Project Evaluation Report

Report title:	Baseline Study of the Girls Education Challenge (Transitions) Rwandan Education and Advancement Programme (REAP) implemented by Health Poverty Action
Evaluator:	One South
GEC Project:	Rwandan Girls' Education and Advancement Programme 2 (REAP 2)
Country	Rwanda
GEC window	GEC-Transition
Evaluation point:	Baseline
Report date:	April 2018

Notes:

Some annexes listed in the contents page of this document have not been included because of challenges with capturing them as an A4 PDF document or because they are documents intended for programme purposes only. If you would like access to any of these annexes, please enquire about their availability by emailing uk_girls_education_challenge@pwc.com.

Girls' Education Challenge

UKaid from the British people

UKaid from the British people

Girls' Education Challenge

HEALTH POVERTY ACTION

Baseline Study

of the Girls Education Challenge (Transitions) Rwandan Education and Advancement Programme (REAP) implemented by Health Poverty Action

Baseline Study Report

April 2018

Prepared by Andrés O. Navarrete and Tariq Ambrose Omarshah from One South, LLC

This publication was produced for review for the UK Department for International Development (DIFID) as part of the Girls' Education Challenge Innovation Funding Window.

This GEC-T Baseline Study was carried out by **Andres O. Navarrete, Tariq Ambrose Omarshah** from **One South, LLC** and **Oswald Rutayisire**. The evaluation will track a cohort of girls and their households in Nyaruguru District, Rwanda from 2017 - 2020.

The Evaluation is managed and coordinated by **Riccardo Gavioli** from Health Poverty Action UK and **Vincent Bayinga** from Health Poverty Action Rwanda.

For any questions related to the Evaluation, please contact:

One South, LLC.
Attn: Andres O. Navarrete (Team Leader)
1521 Concord Pike #301
Wilmington, DE 19806
United States of America
Telephone: +1 703 584 4081
www.one-south.org

For questions related to the REAP Project, please contact:

Health Poverty Action Rwanda
Remera Controle Technique Road,
Opposite Amahoro Stadium,
P.O. Box 4720, Kigali
Rwanda

+250 788 308 773

www.healthpovertyaction.org

Acknowledgements

The Evaluation Team would like to thank several people for their support in conducting the Baseline Study. The study could not have taken place without the commitment and drive of all enumerators who participated. We would also like to thank Oswald Rutayisire, our Evaluation Partner, and Belle Fille Murorunkwere, the Field Manager for their support throughout field work and for their supervision of the cohort tracking process. The Baseline Study additionally benefited from the continual feedback and coordination efforts of Riccardo Gavioli, at HPA London, and Vincent Bayingana, at HPA Rwanda. Finally, we would like to thank all members of HPA, LCD and ADRA, including project staff at the office in Huye, whose support helped us access remote communities and beneficiaries.

Acronyms

ADRA	Adventist Development and Relief Agency
CSO	Community and Social Organization
CP	Child Protection
CPP	Child Protection Policy
DFID	Department for International Development (UK)
ECOSAN	Ecological Sanitation
EGMA	Early Grade Mathematics Assessment
EGRA	Early Grade Reading Assessment
FGD	Focus Group Discussion
FM	GEC Fund Manager
GBV	Gender-Based Violence
GEC	DFID-UKAID Girls' Education Challenge
HH	Household
HHS	Household Survey
HIMO	Haute Intensite de Main d'Oeuvre (High Intensity Workforce)
HIV/AIDS	Human Immunodeficiency Virus Infection / Acquired Immune Deficiency Syndrome
HPA	Health Poverty Action
IGA	Income Generating Activity
IS	In-School Girl
INGO	International Non-Governmental Organization
KAP	Knowledge, Attitudes and Practices
KII	Key Informant Interview
LCD	Link Community Development
LOI	Language of Instruction
MDC	Mother-Daughter Clubs
MEL	Monitoring, Evaluation and Learning
OOS	Out-of-School Girl
ORF	Oral Reading Fluency
PTA	Parent Teacher Association A.k.a. Parent Teacher Committee
SeGRA	Secondary Grade Reading Assessment
SeGMA	Secondary Grade Mathematics Assessment
SIP	School Improvement Plan
SMC	School Management Committee
SRH	Sexual and Reproductive Health
SRHR	Sexual and Reproductive Health Rights
SRGBV	School-related Gender-Based Violence
VfM	Value-for-Money

Table of Contents

Executive Summary

Project Context

The Government of Rwanda is committed to providing universal basic education for all. The Constitution of Rwanda asserts that, "every person has the right to education"[1]. To achieve this, the Nine Year Basic Education Policy was introduced in 2006, which expanded free and compulsory education from 6 years (P1-P6) to 9 years (P1-S3). This was broadened once more in 2011, with the Twelve Year Basic Education Policy which ensured the provision of free 12-year basic education. These initiatives resulted in dramatic increases in enrolment[2].

However, despite improvements in enrolment, Rwanda has one of the highest drop-out rates in the region, currently at a cumulative average of 65% (61% for females and 69% for males)[3]. In lower secondary school, 20% of boys and 25% of girls are enrolled compared to 20% and 22% respectively in upper secondary school. Subsequently, there has been a shift in focus, at the policy level, from academic performance to transition rate of girls, which lags than that of the boys[4].

Rwanda has a 6-3-3 formal education structure. Primary school has an official entry age of seven and a duration of six grades (from P1 to P6). Secondary school is divided into two cycles: lower secondary consists of grades 7 – 9 (from S1 to S3), and upper secondary consists of grades 10 – 12 (from S4 to S6).

With the aim to make Rwandan graduates more competitive in and outside the East Africa region, the Department of Curriculum and Pedagogical Materials started to revise the old education curriculum in July 2013[5], a project that lasted for two years and resulted in the competence-based curriculum that came into force in February 2015[6]. Studies have demonstrated that the old curriculum lacked contents relevant to the expectations of the labour market, due to the dearth of transferrable skills such as problem-solving and critical thinking[7]. The competence-based curriculum aims to elevate learning by offering challenging and engaging learning experiences that demand deep-thinking instead of just rote memory[8].

In 2013 Rwanda issued a revised Education Sector Strategic Plan. The plan sets policy strategies and objectives for the period between 2014 and 2018 and is an update to the ESSP issued in 2010. At its core, the plan aims to "provide a planning framework that will enable the education sector to improve the provision of education, including skills development, to better meet the requirements of the diverse labour market, by increasing the coverage and the quality of 12YBE. In addition to strengthening TVET and higher education provision, the plan also aims to improve pre-primary education, teacher education and adult literacy provision"[9].

---

[1] Constitution of Rwanda (2003) available at: http://www.rwandahope.com/constitution.pdf

[2]MINEDUC. (2014). 2013 Education Statistics Yearbook. Kigali: Ministry of Education.

[3] Cumulative dropout rate

[4]Ministry of Education. (2013). *Education sector strategic plan 2013/14-2017/18.* Kigali.

[5]Mbarushimana, N., & Kuboja, J. M. (2016, Feb - April). A paradigm shift towards competence based curriculum: The Experience of Rwanda. *Saudi Journal of Business and Management Studies, 1*(1), 6 - 17.

