetary support from development partners could most efficiently be deployed.

Baseline Assumptions:

In order to generate an estimate of a unit cost for meeting the needs of out of school children it is necessary to have some idea of the number of children the program will reach. For example, the cost per child of developing a quality teacher's guide is shared across all the children that participate in the program. The assumptions we have made in our cost calculations are identical to the ones used in the 'simulated' program used to estimate how much difference a program for out of school children could make in the number of children who complete P6 in the districts. These assumptions are:

- The program will reach about 20 percent of the out of school children
- Each site will have about 150 children
- The ratio of children to teachers will be about 50 to 1 (3 teachers at each site)
- No additional personnel at MINEDUC or districts are employed
- Transportation of materials and persons to undertake the recommendations is already included in current spending

Figure 2 - Unit Cost Estimates

Item	School/Centre	District	MINEDUC	*Unit Cost Estimates*		
				'True Cost'	'Additional Cost'	'Efficient Cost'
	Infrastructure			*unit cost*	*unit cost*	*unit cost*
1	Classroom			$15.42	$4.63	$4.63
2	Furniture			$0.00	$0.00	$0.00
			Total unit cost Infrastructure	$15.42	$4.63	$4.63
	Teachers					
3	Salaries			$12.50	$0.00	$0.00
4		Supervision		$0.00	$0.00	$0.00
5		Training (in service)		$6.48	$6.48	$5.34
6		Reporting, Monitoring		$0.00	$0.00	$0.00
7			Develop in-service training	$0.13	$0.13	$0.00
8			Training trainers	$0.14	$0.14	$0.07
			Total unit cost Teachers	$19.25	$6.75	$5.41
	Learners					
9	Identify/mobilize			$0.20	$0.20	$0.20
10		Materials (mobilization, site selection, etc.) Program guide for inspectors, vice mayors, etc,		$0.02	$0.02	$0.00
11			Develop guides and materials for districts	$0.04	$0.04	$0.04
12			Train district teams	$0.14	$0.14	$0.00
			Total unit cost Learner mobilization	$0.40	$0.40	$0.24
	Materials/ program					
13	books			$7.80	$7.80	$0.00
14	guides			$0.12	$0.12	$0.12
15	cash			$0.34	$0.34	$0.34
16		storage distribution		$0.00	$0.00	$0.00
17			Develop Program of Study, Guides and Student Materials	$0.13	$0.13	$0.00
18			Develop sourcebook on resource mobilization	$0.09	$0.09	$0.00
			Total unit cost materials	$8.48	$8.48	$0.46
			Cost per learner (true cost)	$43.55		
			Cost per learner (additional cost)		$20.26	
			Cost per learner (efficient cost)			$10.74

Total 'true' cost of reaching 50,000 children (20% of out of school)	$2,177,389.00	*50,000*43.55*
Total 'additional cost' to MINEDUC for reaching 50,000 children (20% of out of school)	$1,012,889.00	*50,000*20.26*
Total MINEDUC cost for 50,000 children (20% of out of school) with support from partners	$537,000.00	*50,000*10.74*
Total development partner contributions in 'efficient cost' calculations	$1,491,915.00	

Partner Collaboration		
Initial in-service 2 weeks 1,000 teachers	*$463,000.00*	*item 5*
Student books @ $6.00 per student for 50,000 students (3 years)	*$900,000.00*	*item 13*
Development costs for curriculum and materials	*$26,000.00*	*item 17*
Development and production cost for sourcebook for Districts on local resource mobilisation	*$28,000.00*	*item 18*
Development costs for teacher in-service modules	*$26,000.00*	*item 7*
Training of teacher trainers	*$15,665.00*	*item 8*
Produce (print) 250 programme guides for districts	*$3,750.00*	*item 10*
Development costs for district guides	*$14,500.00*	*item 11*
Produce 1,000 teachers' guides	*$15,000.00*	*item 14*

Figure 2 presents the unit cost (cost per learner per year) for an expanded programme that reaches 20 percent of the estimated number of out of school children 7 – 16 years of age in Rwanda consistent with the recommendations summarized in figure 1. These estimates are 'scalable' to some degree, that is, they can be used to estimate the total annual cost for meeting fewer or greater numbers of out of school children. However, drastically smaller numbers, for example a programme to reach 5,000 learners would have considerably higher costs per learner as many of the more expensive investments like developing a curriculum and materials would be spread across many fewer children.

Appendix 3 contains a detailed description of how each estimate was calculated. The calculations are based on prices determined from the research in Rwanda and the baseline assumptions described above. One techniques used for a number of items is calculating an 'annualised' cost for items that are capital or 'one time' investments. For example an additional classroom for the program is an expense that is incurred at the time it is constructed. However, that classroom continues to be utilised to deliver the program over some number of years. In a sense some part of the classroom is 'consumed' each year by the program. Economists use a discounting method to translate these 'one time' expenditures into annualised costs. The discount rate builds into the annualised cost a consideration that capital has alternative uses. If a large amount of capital is used to build a classroom the return to that capital from alternative uses is forgone. This forgone return from alternative uses means that the annualised cost of a $10,000 classroom that last 10 years is more than $1,000 since the $10,000 original investment would be worth more 10 years later if it had been used for an alternative investment. The 'annualised' cost attempts to capture both the original capital sum plus the forgone earnings.