[6]Republic of Rwanda. (2015, April 23). *Rwanda unveils competence-based curriculum to guarantee a better quality of education*. Retrieved July 3, 2017, from http://www.gov.rw/news_detail/?tx_ttnews%5Btt_news%5D=1162&cHash=2eb4ec079e9cef10a276c58b67074406

[7]NewTimes. (2015). *Rwanda Education Board: New competence based curriculum is aligned to national development goals*. Retrieved July 03, 2017, from NewTimes: http://www.newtimes.co.rw/section/advertorial/744/

[8]Ngendahayo, E., & Askell-Williams, H. (2016). *Rwanda's New Competence-Based School Curriculum New Approaches to Assessing Student Learning Needed.* Publishing Higher Degree Research.

[9] ESSP 2013 available at https://ictedupolicy.org/system/files/education_sector_strategic_plan_2013_-_2018_small.pdf

Barriers to Girls Education

There are several barriers in intervention areas affecting the ability of marginalized girls to access and learn in school. A review of qualitative evidence from this study finds that the most prevalent barriers mentioned by project stakeholders include economic hardship, lack of teaching quality, negative parental attitudes, poor sexual and reproductive health and a high chore burden.

The most common barrier to girls' education, listed by stakeholders consulted, was economic hardship. In principle, school is free and compulsory for primary and lower secondary. However, attending school carries associated costs such as costs for matriculation[10], school materials and transport[11] that disproportionally burdens the poor and extremely poor.

The second most prevalent barrier listed by project stakeholders was poor teaching quality. Several girls mentioned that teachers' behaviour is often not conducive to student learning. Some girls mentioned that they felt their teachers did not care for them and were not visibly interested in improving their learning.

Negative parental attitudes are a cross-cutting barrier mentioned by several stakeholders. Girls mentioned that parents sometimes aren't aware of the importance of learning and are therefore unwilling to invest in girl's education. Others commented that their parents don't demonstrate an interest in what they do in school. Several girls explained this may be because some parents did not go to school and therefore do not know how to actively support the education of their children.

Project staff have supported this finding and report that girls are consistently discriminated against, with girls' education being viewed as less important than boys'. Girls are encouraged to marry at an early age, and they often take on household and income-generating responsibilities due to poverty or illnesses in the family, interrupting or ending their schooling.

Poor sexual and reproductive health was the fourth most prevalent barrier mentioned by project stakeholders. Specifically, stakeholders reported that girls often struggled to attend school or learn in school when they were menstruating. Girls and parents also reported cases were girls had dropped out of school due to teenage pregnancy.

A review of barriers to girls' education in intervention areas suggest that educational marginalization is due to economic hardship, negative parental attitudes, poor teaching quality, not speaking the language of instruction, and low sexual and reproductive health resulting in poor menstrual management, and increased risk of teenage pregnancy.

Project Theory of Change

In response to these barriers and through funding from the UK Department for International Development's (DFID) Girls Education Challenge[12] (GEC), Health Poverty Action (HPA), the Adventist Relief and Development Agency (ADRA), Link Community Development (LCD)and Future First Global (FFG) adopted a multi-sector, multi-partner approach to promote the learning and transitions of marginalized girls across 28 schools. The project will run from July 2017 - December 2019.

The Rwanda Educational Advancement Programme Phase 2 (REAP2) argues that girl-friendly learning environments are created through the provision of targeted support to schools and communities, and through the replication of best practices in the wider education system. REAP's theory of change aims to deliver five core outputs:

- Output 1: Improved school and community capacity to support learning
- Output 2: Improved school management and school budget use in support of girl's education

[10] U.S. Department of State (2004) Country Reports- 2004; FGD with Mothers of out-of-school girls); KII with School Director,

[11] Project proposal

[12] For more information about the Girls' Education Challenge, please visit: https://www.gov.uk/international-development-funding/girls-education-challenge

- Output 3: Girls who are behind in school or have dropped out supported to develop basic literacy and numeracy and transition back into school, skills training, or livelihoods activities
- Output 4 Improved enabling environment through a reduction in barriers to girls' education: Improved enabling environment through a reduction in barriers to girls' education
- Output 5: Commitment for replication of best practices

Evaluation Approach

Over the course of three years, the external evaluation will assess the relevance, effectiveness, efficiency, impact and sustainability of the project as well as report the findings and the lessons learnt throughout the process.

This evaluation follows the five key principles based on GEC-T guidance[13]. The principles are outlined below:

1. **Establish a reliable counterfactual:** To demonstrate that outcomes have been caused by the intervention, rather than by other contextual factors (such as natural progressions or individual self-selection) the project will employ a two-arm quasi-experimental approach in the measurement of the project's impact. In doing so, the project will utilize 'a difference-in-difference' technique to measure the changes in learning and transitions over and above a control group.
2. **Conduct a mixed-methods evaluation:** Answering research questions requires a high-degree of data triangulation and building on the findings of one method with another method. The baseline study will seek to inform the development of research tools for later evaluation periods, potentially expanding the breadth of inquiry across different dimensions.
3. **Track a cohort of girls longitudinally on individual-level outcomes:** data is gathered at the individual level, tracking participants longitudinally and merging all data by case in horizontal form. As such, three studies will be conducted: one before the intervention at *baseline*, one during the intervention at *midline* and one after the intervention at *endline*.
4. **Integrated research for outcomes and intermediate outcomes:** research questions, assumptions and performance measures were traced and developed through a holistic review of REAPS theory of change. As such, change is explored using school-, community- and household-based research strategies.
5. **Adopt a gender equality and social inclusive lens to review intervention activities and achievements:** the evaluation will assess the extent to which the intervention is gender sensitive and socially inclusive with emphasis placed on often excluded populations including girls who experience disability. GESI will be assessed against the GESI Continuum set by the GEC.

The Baseline Study aims to create reliable counterfactual and gather important benchmark information to establish learning and transition targets. The baseline also aims verify REAP's theory of change at the outcome-level and provide a detailed picture of the educational and social context of Nyaruguru District.

Learning Outcomes

At the outcome level, the project aims to improve marginalized girls' learning outcomes in English and Kinyarwanda literacy and in numeracy. The project expects this to be achieved through improved teaching quality, enhanced community support for learning, the provision of extended learning opportunities , the provision of teaching and learning materials, and improved access of girls to schools.

For the purposes of the external evaluation, literacy is assessed in primary grade levels through the English and Kinyarwanda Early Grade Reading Assessment (EGRA), and in secondary levels through the English and Kinyarwanda Secondary Grade Reading Assessment (SeGRA). Numeracy in primary levels is assessed through the Early Grade Mathematics Assessment (EGMA) and, in secondary levels, through the Secondary Grade Mathematics Assessment (SeGMA).

[13]Source: MEL Guidance Part Two

Aggregate scores for each assessment type were calculated by averaging each subtask score, weighted equally. Subtasks and aggregate level scores were measured out of 100, with 100 representing either reaching the agreed target or answering 100% of items correctly.

Distributions for all learning outcomes did not exhibit floor or ceiling effects. For Kinyarwanda literacy, English literacy, and numeracy, the intervention group was comparable to the control group, suggesting control represents a reliable counterfactual for later evaluation points.