For all the estimates of an annualised cost for expenditures that occur in one point in time a discount rate[15] of 5% has been used. The $10,000 classroom that will need to be replaced in 10 years has an annualised cost of $1,295 once the discounting method is applied. The kinds of items in the cost estimate for a programme for out of school children tend to be mostly items with a relatively short useful life (3-5 years). This relatively short period means that the estimates will not vary significantly with small changes in the chosen discount rate so no effort has been made to test the sensitivity of the cost estimates to alternative discount rates.[16] In the case of the estimates for a programme to meet the needs of out of school children this annualisation method was applied to capital items like classrooms and durable (non consumable) materials like programme guides and teachers' guides as well as to other 'one time' costs like developing the content and methods of the program.

The 'true cost' of the program as recommended is $43.55 per participating child. This 'true cost' estimate is the actual sum of all the resources that would need to be invested per year to deliver the programme recommendations. Some portion of this 'true cost' is already being invested by MINEDUC. For example, MINEDUC already employs teachers and builds classrooms. If it is assumed that not all of the necessary teachers and classrooms for the out of school program would represent additional teachers and classrooms to those already provided or in MINEDUC plans, then some of the needed teachers and classrooms are already being supplied by MINEDUC.

In the calculations of the 'additional cost' estimate the assumption was made that the 1,000 teachers needed to meet the needs of the 50,000 out of school children to be served would be met from the planned expansion of the primary school teaching force outlined in the ESSP 2005-2010 plan. Using these 1,000 teacher salaries has a very small effect on the planned reduction in student – teacher ratios in the formal school. Even after diverting these 1,000 teaching posts into the out of school initiative student –teacher ratios in the formal school would decline considerably between 2005 and 2010. By 2010 the ratios in the formal primary schools would be less than 2 students per teacher higher than the planned ratio – but still significantly lower than in 2005. If the 1,000 teacher salaries for the out of school program are already being invested by MINEDUC the additional cost of the out of school programme in regards to teacher salaries falls to $0.00 (item 3).

Similar logic was applied to investments in classrooms. Significant capital spending is planned for the 2005 -2010 period. For the purpose of generating the 'additional cost' estimate it was assumed that ½ of the 1,000 classrooms necessary for integrating 50,000 children into an out of school program would come from current and new classroom stock. It was also assumed that NGO's, alternative sites, local

[15] The discount rate is what is assumed to be the 'true' cost of capital (the return to capital) in the Rwandan economy.

[16] Assessing the sensitivity of estimates is only important where time frames are longer or amounts are much greater. For example the building of a multimillion dollar bridge that is expected to last 50 years would warrant efforts to examine the sensitivity of annualized cost estimates to changes in the discount rate.

government, etc. could provide another 20 percent of the needed infrastructure. This lowers the 'additional cost' to MINEDUC from $15.42 per participant to $4.63.

The estimate of the unit cost for the 'additional cost' to MINEDUC is $20.26 per child. This represents the spending that would be needed in addition to current and planned MINEDUC expenditure. This total is a bit less than ½ the 'true cost' and suggests that about ½ of the resources necessary to meet the needs of these 50,000 children are already in current spending and planned new spending[17].

Finally some assumptions about what development partners might be able to fund were incorporated into the 'efficient cost' estimate. In general the costs most likely to be absorbed by development partners are capital or 'one time' costs. Development partners are often unwilling to assume significant recurrent costs of government programs since external funding for recurrent costs threaten the long run sustainability of a government initiative. Development partners also often have financial accountability systems and practices in place that create significant obstacles to subsidising recurrent costs – as the experience with UNICEF funding teacher salaries in catch up centres pilot sites illustrate.

In figure 2 the assumed contributions from development partners are outlined. The sum of the support necessary to implement the recommendations and to meet the needs of 50,000 children come to nearly $1.5 million (Each item is described in appendix 3). The resulting estimate, the 'efficient cost' estimate, is $10.74 per child per year to implement the recommended programme. This represents the additional recurrent spending on the part of MINEDUC that would be necessary to implement the program as recommended. Nearly half of that amount is the need for physical space for the children (classrooms). If creative solutions to that problem could bee designed the actual cost of the programme in terms of new resources could be still lower.

The benefits of an out of school program

Evaluating the costs or investment in the recommended programme requires some effort to examine the investment in relationship to the potential benefits. As described previously one way to measure the returns to the investment in the recommended programme is to measure those outcomes in terms of the additional P6 equivalent completers the programme would produce. Table 7 summarised the simulated results of the recommended program for 75 districts where data was available. If, as was assumed in the simulation, 30 percent of those enter the program successfully complete the programme (P6 equivalent) then the cost of producing one additional P6 completer through an out of school program is $435.48[18]. If the assumption that just 30 percent of the participants complete the program is relaxed to say a 45% completion rate (similar to current formal school P6 completion rates) the cost per P6 equivalent produced by the recommended program falls to $290.42.

These estimations of the cost of producing a P6 completer via the recommended programme utilize the 'true cost' estimates. These costs reflect the actual cost of providing the recommended programme regardless of who bears those costs or whether some portion of the investment is already included in current spending. Another way of examining the relationship between the investment and the outcomes of the programme is to use the additional or marginal cost of producing a P6 completer in the out of school programme. This analysis suggests that MINEDUC could produce a P6 completer equivalent for $202.58[19] of additional spending per child in the out of school programme ($135 if a 45 percent completion rate is assumed rather than a 30 percent). Again, this 'additional' or marginal cost is the extra spending required per child that is not already part of MINEDUC current or planned

[17] The assumptions concerning what necessary spending is already in current and planned expenditures can be reviewed by examining appendix 3.

[18] Cost per year * 3 years = $130.64. Cost per completer (30% completion rate) = $130.64 / 0.3 = $435.48

[19] Cost per year ('additional cost' 20.62) * 3 years = $60.67. Cost per completer (30% completion rate) = $60.67 / 0.3 = $202.58

investment. If development partners assume the 'once off' development costs the marginal spending required to produce a P6 completer in the out of school program is just $107.40[20] or $71.60 if a 45 percent completion rate is assumed

Higher levels of educational attainment are only meaningful because they are associated with improvement in life circumstances. These improvements include (among others) things like greater social participation, improved health behaviours and increasing productivity. Wage equations estimating the relationship between level of education and earnings in Rwanda (Lassibille & Tan) were used to estimate the returns to an investment in a programme for out of school children. Improvements in earnings resulting from increasing a person's level of education are a measure of an individual benefit. Given that earnings measure productivity, improvements in earnings also serve as a measure of the social return of increased production in the economy.

Using the wage equations it was possible to generate a rough estimation of the lifetime benefit of completing the out of school programme. If we assume that the difference in the number of years of schooling completed between those children who complete programme and those out of school children who do not complete primary school or the out of school programme is 4 years, the estimated difference in annual earnings is about $70 per year. The life time present value of completing the programme versus not completing the program for an out of school child is about $1,200.[21]

The internal rate of return for the programme would be on the order of 14%.[22] This means that the return to the Rwandan economy for the investments in an out of school program would be a return of about 14 percent per year. It is important to stress that this relatively high return is the 'low' estimate and does not include other effects like better health, more effective political and social participation, increasing the likelihood that the programme completer's own children attend school, etcetera.

IV Conclusion

By reviewing existing data and analysing the pilot programme for out of school children (catch up) a set of recommendations as well as estimates of the costs and potential benefits of an expanded program have been developed. The cost estimates indicate that a program for 20 percent of the out of school children may be possible with an additional investment on the part of MINEDUC of about $21 per participant. If the cooperation from development partners were to materialize in the quantity outlined in the document the additional cost to MINEDUC could fall to near $11 ($10.74) per participant. Even at $10.74 per participant the magnitude of the investment is significant. To meet the needs of 50,000 out of school children would require an investment on the part of MINEDUC of about $537,000 per year.

While the 14% return suggests that the investment would be an astute choice, the competing demands on Rwandan resources imply a very difficult battle to fund the programme. While it may be tempting to think in terms of a smaller effort it is important to keep in mind that the simulations and costs estimated here dealt with only about 20 percent of the children between 7-16 years of age who were out of school.

A smaller program would also may prove to be more expensive on a per child basis.
A critical element in the success of a programme for out of school children in Rwanda is the quality of the content and methods. Opportunities for further training and study subsequent to the proposed three – year programme are very limited for these children. For the program to provide meaningful new skills

[20] Cost per year ('efficient cost' 10.74) * 3 years = $32.22. Cost per completer (30% completion rate) = $32.22 / 0.3 = $107.40
[21] This assumes that the two children (one completer, one non completer) work for 40 years and that the discount rate is 5%.
[22] Total cost to produce a completer assuming 30 percent complete = 435.80. Annual 'true' investment = $435.80/3 = $145.27 per year. Assuming a social discount rate of 5%, a difference in earnings of $70 per year and a working lifetime of 40 years subsequent to completing the programme the internal rate of return is 14%

for these children a significant (and expensive) effort to develop a curriculum and methods that would provide these skills and capacities in the Rwandan context must be undertaken. The more children this expensive input benefits the lower the cost per child of providing a quality programme.

Alternatively it may be tempting to look for ways to lower the cost of the proposed programme. The danger in this approach again relates to the key role played by the quality of the programme. Certainly some of the proposed development and training costs could be reduced if a lowering of the quality and relevance of the programme was viewed as acceptable. However, if the program is not of sufficient quality to attract and retain children who have competing demands on their time or to leave them with something useful, it may be that the benefits of the programme disappear.

References

Abagi. O., Rubagiza. J., Kabano.J. (2002). *Baseline Study of Basic Education for Girls and Other Vulnerable Groups in Rwanda.* MINEDUC/UNICEF. Kigali

Lassiblille G. & J. Tan (2005) *The Returns to Education in Rwanda.* The Journal of African Economies V.14 N. 1 pp. 92-116.