English Literacy

- There is a visible progression in English literacy levels as grade levels increases.
- The intervention and control groups were largely comparable in terms of English literacy at Baseline.
- Mean English literacy scores are low across all grade levels reflecting the low levels of English language acquisition. National curriculum expected competencies are not met in any grade level.
- Qualitative findings suggest that girls lack access to reading materials and have a high chore burden, hampering their ability to practice reading outside of school.
- Girls report that practicing core reading skills in groups, reading out loud or listening to someone read out loud, and imitating someone reading, were useful strategies which supported them to improve their reading skills.

For both the intervention and control group English proficiency visibly increases as girls' progress through school. However, mean literacy scores are low across all grade levels reflecting the low level of English language acquisition in Nyaruguru, in line with pilot findings. This is a significant barrier likely preventing girls from accessing the curriculum, as English is the language of instruction in all grade levels assessed at Baseline.

For English literacy at the primary level, approximately one quarter of the sample in both the intervention and control group were non-learners in letter naming knowledge, the most basic subtask. Most girls, however, tended to perform better on earlier subtasks.

Across primary grade levels, 39.3% of girls in the intervention group and 44.4% of girls in the control group were categorized as 'established' or 'proficient readers in English oral reading fluency, scoring over 45 words per minute on the subtask. However, relatively few of these girls were placed in these categories for the reading comprehension subtask, based on the same passage. This suggests that although these girls can read to some degree of fluency, they do not necessarily understand what they are reading.

Very few girls were 'established learners' or 'proficient learners' in the final two reading comprehension subtasks. On EGRA Subtask 6, the only written exercise, for example, no girls were categorized as 'proficient learners'. To an extent, this is to be expected, as these skills are addressed in later years of school and girls at the primary level have only been exposed to English language instruction since they began upper primary school.

For English literacy, 18.1% of girls in the intervention group are non-readers and 42.7% are emergent readers. The intervention should ensure teacher training is tailored to addressing this large group of girls with early reading skills, and that Child Study Groups are accessible for non-readers.

At the secondary level girls also performed poorly. Most girls were categorized as either 'non-learners' (30.2% in intervention and 36.9% in control) or 'emergent learners (47.4% in intervention and 45.1% in control) on the written comprehension exercise (SeGRA Subtask 2). Control and intervention group proportions were comparable. However, for English oral reading fluency at the secondary level, most girls were categorized as 'established' or 'proficient readers' in both the intervention and control groups.

Across all grade levels, English literacy achievements per subtask are lower than would be expected based on the competencies listed in the national curriculum[14]. This would suggest that there are challenges in Nyaruguru schools with implementing the national curriculum for English literacy.

[14] National curriculum accessible here:
http://reb.rw/fileadmin/user_upload/documents/curriculum/primary/english_revised_primary_2010.pdf

Also see:
http://reb.rw/fileadmin/competence_based_curriculum/syllabi/LANGUAGES/UPPER_PRIMARY_ENGLISH_CURRICULUM.pdf

To further understand girls' relationship to reading, we asked them additional questions about their reading habits. 61.9% of the intervention group and 66.7% of the control group spend time outside of school and school work reading. Of these, most girls read twice a week. In terms of time spent reading, most respondents who read outside of school state that they read either less than one hour (44.6% in the intervention group) or between 1 and 2 hours (38.8%) per week. Linear regressions using time spent reading as a predictor of oral reading fluency, were non-significant, however.

Qualitative findings suggest that girls need support getting access to reading materials and reducing time they spend doing household chores. Girls additionally report that practicing core reading skills in groups, reading out loud or listening to someone read out loud, and imitating someone reading, were useful strategies which supported them to improve their reading skills.

Kinyarwanda Literacy

- Girls tend to perform better on Kinyarwanda literacy than on English literacy, as it is their mother tongue and predominantly spoken in Nyaruguru.
- The intervention and control groups were largely comparable in terms of Kinyarwanda literacy at Baseline.
- Most girls are categorized as 'proficient' or 'established' learners in both primary and secondary level tasks, with expected national curriculum competencies being met across grade levels. However, at the secondary level, girls are less proficient in writing in Kinyarwanda.

Girls tend to perform better on the Kinyarwanda literacy than on English literacy. Although girls tend to do better in Kinyarwanda scores in later grade levels, differences to early grade levels are not as marked as with English scores. This is likely because Kinyarwanda is the first language of most girls and they have been exposed to it throughout their primary education, but the language of instruction in upper primary and secondary school is English.

In Kinyarwanda oral reading fluency at the primary level, close to 80% of girls in both the intervention and control group were categorized as 'established' or 'proficient readers'. Approximately two thirds of these girls were categorized into the same categories for the reading comprehension task which relies on the same passage. Only 2.6% of girls in the intervention group in secondary grade levels were non-readers.

At the primary level, in both the intervention and control groups, most girls were categorized as 'established' or 'proficient learners' for the final subtask, the advanced written comprehension exercise, which is the most challenging task on the assessment.

For oral reading fluency at the secondary level, almost all girls were categorized as 'established' or 'proficient' learners. Additionally,most girls were categorized as 'established' or 'proficient learners' in SeGRA Subtasks 2 and 3, the advanced written comprehension exercises.

Girls performed less well in the fourth subtask, where they were asked to write a letter or essay. Only 6.9% of girls in the intervention group and 3.3% of girls in the treatment group were categorized as 'proficient learners' in this task. This suggests, although girls demonstrate abilities to speak and understand Kinyarwanda, they may have challenges with writing.

Overall, both the intervention and control group proportions were comparable. For all grade levels, most girls achieved the level of competency set out in the national curriculum.

Numeracy

- At the primary level there is a clear progression in numeracy scores as grade level increases. This is not exhibited at the secondary level.
- The intervention and control groups were largely comparable in terms of numeracy levels at Baseline.
- Qualitative findings suggest that girls find math harder to learn when teachers do not provide examples or explain things too quickly.
- Girls reported that practicing exercises, being provided with real world examples, engaging with visual learning aids, and good teaching practices were all conducive to their learning of math.

For numeracy at the primary level, there is a clear progression in both the intervention and control groups with more girls being categorized into higher categories of achievement in earlier subtasks than in later subtasks. The final subtask, which includes advanced multiplication problems and fractions, had the fewest proportion of 'proficient learners', 1.3% in both the intervention and control groups. This progression is to be expected as subtask difficulty increases sequentially.

Secondary numeracy scores across grade levels, on average, were lower than primary scores. This is likely due to the difficulty of the secondary assessment. However, as girls progress through primary schools mean numeracy scores increase. Progression in numeracy scores across secondary school grade levels, by contrast, is not linear.

For secondary levels in numeracy, most girls performed better in task 1, while fewer girls were categorized as 'proficient learners' in task 2. This is to be expected as task 2 is more difficult. Proportions in each category were comparable between the intervention and control groups.

Girls in grades P4-S2 demonstrated a degree of mastery over expected competencies. As some tasks in EGMA subtask 7 are addressed in later grade levels, it is understandable that not all girls in P6 had mastered these skills. The same is true for girls in S2 and girls in S6, where expected skills are likely taught in subsequent grade levels, as demonstrated by the higher achievement of girls in these later grades.