Marsh. C. J. (1997) *Perspectives Key Concepts for Understanding Curriculum* 1. Falmer Press, London

McMonagle (2004) *Support to Provide Training to the Rwandan National Examinations Council and Related Staff Regarding Writing Examinations Specifications and Assessment Grids.* MINEDUC/CfBT, Kigali

MINECOFIN (2001). *National Poverty Reduction Programme*. MINECOFIN, Kigali

MINEDUC (2002) *Education Sector Policy*. MINEDUC, Kigali

MINEDUC (2003) *Education For All, Plan of Action*. MINEDUC, Kigali

MINEDUC. (2005) *Education Sector Strategic Plan 2005 – 2010.* MINEDUC, Kigali

MINALOC. (2003) *National Policy for Orphans and Other Vulnerable Children.* MINALOC, Kigali

MINEDUC (2002) *Programme de Rattrapage – Cours de Science Sociales,* MINEDUC, Kigali

MINEDUC (2005) *Isubizwa mu Ishuri ry'Abana – Integanyanyigisho y'Ikinyarwanda, MINEDUC,Kigali*

MINEDUC (2002) *Programme de Rattrapage – Cours de Mathematique*. MINEDUC, Kigali

MINEDUC (2002) *Programme de Rattrapage – Cours de Science et Technologie Elementaire*. MINEDUC, Kigali

MINEDUC (2005) *Programme de Rattrapage – Cours de Francais*. MINEDUC, Kigali

MINEDUC --------- *Training Materials (Various) – Catch-up Programme*. MINEDUC, Kigali

MINEDUC (2004) Rapport des Activites Realisees Par le Catch Up Programme Depuis 1998 – 2003. Dept of Pre-school and Primary Education, MINEDUC Kigali

Obura. P.A (2005) *Planning a Systemic Response to the needs of Orphans and Other Vulnerable Children OVC) in Rwanda,* MINEDUC/CfBT, Kigali

Watson. M. & Rubagiza J. (2004) *A Study of Curricular and Examination Objectives and Priorities in the Establishment of a Competency Based Nine Year System of Basic Education*. MINEDUC/CfBT, Kigali

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Focus Group Discussions (FGD)

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Learners - Mugina A P.S, Ruyumba District, Gitarama
Learners – Kinihira Centre, Kinihira District, Byumba
Learners – Murama P.S, Nyamata District Kigali Ngali
Learners – CELPAR Centre, Nyabugogo, Kigali City

Appendix 1

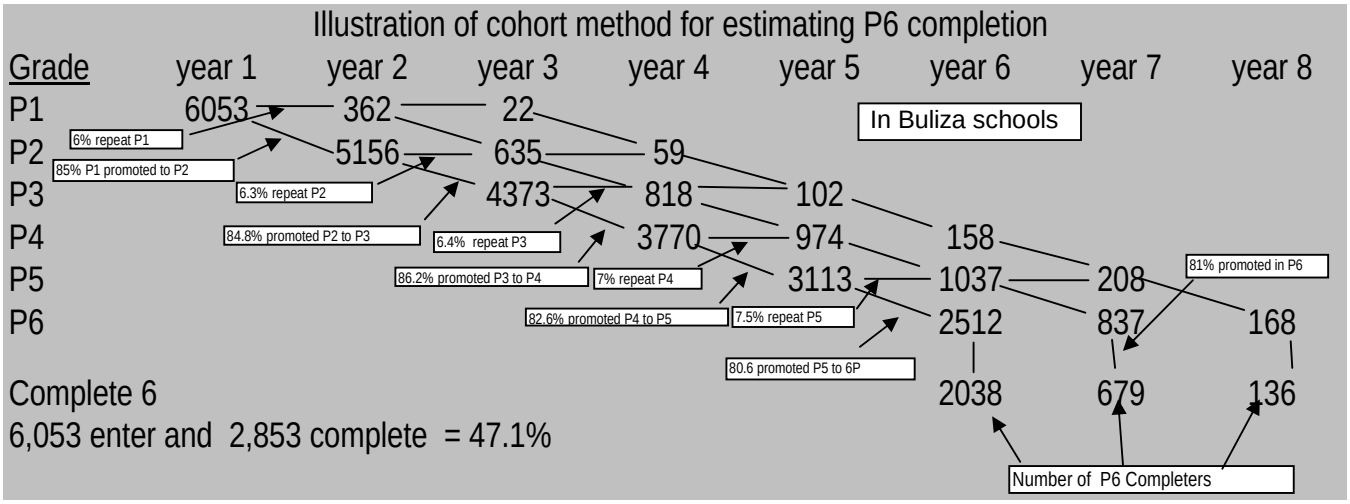
Illustration of cohort method for estimating P6 completion
Grade
year 1
year 2
year 3
year 4
year 5
year 6
year 7
year 8
P1
6053
362
22
In Buliza schools
P2
5156
635
59
P3
4373
818
102
P4
3770
974
158
P5
3113
1037
208
P6
2512
837
168
Complete 6
2038
679
136
6,053 enter and 2,853 complete = 47.1%
6% repeat P1
85% P1 promoted to P2
6.3% repeat P2
84.8% promoted P2 to P3
6.4% repeat P3
86.2% promoted P3 to P4
7% repeat P4
82.6% promoted P4 to P5
7.5% repeat P5
80.6 promoted P5 to 6P
81% promoted in P6
Number of P6 Completers

Appendix 2

PROVINCE	DISTRICT	P1 in 2003	Number who will complete P1 in 2011	Percent completing P6	Out of School 7-16 in 2003	Centers needed to reach 20% out of school	"Catch up" Completers by 2011	Total P6 Equiv in 2011	Additional completers as % of total	Additional completers as % of total if foral completion rates improve 20%
KIGALI NGARI	SHYORONGI	1,762	743	42.2%	7,128	10	770	1,513	50.9%	46.3%
BYUMBA	Byumba Ville	3,187	860	27.0%	8,202	11	886	1,746	50.7%	46.2%
GIKONGORO	NSHILI	7,248	1,442	19.9%	8,120	11	877	2,318	37.8%	33.6%
BUTARE	KIBINGO	5,443	1,750	32.2%	9,770	13	1,055	2,805	37.6%	33.4%
GIKONGORO	Mushubi	7,347	1,529	20.8%	7,333	10	792	2,321	34.1%	30.2%
VILLE DE KIGALI	GIKONDO	2,620	925	35.3%	4,355	6	470	1,395	33.7%	29.8%
CYANGUGU	VILLE DE CYANGUG	2,078	860	41.4%	3,966	5	428	1,289	33.2%	29.3%
GITARAMA	MUHANGA	5,356	915	17.1%	4,144	6	448	1,362	32.9%	29.0%
GIKONGORO	Gikongoro-Ville	2,190	210	9.6%	945	1	102	312	32.7%	28.8%
GISENYI	NYAMYUMBA	5,604	904	16.1%	3,617	5	391	1,295	30.2%	26.5%
VILLE DE KIGALI	GISOZI	2,830	1,203	42.5%	4,759	6	514	1,717	29.9%	26.3%
BUTARE	GIKONKO	3,929	1,217	31.0%	4,754	6	513	1,731	29.7%	26.0%
VILLE DE KIGALI	NYAMIRAMBO	3,353	1,673	49.9%	6,481	9	700	2,373	29.5%	25.9%
UMUTARA	MUVUMBA	8,600	1,610	18.7%	6,130	8	662	2,272	29.1%	25.5%
BUTARE	VILLE DE BUTARE	2,237	1,448	64.7%	5,324	7	575	2,023	28.4%	24.9%
BYUMBA	NGARAMA	5,781	1,343	23.2%	4,728	6	511	1,853	27.6%	24.1%
GIKONGORO	Mudasomwa	5,299	1,303	24.6%	4,508	6	487	1,790	27.2%	23.7%
GISENYI	KAYOVE	7,147	1,882	26.3%	6,322	8	683	2,565	26.6%	23.2%
KIBUYE	GISUNZU	4,657	2,192	47.1%	7,175	10	775	2,967	26.1%	22.8%
BUTARE	MUGOMBWA	4,987	2,235	44.8%	7,057	9	762	2,997	25.4%	22.1%
CYANGUGU	BUGARAMA	6,774	2,305	34.0%	7,003	9	756	3,061	24.7%	21.5%
BUTARE	SAVE	3,792	1,100	29.0%	3,257	4	352	1,452	24.2%	21.0%

VILLE DE KIGALI	KACYIRU	3,759	1,629	43.3%	4,616	6	499	2,127	23.4%	20.3%
CYANGUGU	BUKUNZI	5,093	3,070	60.3%	7,641	10	825	3,896	21.2%	18.3%
BUTARE	NYAKIZU	4,992	2,185	43.8%	5,404	7	584	2,769	21.1%	18.2%
BYUMBA	KISARO	5,569	2,353	42.2%	5,814	8	628	2,981	21.1%	18.2%
GISENYI	GASEKE	6,287	2,011	32.0%	4,851	6	524	2,535	20.7%	17.8%
CYANGUGU	GASHONGA	4,439	2,340	52.7%	5,567	7	601	2,941	20.4%	17.6%
GISENYI	CYANZARWE	7,003	2,250	32.1%	4,490	6	485	2,735	17.7%	15.2%
GITARAMA	VILLE DE RUHANGO	3,072	1,927	62.7%	3,834	5	414	2,341	17.7%	15.2%
UMUTARA	KABARE	2,513	1,232	49.0%	2,442	3	264	1,496	17.6%	15.1%
KIGALI NGARI	RULINDO	4,073	1,756	43.1%	3,473	5	375	2,131	17.6%	15.1%
KIGALI NGARI	GASABO	6,244	2,552	40.9%	4,911	7	530	3,082	17.2%	14.8%
GIKONGORO	Kaduha	5,471	877	16.0%	1,648	2	178	1,055	16.9%	14.5%
BUTARE	KIRUHURA	2,898	1,622	56.0%	3,029	4	327	1,949	16.8%	14.4%
KIBUYE	RUTSIRO	4,490	2,027	45.1%	3,713	5	401	2,428	16.5%	14.2%
GISENYI	KANAMA	5,745	4,631	80.6%	7,851	10	848	5,479	15.5%	13.2%
KIGALI NGARI	RUSHASHI	3,701	2,358	63.7%	3,956	5	427	2,785	15.3%	13.1%
BUTARE	NYAMURE	4,953	2,518	50.8%	4,195	6	453	2,971	15.3%	13.0%
KIBUYE	RUSENYI	8,971	3,958	44.1%	6,110	8	660	4,618	14.3%	12.2%
GISENYI	VILLE GISENYI	4,295	1,908	44.4%	2,773	4	299	2,208	13.6%	11.6%
KIBUYE	BUDAHA	6,442	3,937	61.1%	5,636	8	609	4,546	13.4%	11.4%
VILLE DE KIGALI	KICUKIRO	2,905	1,609	55.4%	2,271	3	245	1,854	13.2%	11.3%
BYUMBA	BUNGWE	7,065	3,767	53.3%	4,934	7	533	4,300	12.4%	10.5%
GIKONGORO	Nyaruguru	6,050	2,046	33.8%	2,654	4	287	2,332	12.3%	10.5%
VILLE DE KIGALI	BUTAMWA	1,478	1,086	73.5%	1,303	2	141	1,227	11.5%	9.7%
GISENYI	KAGEYO	6,274	4,134	65.9%	4,552	6	492	4,626	10.6%	9.0%
CYANGUGU	GATARE	6,944	4,062	58.5%	4,246	6	459	4,521	10.1%	8.6%
UMUTARA	UMUTARA VILLE	440	177	40.3%	184	0	20	197	10.1%	8.5%
KIGALI NGARI	BICUMBI	7,933	5,720	72.1%	5,850	8	632	6,352	9.9%	8.4%
CYANGUGU	NYAMASHEKE	5,825	3,067	52.6%	3,054	4	330	3,396	9.7%	8.2%
GITARAMA	NTONGWE	6,072	3,310	54.5%	3,280	4	354	3,664	9.7%	8.2%
GISENYI	NYAGISAGARA	7,161	3,823	53.4%	3,689	5	398	4,221	9.4%	8.0%
KIGALI NGARI	KABUGA-VILLE	3,202	2,390	74.6%	2,221	3	240	2,630	9.1%	7.7%