Qualitative findings suggest that teaching quality and instructional practices play a strong role in promoting early mathematics skills. The project should consider some of the examples provided by girls to include in teacher training, such as encouraging the use examples, where possible real-life examples, and the utilization of visual learning aids.

Barriers and Characteristics Affecting Learning Outcomes

Language of Instruction: A comparison of means between girls who speak the language of instruction and girls who don't, found that there is a statistically significant difference in English literacy mean scores ($p<0.05$), with girls who speak the LOI on average performing better. A linear regression found that whether a girl speaks the LOI was a statistically significant predictor of aggregate English literacy scores ($p<0.005$). The model was able to explain 3.1% of variance in aggregate literacy score ($r=0.031$), with not speaking the LOI accounting for a decrease of 9% on the literacy score.

After finding a statistically significant difference in Kinyarwanda mean scores between speakers and non-speakers of the LOI ($p<0.005$), we conducted another regression on Kinyarwanda scores. This model was also statistically significant and was able to explain 6.1% of variance ($p<0.005$, $r=0.061$). Not speaking the LOI accounted for a decrease of 10% on the Kinyarwanda aggregate literacy score.

These findings indicate that speaking the language of instruction, English for all targeted grade levels, results in better literacy scores. This makes intuitive sense as girls who speak the LOI are better able to access the curriculum and engage in learning opportunities in the classroom.

Economic Hardship: The Baseline also found that girls living in households facing severe or moderate hardship scored less on Kinyarwanda literacy at statistically significant levels ($p<0.05$). Hardship was understood through a 4-item scale asking how often households had gone (1) to sleep at night feeling hungry (2) without necessary medicines or medical treatment (3) without clean water for home use (4) without cash income. A linear regression using a severe hardship dummy as a predictor was statistically significant ($p<0.005$) and explained 2.1% of variance in Kinyarwanda aggregate score ($r = 0.021$). Living in a household facing severe hardship accounted for a 7% decrease in aggregate Kinyarwanda score. Similarly, a regression using a dummy for living in a household facing moderate degrees of hardship was also significant ($p<0.005$). These findings indicate that girls who live in poorer households, face additional barriers to learning in school.

Several qualitative findings support the fact that it is difficult for households facing economic burdens to support their children to go to and learn in school. Girls reported that teachers often only provided materials to girls who are more affluent, for example. Parents also reported that coming from a poor background and not maintaining acceptable levels of hygiene often led to discrimination of girls from their peers.

Corporal Punishment: 72.3% of girls in the intervention group report that their teacher uses physical punishments on students if they get something wrong in a lesson. Although corporal punishment is technically not condoned in schools, according to the Global Initiative to End Corporal Punishment of Children (2015), this is not enforced. Government policy allows the Discipline Board of the school to enforce appropriate punishments in the interest of "educating the student".

Aside from the effect this has on girls' psycho-social wellbeing, this can result in learners being unwilling to participate in class and can inhibit their learning in school. This was raised as a significant concern by girls in qualitative sessions, with many girls listing physical punishment as the one thing they would want to change in their school. Punishments reportedly range from being hit with a ruler, to being forced to kneel for long periods of time on hard floors.

Learning Environment: With regards to the learning environment, 11.1% of girls in the intervention group reports that their teachers are often absent from lessons and 8.3% of girls in the intervention group report that there are not enough seats for all students in class. Girls additionally reported liking their teachers more when their teachers showed that they cared for them and cared for their learning. Project stakeholders widely agreed that positive learning environments support class participation, school engagement and learning.

Transition Outcomes

A transition is understood as between-school movements (such as from grade to grade), within school progressions and the transition into employment of marginalised girls aged 9-19[15].

In terms of between- and within- school transitions, the prevalence of out-of-school girls in Nyaruguru's was higher in primary school and lower in secondary school when compared to regional and national averages[16].

In terms of gender differences, equal rates of out-of-school children exist between males and females for the Central Province and Rwanda. However, in Nyaruguru, more boys are out-of-school than girls in primary school, a trend that is reversed in secondary school where the rate of out-of-school girls in higher than boys.

This suggests that girls face additional barriers when progressing onto- and staying in secondary school and that these barriers are particularly strong in Nyaruguru.

In terms of school-to-work transitions, currently 16.8% of Rwandan girls aged 15-17 years are employed compared with 20.8% of boys. In Nyaruguru 13.8% of girls aged 15-17 are employed compared to 13.1% of males.

However, Nyaruguru has almost double the national rates for inactive persons. In Nyaruguru, 46.8% of the resident population aged 14-35 self-labels as "inactive" (i.e. neither employed or unemployed), compared to 51.1% who are employed and 1.9% who mentioned were unemployed. This is much higher than the national average of inactive persons, which are 19.4% females and 17.2% for males for Rwanda[17][18].

To calculate transition benchmarks, the study relied on primary individual-level data from non-intervention areas gathered at baseline. As such, our benchmark and control group are the same. Caregivers were asked what the girl was doing in 2016 and in 2017 and, if she had been in school, what was the girls' grade level in 2016 and 2017. Every case was then classified according to successful and unsuccessful transition types.

To calculate school-to-work benchmarks, we asked caregivers to list all girls of appropriate age (9-19) and up to three years higher (20-21) living in the same households. For each of those girls they mentioned, we then asked the parents (1) the girls' age; (2) what was the girl doing last year in November 2016 and (3) what the girls was doing this year. We have therefore gathered transition data for all girls living with tracked girls in the households. Data for 931 treatment and 1006 control girls aged 9-21 was gathered. For benchmarks indicators, only control data was used.

---

[15] GEC-T MEL Guidance Part 2 p.p. 44-45.

[16] NISR (2012) RPHC4 District Profile, Nyaruguru. *Rwanda 4th Population and Housing Census*

[17] Ibid, XX RPHC4, 2012

[18] Small differences exist between males and females in this regard (46.1% of females and 47.5% of males are inactive in Nyaruguru).

Transition in the Benchmark and Intervention Sample

- In Nyaruguru the average successful transition rate is 66%.
- 71% of girls transition into secondary school.
- Transition rates are higher in schools than for TVET or employment.
- As girls grow older, they are likely to be more successful in transitions to TVET or employment, and less successful in school-based transitions.

Results show that overall transition targets decrease as girls grow older. The average successful transition rate when all pathways are considered is 65.6%. Girls aged 9-11, and girls aged 15 have considerably higher success rates than other age groups. Girls from 20-21 have the lowest success rates of all groups, suggesting that girls that are currently aged 17-19 are a special risk group to consider.

TVET and other forms of professional training are rare transition pathways chosen by girls. Of all girls who were inactive in 2016, only 1.7% successfully transitioned into TVET. Of those that did, they were all 18 years old. The average transition rate into employment is 27% with 19 years old and 21 years old being experiencing the highest transition among all groups at a 39% and 33% rate respectively.

More 17 and 20 years old girls dropped out from school than other ages, supporting the hypothesis that older girls feel discouraged to continue in school when compared to the younger girls. Currently 2% of girls of out-of-school girls surveyed had dropped out the previous year. The average enrolment rate is 21%.