VILLE DE KIGALI	NYARUGENGE	3,537	1,131	32.0%	1,018	1	110	1,241	8.9%	7.5%
GITARAMA	GITARAMA VILLE	4,831	1,960	40.6%	1,705	2	184	2,144	8.6%	7.3%
KIGALI NGARI	BULIZA	6,053	2,243	37.1%	1,947	3	210	2,454	8.6%	7.2%
GISENYI	MUTURA	10,873	7,875	72.4%	6,495	9	701	8,577	8.2%	6.9%
GITARAMA	RUYUMBA	6,629	2,517	38.0%	2,042	3	221	2,737	8.1%	6.8%
GITARAMA	KAMONYI	8,996	2,996	33.3%	2,427	3	262	3,258	8.0%	6.8%
UMUTARA	KAHI	6,395	1,803	28.2%	1,340	2	145	1,948	7.4%	6.3%
UMUTARA	RUKARA	6,689	2,441	36.5%	1,668	2	180	2,621	6.9%	5.8%
KIBUYE	VILLE DE KIBUYE	2,899	1,427	49.2%	906	1	98	1,525	6.4%	5.4%
GITARAMA	KABAGARI	5,564	2,368	42.6%	1,404	2	152	2,519	6.0%	5.1%
VILLE DE KIGALI	KANOMBE	2,708	1,273	47.0%	714	1	77	1,350	5.7%	4.8%
KIBUYE	ITABIRE	7,074	5,268	74.5%	1,661	2	179	5,447	3.3%	2.8%
GITARAMA	NTENYO	8,354	2,788	33.4%	829	1	90	2,878	3.1%	2.6%
KIGALI NGARI	NGENDA	9,115	4,384	48.1%	988	1	107	4,491	2.4%	2.0%
UMUTARA	BUGARAGARA	3,629	1,333	36.7%	260	0	28	1,362	2.1%	1.7%
KIGALI NGARI	NYAMATA	5,131	4,200	81.9%	634	1	68	4,269	1.6%	1.3%
KIGALI NGARI	GASHORA	6,621	4,129	62.4%	443	1	48	4,177	1.1%	1.0%

Appendix 3

Description of cost items

Item	Description	'true cost'	'additional cost'	'efficient cost'
1	The basic cost of a classroom is $8,100 per classroom (includes estimate of expansion of water and sanitation at school site for additional children). With an expected lifespan of 15 years and estimated repair/maintenance assumed to be 5% per year, the annualised cost of the classroom is $771. If the program provides 3 levels for 150 children and each level has a separate classroom the cost per child will be $771 / 50 = $15.42 per child. The 'additional cost' estimate assumes that the planned spending on classrooms described in the ESSP can accommodate ½ of the additional space needed to meet the needs of 50,000 out of school children. It is also assumed that local resources (other levels of government, the communities, NGOs. etc.) can provide another 20 percent of the needed classrooms. With these assumptions the cost to MINEDUC in terms of additional classroom space to meet the needs of an out of school initiative falls to $4.63 per student per year.	$15.42	$4.63	$4.63
2	The estimate of classroom costs provided by MINEDUC were inclusive with furniture.	$0.00	$0.00	$0.00
3	Salary per teacher = $625. Each teacher attends 50 children. Annual cost of teacher per child = $625/50 The MINEDUC strategic plan (ESSP) 2005 -2010 already contemplates expanding the number of primary teachers by 9.605 over the five year period. If all of the 1,000 teachers necessary to meet the needs of 50,000 children (20 percent of out of school children) were taken from this planned expansion the student teacher ratio in the formal primary schools would still fall significantly from their current levels. The impact of using these 1,000 teachers for an out of school program would be to only increase the student teacher ratio by less than 2 students per teacher from what it would be if those 1,000 teachers were used in the formal school. The 'additional cost' estimate assumes that all of the necessary teacher salaries for meeting the needs of 20 percent of the out of school population are met within the existing planned expansion of teaching staff. The 'additional cost' of the out of school program in regards to teacher salaries is $0.00	$12.50	$0.00	$0.00
4	It is assumed that since most sites will be in primary schools there is no additional cost for supervision since district inspectors are already required to make periodic visits to schools. There will be additional costs in terms of training for the inspectors in the areas of program management, site selection, community mobilization, etc. Those costs are included in the calculations for item *12*	$0.00	$0.00	$0.00
5	In-service training for teachers in the program will be provided in the district by a provider authorised and trained by MINEDUC- Kigali. The initial training is for two weeks. It is assumed that teachers from more than one centre will be brought together at a site in the district. After the initial training a one week follow-up training will be provided each year. Initial training - accommodation/food per teacher = 200 transport subsidy $15, accommodation/food trainers (2) = 400 transport subsidy trainers (2) = $60 Fee for trainers (2) = $400, consumable materials per participant $5 Total initial training for 6 teachers (2 sites) = 2,780 or $463.33 per teacher. Cost of one-week follow up for 6 teachers in a District = $1390 or $232 per teacher. Assuming a two-week training every 3 years and the one-week training in the intervening years the annual cost for training teachers per year = $324. If each teacher attends to 50 children the annual cost of teacher training per child = $324/50 = $3.06. The 'efficient cost' estimate assumes that development partners will cover the cost of the initial two-week training for teachers. (Cost of initial training for development partners = 463.33 per teacher).	$6.48	$6.48	$5.34