As with the benchmark group, overall transition targets for the target group decrease as girls grow older. The average successful transition rate when all pathways are considered is 62%, 3.6% lower than control. Girls aged 9-15 have considerably higher success rates than other age groups. Transition rates begin to fall for girls aged 16-21, mostly due to the low work-based transitions, which are accounted for girls older than 16 years of age.

According to qualitative sessions, this is largely the result of economic hardship, lack of jobs, and other personal motivations. For example, as girls get older, they are motivated to seek their own incomes and prefer to move onto vocational training. Many also mentioned that the school curriculum is irrelevant when it comes to their expectations about life, as more practical or vocational skills are preferred over those obtained in school.

The average re-enrolment rate is 13% for school aged girls (9-18 years old).

Barriers and Characteristics Affecting Transition Outcomes

- Common barriers to transition include economic hardship, pregnancy and lack of motivation. Parental values are important when girls are demotivated to attend school.
- Inactivity is common in Nyaruguru and transitions into employment and TVET are rare. There is, however, demand for these activities among out-of-school girls and girls above 15 years old.
- Employment is high in Nyaruguru and girls will find it difficult to find employment without the necessary skills.

To understand if different barriers affect transition outcomes, we categorized all cases according to whether they successfully transitioned or not.

Findings indicate that girls that live without both parents find it more difficult to transition, as well as girls who do not speak the language of instruction, experience hardship, or whose parents have negative parental values towards girls' education.

The largest difference in transition rates was seen for girls who have been pregnant, 58% of which were able to transition in secondary school. This resonates with the results from the Force Field analysis during qualitative exercises, where pregnancy was found to be a determinant factor to whether a girl is able or not to go back to

school. Likewise, mothers transition less than those who are not as "it requires a lot of things to accommodate the new born"[19].

In terms of school-related barriers, teachers' absenteeism and insufficient materials are important barriers to transition.

When disability groups are compared, only persons with hearing impairments seem to transition at lower rates than their non-hearing disabled peers. This suggests that additional efforts must be taken to accommodate the needs of persons with hard or no hearing.

Sustainability Outcomes

At the community-level, the project aims to ensure both CSGs and MDCs meet regularly. The project argues that this is a reasonable indicator of interest and commitment to REAP aims and objectives. At the baseline, this indicator was difficult to assess, as CSGs had not begun project activities. However, MDCs operating in target communities and inherited from REAP1 have continued to meet regularly, indicating a strong commitment to supporting the most marginalized of girls to enrol and attend school. MDCs have continued to participate in community days to select marginalized girls to receive IGA funds. IGAs have also continued with support of the project.

The baseline set the scorecard score as 2 out of 4, at the community level, as indications from parents and caregivers suggest evidence of improved support for girls' education. However, based on the review of barriers, there are several indications that although there has been a change in attitudes, this has not always resulted in a change of behaviour. A clear example of this is the fact that one third of girls face a high chore burden.

At the school-level, several schools are still benefiting from school businesses with an average of 20% of the school budget across project schools being sustained by profits from the business. Although some school businesses are not yet profitable, the project has continued to provide technical and mentorship support to ensure these activities remain sustainable.

For schools, the baseline study set the scorecard as 2 out of 4 indicating that school level sustainability changes are emergent. This is because there is evidence of improved support for girls' education in school management and a commitment to adapt the school budget to address the needs of girls, as evidenced by the use of proceeds from the school business.

At the system-level, the project has developed a strong relationship with several district officials, including the District Education Officer and the District Gender Officer.

Although there has been no commitment on the part of government or other stakeholders to replicate project activities, REAP has been referenced several times on radio and local TV stations as an innovative approach to support girls' education. According to project data, REAP was mentioned 19 times on national television (Rwanda TV), at the start of the project.

At the system-level, the scorecard has been set at 2, indicating that there is evidence of improved capacity of local officials to support girls' education through existing functions. The DEO and DGO both provided clear examples of how they were targeting girls' enrolment and supporting schools to better engage with at risk girls.

Intermediate Outcomes

Attendance

Project activities aim to improve the attendance of girls in schools by targeting barriers which reduce girls' access to school and by making learning environments girl-friendly. The project argues that improved attendance will lead to both improved ability of girls to successfully transition, and improved learning outcomes.

[19] FGD with Parents

The project is continuing to provide technical support and mentorship to school businesses and IGAs established in REAP1. School business generate income to invest in girl-friendly improvements and IGAs provide funding to support girls who can't afford school materials. FFG will also establish alumni networks in project schools to finance scholarships for girls in need. In addition to these activities, the project has set up youth friendly SRH corners in target schools aimed at preventing barriers caused by poor sexual and reproductive health including early marriage and teenage pregnancy.

Most households report that their girls attend school more than half the time; 90.7% in the intervention group and 87.8% in the control group. Quantitative findings based on historical attendance data demonstrate that most girls attend school almost all of the time. The validity of attendance registry data is supported by spot check data, with no visible discrepancies between head count and registry attendance.

Several girls reported that they attend school because they expect this will lead to better job opportunities in the future. Other girls mentioned the relevance of skills learned in school. Findings suggest that if girls understand the relevance of school to their future aspirations, this will likely lead to improved attendance.

Whether school has a real-world application, seemed important to several of the interviewees. The project should consider encouraging teachers and CSG tutors to utilize real life in examples in their sessions to motivate girls to participate.

When asked whether it's ok for parents to keep girls at home for other activities, such as chores or earning money at home, several girls agreed that it is ok as they were needed in the home. Based on these reports, a high burden of household chores can influence school attendance, despite it not being mentioned by parents as a reason for a girl staying home.

Teaching Quality

Based on consultations with project staff, teaching practices in target schools are not inclusive, or outcome based[20]. In addition to this, a 2016 review by HPA on teaching and learning in REAP1 schools found that "some teachers exclude, discriminate against or pigeonhole girls, limiting their learning and participation". This finding is supported by research and consultations conducted by ADRA with MINEDUC.

To address this barrier the project has several intervention activities aimed at improving teaching quality. Specifically, with the support of ADRA the project will train 252 REAP2 teachers in gender-inclusive pedagogy, child-responsive teaching practices, and improved literacy and numeracy instructional practices.

Both the intervention and control groups are comparable on measures of student perceived teaching quality. In primary schools, teachers in the control group had slightly higher levels of perceived ability to consolidate knowledge, to care for students, to clarify and explain things, to confer with students, and to captivate them. In primary schools, teachers in the intervention group had slightly higher levels of perceived ability to manage classes and challenge students.

Perceived teaching quality in secondary schools is less comparable between intervention and control groups. The intervention group outperformed the control group on all dimensions, on average.

To understand the relationship between perceived teaching quality and learning outcomes, the study conducted a series of linear regressions using each dimension as a predictor of numeracy, English literacy, and Kinyarwanda literacy.

At the primary level, all teaching quality dimensions, as well as overall perceived teaching quality were statistically significant predictors of English literacy and explained some degree of variance in the data ($p<0.05$). The extent to which teachers captivate students explained 5% in variance in English literacy outcomes, with an increase by one on the scale resulting in an increase of 6.8% on English literacy score. These results indicate that teaching quality can predict outcome achievements in English literacy.