	Assuming that sufficient teachers will be trained to meet the needs of 20 percent of out of school children yields a total of $463.33 * 1,000 teachers = $463,000. The funding of the initial in-service training cost leaves MINEDUC with the need to cover the annual (2 times every 3 years) one-week refresher course. That cost is $267 per teacher per year or $267/50 per year per learner = $5.34			
6	It is assumed that since most sites will be in primary schools there is no additional cost for supervision since district inspectors are already required to make periodic visits to schools. There will be additional costs in terms of training for the inspectors in the areas of program management, site selection, community mobilization, etc. Those costs are included in the calculations for item *12*.	$0.00	$0.00	$0.00
7	MINEDUC will direct and coordinate the development of the teacher training modules. This activity will be assumed to have no additional labour costs for MINEDUC and other public institutions that participate. The estimate includes $20,000 for honoraria and travel/accommodation for national and/or international advisors/experts. Material costs for prototype development and production is estimated at $3,500. Meeting and workshop costs (approximately 10 days for 10 persons) = 2,500. Total for development of teacher training module = $26,000. The training modules are assumed to have a useful life of 5 years before they need revision. Annualised cost = $6,500 per year. Cost per child assuming the program reaches 20 percent of out of school children (approx 50,000) $6,500/50000 = $0.13 per child per year. Meeting the needs of only 10 percent of the children would raise the annual cost of developing the teacher training module to $0.26 per learner. The 'efficient cost' estimate assumes development partners will provide resources for the development of the teacher in-service modules ($26,000).	$0.14	$0.14	$0.00
8	MINEDUC will train (or contract to provide training) the institutions who will provide the in-service teacher training to teachers. While the actual teacher in-service will be provided at the district level (or with districts combining to provide) there will not necessarily be a provider of the in-service located in every district. For the purpose of estimating the cost of this component it is assumed that one provider per province is trained by MINEDUC (10). 3 to 5 trainers from each of the 10 entities (40 persons total) would attend the training. The training would be two weeks in the first year of the program with a two-day meeting each year for training providers and a repeat training for current and new providers every 4 years. Travel and accommodation for participants for two week training (per person) = $260. Venue and lunch costs for two weeks = $3,650. Cost of trainers = 0 as assumption is that MINEDUC or collaborating government partner would provide training of trainers. Accommodation for trainers and officials (5) = 260 per person. Training materials = $7 The total cost of the two week training = (45 * 260) + 3,650 + (45 * 7) = $15,665. The costs for the two day meeting held each year in the intervening three years include travel and accommodation $55 per person, materials $5 per person, venue and food $850 total (45 persons). The total annual cost of the annual meeting for trainers is $3,550. The annual cost of this training of in-service providers is calculated by assuming that the two week training is similar to a capital expenditure in that it is made in year 1 and has a lifetime of 4 years. The annual meetings can be considered recurrent costs since they happen annually. The total annualised cost for in-service (once every 4 year training and annual meeting) = $6,634. Again this is shared across all the participating children (50,000) to yield a unit cost of $6,967/50,000 = $0.14 per child per year. The 'efficient cost' estimate assumes that development partners could fund the initial training of trainers ($15,665) This lowers the cost to MINEDUD to 3,550 per year for the annual two-day meeting of	$0.13	$0.13	$0.13

	in-service training providers. This translates to a cost of $.07 per child per year.			
9	Mobilization of learners for participation and sensitizing the communities will be a shared activity between schools and the district. School heads will need some resources to support this activity (meetings, events, etc.). A figure of $30 per year is included in the estimate for supporting school efforts in this area. If a program site will serve 150 children the unit cost of this support to the school will be $0.20	$0.20	$0.20	$0.20
10	Program guide for district officials. Guide describes potential strategies for incorporating children into a program for out of school children, for forging links to other government programs and NGO initiatives in the area, etc. Production cost only = $15.00 with an assumed life of 5 years and a 10 percent loss/damage replacement per year. Two copies in each district = $30.00. The annualized cost = $6.93. Unit costs are estimated by assuming that a district has 450 children participating in an out of school programme. $6.93/450 = $0.015 per learner (0.02) The 'efficient cost' estimate assumes development partners will fund the production of 250 district programme guides ($3,750)	$0.02	$0.02	$0.00
11	MINEDUC will lead the development of a program guide for district officials (and head teachers). As with teacher training materials the labour costs for MINEDUC and other government partners will be assumed to be 0. An amount of $8,000 is allocated for honoraria for local experts who are not government employees and $5,000 in meeting costs and local travel. Another 1,500 is allocated for development of the prototype guides (actual production is included in item *10).* This investment is a capital investment and will have a useful life 10 years. Subsequent modification cost will assumed to part of the work of already employed officials. The annualized cost for the development of these guides is $1,878. Assuming that the programme serves 50,000 children the unit cost is = 1,878/50,000 = $0.04 per child. The 'efficient cost' estimate assumes development partners will fund the development of district guides ($14,500)	$0.04	$0.04	$0.00
12	MINEDUC will train district teams in all participating districts. This training will focus on mobilization, sensitization, programme monitoring, forging links with other government or NGO programmes, etc. Each participating district will send 1-3 persons for the training. The training will be one week in duration. Training costs (fees) will assumed to be 0 as it will be provided by MINEDUC staff (or other collaborating institution). Accommodation and travel for participants = $140, materials = 5, venue and food = $11,000 (310 participants). Total cost for training district teams = ($140 * 300) + (300 *5) + $11,000 = $53,150. The annualised cost of the training for district staff – assuming the training does not need to be repeated for 5 years = $6,930. The cost per child assuming 50,000 participants = $0.14. The 'efficient cost' estimate assumes that development partners meet the costs of training district teams ($53,150).	$0.14	$0.14	$0.00
12	2 consumable student books per year per level - production cost only - develop costs as separate line item - $3 each + 10 percent loss = 6*1.3 = $7.80 (Development costs for programme and materials in item *17)* The 'efficient cost' estimate assumes development partners will cover the production costs of the number of student books needed. ($6.00	$7.80	$7.80	$0.00

	for 50,000 learners = $300,000 per year with loss/damage of 10%. Total needed for one complete cycle -3 years = $900,000)			
14	Teachers' guides for programme (content and methodology) - production costs only $15.00 per teacher. Guides last 3 years with 10 percent loss damage. Annualised cost with loss and damage = $6.84. Unit cost per learner = $6.06/ 50 (number of learners in class) = $0.12 'Efficient cost' estimate assumes that development partners fund production of first set of teachers' guides. 1000 guides ($15,000). MINEDUC assumes cost of meeting replacement needs 10% or 100 guides per year – 1,500. MINDEUC cost per child per year = $1,500/50,000 = $0.03 per participant	$0.12	$0.12	$0.03
15	The implementation of a curriculum with a sound life orientation may require that sites have some modest financial resources for implementing activities at the sites. A figure of $50 per year is used. The unit (per learner) cost = $50/150 = $0.34	$0.34	$0.34	$0.34
16	Assumed to have 0 cost. Storage and distribution of materials part of regular transfers of goods between MINEDUC and Districts and Districts and schools.	$0.00	$0.00	$0.00
17	5,000 USD local travel and meeting costs for experts, 12,000 for international travel and external experts, 8,000 USD honoraria for local experts, 3,000 USD material costs for prototypes, (honoraria, and local travel includes testing materials with teachers and students = $28,000 -- material development should last 5 years. Annualised cost = $6,467. Assuming program enrols 20 percent of out of school learners (50,000) unit cost = 6,500/50,000 = $0.13. The 'efficient cost' estimate assumes that development partners will fully cover the development costs for the curriculum and student materials ($28,000)	$0.13	$0.13	$0.00
18	MINED will develop a sourcebook on local resource mobilization for district officials and school heads. Research on best local success stories - $12.000. Literature review of best international practices $5,000. Production cost for 200 copies $10 each. Assumed to have 5 year lifespan. Total annualised cost = $4.389. Unit cost = $4,389 / 50,000 = 0.09 per learner. The efficient cost estimate assumes development partners will fund the development and production of the sourcebook on local resource mobilization	$0.09	$0.09	$0.00

Cost per learner (true cost)	$43.55		
Cost per learner (additional cost)		$20.26	
Cost per learner (efficient cost)			$10.74

Annual Unit Cost Estimates

Total true cost of reaching 50,000 children (20% 0f out of school)	$2,177,389.00		
Total 'additional cost' to MINEDUC for reaching 50,000 children (20% 0f out of school)		$1,012,889.00	
Total MINEDUC cost for 50,000 children (20% 0f out of school) with support from partners			$537,000.00
Total development partner contribution in 'efficient cost' calculations	$1,491,915		

Partner Collaboration

Initial in-service 2 weeks 1,000 teachers	*$463,000.00*
Student books @ $6.00 per student for 50,000 students (3 years)	*$900,000.00*
Development costs for curriculum and materials	*$26,000.00*
Development and production cost for sourcebook for Districts on local resource mobilisation	*$28,000.00*
Development costs for teacher in-service modules	*$26,000.00*
Training of teacher trainers	*$15,665.00*
Produce (print) 250 programme guides for districts	*$3,750.00*
Development costs for district guides	*$14,500.00*
Produce 1,000 teachers' guides	*$15,000.00*