At the secondary level, fewer dimensions were statistically significant predictors of English literacy scores. However, overall perceived teaching quality was a statistically significant predictor, suggesting it plays a similar role in secondary.

[20]Interview with REAP Project Staff. November 2018

The same, however, was not found for Kinyarwanda literacy. This may be because literacy levels in Kinyarwanda or less dependent on the individual teacher's instructional practices, as it is the main spoken language in the region and not the language of instruction in target grade levels.

At the primary level, overall perceived teaching quality, was able to predict achievements in numeracy at statistically significant levels ($p<0.05$). Each point improvement in the score resulted in an increase of 2.65% on aggregate numeracy score. However, at the secondary level, no dimensions successfully predicted numeracy scores at statistically significant levels.

Collectively, these findings indicate that teaching quality can influence learning outcomes, validating a central assumption of the project's theory of change.

Life Skills

The promotion and acquisition of life skills are an important element of equipping and preparing adolescent girls for their transition into adulthood, particularly in contexts where access to appropriate information, guidance and role models is limited. REAP recognizes this and considers the intersections between cognitive and non-cognitive development as both involving the acquisition of knowledge and skills, and the application of these through specific perspectives and demonstrable behaviours e.g. the acquisition of knowledge of financial management, and the behaviour of regularly saving.

Through this project, HPA delivers Work Readiness (WR) training to youth and ensures clear transition pathways are identified for all students participating in the programme by accessing jobs or internships, forming cooperatives and initiating income-generating projects. In addition to these activities, REAP2 will also engage the most vulnerable in saving groups to increase their economic resilience.

Girls with planning skills, inter-personal skills, and personal skills performed better in English literacy than those that do not. The fact that these differences exist highlights the influencing role of life skills on learning outcomes. In Kinyarwanda this effect was not present, however. In terms of numeracy, only girls with inter-personal skills and overall life-skills performed better than those that did not have these skills.

No group differences exist between treatment and control in terms of life skills and most parents in both treatment and control areas considered the skills children learn in school as relevant and useful.

In terms of financial literacy, 50% of girls in control and 48.4% of girls in treatment schools mentioned they can save little or very little. Only 4.2% of girls in control schools and 9.7% of girls in treatment school mentioned that they can save much or a great deal each month.

Economic Empowerment

Schooling incurs several indirect costs including tuition payments, school uniforms and materials. Several intervention activities aim to support families to off-set or cover these costs and improve girls' access to school.

52% of respondents mentioned that it has become increasingly more expensive to send a girl to school and 28% mentioned that it has remained the same since last year. On average, schooling has an associated cost of 28,360 RWF per year per family. 71% of respondents mentioned that their ability to finance school costs has worsened since last year, a trend that has affected all hardship groups equally.

REAP2 will continue to provide mentorship support to both MDCs and school businesses to ensure enterprises run at a profit and that profit is used to support girls to access school or finance the maintenance of girl-friendly facilities. To further reduce the burden of economic hardship on school enrolment, FFG will establish alumni networks in project schools. Alumni networks will aim to fundraise 5 scholarships by the end of the project.

Unless families experiencing hardship are financially supported with the schooling of their children, it is likely their learning outcomes will decay over time. According to ANOVA tests, girls who experience moderate and extreme hardship perform significantly worse than those that do not experience hardship in English ($p<.05$) and Kinyarwanda literacy ($p<.05$). According to independent sample t-tests, English literacy is also different in households with more than 3 children per adult.

By Baseline, 6.2% of treatment households and 11.2% of control households mentioned that the girls' school has covered some of her expenses to attend school. Of these girls, 12% of treatment and 15% of control are in the extreme hardship category of respondents.

Conclusion

Through a multi-partner approach, REAP2 aims to improve the access, learning and transition rates of marginalized girls across 28 schools in Nyaruguru. The intervention is in line with national objectives and supports the achievement of four outcomes targeted by the Education Sector Strategic Plan (2013):

1. Increased equitable access to 9 years of basic education for all children and expanding access to 12 years of basic education.
2. Improved quality and learning outcomes across primary and secondary education.
3. Qualified, suitably skilled and motivated teachers and trainers to meet demands of expanding education access.
4. Increased equitable access to relevant, high quality, demand driven TVET programmes.

Based on the review conducted at Baseline the project is appropriately targeted to support girls to overcome barriers associated with educational marginalization and is likely to achieve desired results in project outcomes.

With regards to targeting, the project is inclusive of girls experiencing characteristics and barriers inhibiting their educational achievements.

Most girls (64.9%) face severe or moderate degrees of economic hardship. Due to costs associated with schooling, this contributes to an increased propensity of girls to fail to access and learn in school and drop-out. Study findings indicate that degree of hardship has a negative effect on Kinyarwanda test scores, and successful transition. This is supported by qualitative findings with project stakeholders listing poverty as a main reason by for lack of attendance and poor educational achievements.

A large proportion of girls do not speak the language of instruction (24.8%). While Kinyarwanda is used as the LOI in early primary grade levels, in upper primary and throughout secondary English is used. This prevents girls from accessing the curriculum and benefiting from being in school. Findings indicate that girls who speak the LOI perform better in both English and Kinyarwanda literacy and that girls who do not speak the language of instruction find it more difficult to successfully transition.

Quantitative and qualitative evidence validates all key project assumptions assessed at Baseline, suggesting that the intervention is likely to impact desired results.

Improved teaching quality will lead to improved learning outcomes. The study found that perceived teaching quality successfully predicts English literacy at the primary and secondary level, and numeracy outcomes at the primary level. The review of this intermediate outcome found that teachers may face challenges with classroom management, providing learning opportunities to students at the right level of challenge, and conferring with learners. Project stakeholders widely agree that improved teaching quality, will lead to improved educational achievements.

However, both qualitative and quantitative findings raised the issue of punishment for getting something wrong in a lesson as a significant concern for girls, and this may confound the effects of any improvements in teaching quality on learning. Girls reported that this was common practice in schools and this likely discourages student participation and engagement in the classroom.

Extended learning opportunities will support girls to improve their learning outcomes. Qualitative evidence supports the role that extended learning opportunities such as Child Study Groups and remedial lessons can play in improving literacy and numeracy acquisition. Girls report that practicing core reading skills in groups, reading out loud or listening to someone read out loud, and imitating someone reading, were useful strategies which supported them to improve their reading skills. Girls also reported that practicing exercises and being provided with real world examples supports learning in mathematics. These approaches can be employed in project activities to promote learning improvements.

Better access to teaching and learning materials will lead to improvements learning. Girls reported that having access to visual learning aids as well as reading materials including books and magazines can support their learning outcomes in literacy and numeracy. This suggests that the project is appropriately targeting this area to promote improvements in learning.

Out of school girls lack basic literacy and numeracy skills inhibiting their ability to successfully re-engage with school or participate in TVET, IGAs, or work-readiness training. According to qualitative sessions with caregivers, parents who experience economic hardship often must decide who among many they send to school

and often choose to send only those children who perform well in school or those with more likely job prospects. While these decisions are not gendered in nature, doing house chores is associated with both being a girl and poor school performance. These barriers negatively affect a girls' ability to successfully transition in school.

Girls need better access to internship opportunities to be able to successfully enter the workforce. Matched with the right skills, internship opportunities offer the opportunity to home in work skills and access the workforce. Given that employment opportunities are few in Nyaruguru, these experiences might be an important way for girls to build relationships and successfully reach paid employment.

Poor sexual and reproductive health is a barrier affecting the access and learning of girls in schools. Poor sexual and reproductive health was the fourth most prevalent barrier mentioned by project stakeholders. Stakeholders reported that girls often struggled to attend school or learn in school when they were menstruating. Despite changing rooms being built as part of REAP1 to support girls to attend school during menstruation, some girls still feel ashamed to ask to use these facilities. Although stakeholders reported improvements since REAP1, this remains a barrier to girls' attendance. Girls and parents also reported cases were girls had dropped out of school due to teenage pregnancy. Through SRH corners the project aims to improve menstrual management and provide girls with access to SRH knowledge and advice.

Marginalized girls need financial support to be able to afford school costs. Economic hardship was shown to be a key barrier to educational access and achievement. Out of school girls highlighted the role of poverty in causing them to drop out due to lack of school materials. Parents and girls also reported stigma associated with poverty. This included teachers treating poor students differently, with girls reporting that books and other materials were usually provided to wealthy girls, and parents reporting discrimination from peers of children who could not afford school uniforms or soap. Through MDCs, IGAs, school business, and active budgeting to support girls to enrol in school, the project aims to address this barrier.

With regards to sustainability, **advocacy engagements and sharing learning with key stakeholders at the community, district, and national level is likely to lead to replication of best practices**. The project has had past success through advocacy engagements with various stakeholders. This has resulted in district officials committing to actively participating in the design and monitoring of school improvement plans. Overall, the baseline assessed sustainability at the community, school and system level to be emerging.

With regards to gender and social inclusion, the project is GESI accommodating and acknowledges the role of gender and disability in the design of project activities and in relation to the achievement of educational outcomes. Several project activities focus on addressing gender inequities, including teacher training on gender-responsive pedagogy, and the provision of sexual and reproductive health corners tailored to the needs of girls. However, the project needs to take active steps to ensure activities are inclusive of girls who experience disability. 5% of girls at Baseline experienced some form of disability: cognitive, mobility, hearing, visual, communication, or self-care. The study found, that girls experiencing some form of disability had a significantly higher chore burden than their peers. This is likely to influence the time girls who experience disability can spend on school work outside of class, including participation in Child Study Groups and remedial lessons.

1 Background to Project

1.1 Project Context

Overview

Rwanda, with 12 million inhabitants[21] living in an area of 26,340 Km^2, is one of the smallest countries of the African mainland. More than 70% of the population of Rwanda live in rural areas and work mainly in agriculture, mining, or forestry. 41% of the population is aged between 0 and 14 and women are in the majority[22]. Rwanda ranks 163rd in the Human Development Index[23] (of 188 ranked countries) and spends 5% of its GDP on education[24].

Nyaruguru district, where REAP is implemented, is in the Southern Province, hosts 3% of Rwanda's population[25] and is among the poorest districts in Rwanda[26]. In Nyaruguru, 81% of the population aged 16 and above work in agriculture[27].

In Nyaruguru, 71% of the population live in rural cluster settlements known as *Umudugudus (*50% of Rwanda lives in similar settlements)*[28],* and 78% live in houses made of wood or mud (36% of Rwandan houses are made of similar materials)[29]. In Nyaruguru, only 3% of households have electricity (compared to 18% when the entire country is taken into consideration).

Gender

Rwanda has been internationally recognized as a world leader in promoting women's empowerment. In the aftermath of the 1994 genocide, the Government undertook numerous reforms to address the political, social, legal and economic status of women. These included legal reforms that gave women property and inheritance rights. The constitution adopted in 2003, promotes gender equality, and outlaws any form of gender discrimination, going as far as enshrining the principle of equality within marriages[30].

While the country does not officially recognize child marriage[31], UNICEF reports that 8% of girls marry before reaching the age of 18 and the majority drop-out from school[32]. In Nyaruguru, only 1.7% of boys between the ages of 12-19 are married compared to 32.4% of girls of the same age[33].

---

[21]United Nations Population Division (2015) World Population Prospects.

[22]World Bank staff estimates based on age distributions of United Nations Population Division's World Population Prospects.

[23] HDI by UNDP

[24] Education Index

[25] National Institute of Statistics (2012) District Profile Nyaruguru [Available at: http://www.statistics.gov.rw/publication/phc-2012-district-profile-nyaruguru]

[26] Government Statistics, Nyaruguru's GDP-per capita.

[27] National Institute of Statistics of Rwanda (2011) EICV3 DISTRICT PROFILE Nyaruguru.

[28]National Institute of Statistics (2012) District Profile Nyaruguru [Available at: http://www.statistics.gov.rw/publication/phc-2012-district-profile-nyaruguru]

[29]Ibid.

[30]http://pdf.usaid.gov/pdf_docs/pnadz185.pdf

[31]Child marriage reference.

[32]UNICEF, State of the World's Children, 2016

[33]National Institute of Statistics (2012) District Profile Nyaruguru [Available at: http://www.statistics.gov.rw/publication/phc-2012-district-profile-nyaruguru]

Currently, the literacy rate of females aged 25-64 years is 63% compared to 72% of males suggesting that gender imposes additional barriers that affect educational outcomes.

In rural Nyaruguru, 3.4% of active females aged 16 years and above are unemployed compared to 2.7% of males.

Education Policy & Governance Context

The Government of Rwanda is committed to providing universal basic education for all. This is a central component of the Rwanda's Vision 2020. The Constitution of Rwanda further asserts that, "every person has the right to education"[34].

In 2003 the Government of Rwanda issued the Education Sector Policy. The policy's mission is to "reduce poverty and in turn improve the well-being of the population. Within this context, the aim of education is to combat ignorance and illiteracy and to provide human resources useful for the socio-economic development of Rwanda through its educational system"[35].

The following general objectives were defined in the Education Sector Policy[36]:

1. To educate a free citizen who is liberated from all kinds of discrimination, including gender-based discrimination, exclusion and favouritism;
2. To contribute to the promotion of a culture of peace and to emphasise Rwandese and universal values of justice, peace, tolerance, respect for human rights, gender equality, solidarity and democracy;
3. To dispense a holistic moral, intellectual, social, physical and professional education through the promotion of individual competencies and aptitudes in the service of national reconstruction and the sustainable development of the country;
4. To promote science and technology with special attention to ICT;
5. To develop in the Rwandese citizen an autonomy of thought, patriotic spirit, and a sense of civic pride, a love of work well done and global awareness;
6. To transform the Rwandese population into human capital for development through acquisition of development skills;
7. To eliminate all the causes and obstacles which can lead to disparity in education be it by gender, disability, geographical or social group;

At the national level there are two key actors responsible for realizing Rwanda's education sector objectives: the Ministry of Education (MINEDUC) who are tasked with developing policy, norms and standards for the education sector and undertaking planning, monitoring and evaluation activities at the national level, and the Rwanda Education Board tasked with providing quality education to all Rwandans and implementing national initiatives and coordinating other education sector actors under the supervision of MINEDUC.

To universal access to education, the Nine Year Basic Education Policy was introduced in 2006, which expanded free and compulsory education from 6 years (P1-P6) to 9 years (P1-S3)[37]. This was expanded once more in 2011 with the Twelve Year Basic Education Policy which ensured the provision of free 12-year basic education.

These initiatives resulted in dramatic increases in enrolment[38].The overall Gross Enrolment Ratio increased from 123.2% in 2012 to 138.5% in 2013, for example, with more girls being enrolled than boys[39]. Similar progress has been observed in secondary schools. The construction of secondary education establishments and classrooms served as the cornerstone of student enrolments at both lower and upper secondary levels[40], while the 9YBE

---

[34] Ibid, 29

[35] Rwanda Education Sector Policy (2003)

[36] Rwanda Education Sector Policy (2003)

[37]Ibid, 29

[38]MINEDUC. (2014). 2013 Education Statistics Yearbook. Kigali: Ministry of Education.

[39]

[40] See 23.

program increased more equitable access to lower secondary education, which dramatically decreased dropout rates[41].

With a gross enrolment ratio of 133.5 (140.9 for Nyaruguru)[42], Rwanda sees a high portion of students enrolling late in primary school where multi-age classes are common[43]. The situation changes in secondary school, where the enrolment ratio drops to 39.11 (36.5 in Nyaruguru)[44] demonstrating the significant number of drop outs when children reach secondary school. Schools also experience high fluctuations in student composition; while roughly 96% of students of school age are enrolled in primary school[45], Rwanda has one of the highest drop-out rates in the region, currently at a cumulative average of 65% (61% for females and 69% for males)[46]. In lower secondary school, 20% of boys and 25% of girls are enrolled compared to 20% and 22% respectively in upper secondary school.

At the national level: the inclusion of women has been the hallmark of Rwandan's program for post-genocide reconstruction. Studies show that Rwanda has achieved the gender parity targets at the primary level earlier this century due to the implementation of policies and initiatives such as the Vision 2020, various National sensitization programs, Girls' Education Policy and EFA action Plan etc. However, gender disparities persist, especially at public and private higher education institutions[47]. Subsequently, has also been a shift of focus from academic performance to transition rate of girls, which lags than that of the boys[48].

Increases in girls' enrolment are also due to increased emphasis on girls' education through national initiatives. The Girls' Education Task Force of the Ministry of Education (GETF), established in 2004 under the UNGEI framework, consists of MINEDUC, Ministry of Gender and Family Promotion, DFID, UNICEF, FAWE, National Women Council, National Youth Council and Pro-femmes. It has implemented the Girls' Education Action Plan: which included activities focused on adapting school curricula to focus on life skills, establishing minimum standards within the Child-Friendly Schools Framework, forming children's peer support groups by using participatory "Tuseme" clubs, and initiating 'catch-up' programmes to help vulnerable children and girls previously excluded from the school[49].

In 2013 Rwanda issued a revised Education Sector Strategic Plan. The plan sets policy strategies and objectives for the period between 2014 and 2018 and is up update to the ESSP issued in 2010. At its core the plan aims to "provide a planning framework that will enable the education sector to improve the provision of education, including skills development, in order to better meet the requirements of the diverse labour market, by increasing the coverage and the quality of 12YBE. In addition, to strengthening TVET and higher education provision, the plan also aims to improve pre-primary education, teacher education and adult literacy provision"[50]. The plan aims to reflect the strategies and objectives set out in 12 previous national policies:

- Girls Education Policy (2008)
- Higher Education Policy (2008)
- Quality Standards in Education (2008)
- Special Needs Education Policy (2008)
- ICT in Education Policy (2008, and reviewed in 2014)
- Technical and Vocational Education and Training (TVET) Policy (2008)
- Teacher Development and Management Policy (revised 2011)
- Early Childhood Development Policy and Strategic Plan (2011)

---

[41]MINEDUC. (2008). *Nine Years Basic Education.* Kigali: Ministry of Education .

[42]4th Rwanda Population and Housing Census, 2012(NISR)

[43]Gross enrolment ratio, 2014

[44]4th Rwanda Population and Housing Census, 2012(NISR)

[45]Adjusted net enrolment ratio

[46] Cumulative dropout rate

[47] See 30.

[48]Ministry of Education. (2013). *Education sector strategic plan 2013/14-2017/18.* Kigali.

[49]UNGEI. (2007). *United Nations Girls' Education Initiative: Regional Updates.* New York.

[50] ESSP 2013 available at https://ictedupolicy.org/system/files/education_sector_strategic_plan_2013_-_2018_small.pdf

- Youth and Adult Literacy Strategic Plan
- School Health Policy (in development)
- Policy on Teacher Incentives (in development)
- National Science, Technology and Innovation Policy (2005 and reviewed in 2014)

The plan therefore targets ten sector outcomes[51]:

1. Increased equitable access to 9 years of basic education for all children and expanding access to 12 years of basic education.
2. Increased equitable access to education for students with special educational needs within mainstream and special schools.
3. Improved quality and learning outcomes across primary and secondary education.
4. Qualified, suitably skilled and motivated teachers and trainers to meet demands of expanding education access.
5. Increased equitable access to relevant, high quality, demand driven TVET programmes.
6. Increased equitable access to affordable, relevant, academically excellent higher education that also delivers quality research outputs.
7. Improved access to school readiness programmes by 2018, accompanied by expanded access to three years of early learning for four to six-year olds.
8. Strengthened performance in science, technology and innovation at all levels of education, and application of science, technology and innovation in relevant sectors of the economy.
9. Increased access to Adult Basic Education to improve adult literacy and numeracy.
10. Improved administrative and management support services, including the management of policy, information, finances, and human resources across the education sector.

Educational System

Rwanda has a 6-3-3 formal education structure. Primary school has an official entry age of seven and a duration of six grades (from P1 to P6). Secondary school is divided into two cycles: lower secondary consists of grades 7 – 9 (from S1 to S3), and upper secondary consists of grades 10 – 12 (from S4 to S6). Lower secondary education is referred to as "tronc commun" or "cycle d'orientation." In principle, school is free and primary school is compulsory through lower secondary. Students sit for the Certificat d Études Primaires at the end of P6, the Certificat de Fin de Tronc Commun at the end of S3, and the Diplôme de Fin des Études Secondaires at the end S6[52].Currently 20% of girls of the target grades of REAP do not progress onto secondary school because they do not pass the state achievement test[53].

With the aim to make Rwandan graduates more competitive in and outside the East Africa region, the department of curriculum and pedagogical materials started to revise the old education curriculum in July 2013[54], a project that lasted for two years and resulted in the competence-based curriculum that came into force in February 2015[55]. Studies have demonstrated that the old curriculum lacked contents relevant to the expectations of the labour market, due to the dearth of transferrable skills such as problem-solving and critical thinking[56]. the competence-based curriculum aims to elevate learning by offering challenging and engaging learning experiences

[51] ibid

[52] Education Policy and Data Centre: http://www.epdc.org/country/rwanda

[53]HPA (2013) GEC Application Form [unpublished]

[54]Mbarushimana, N., & Kuboja, J. M. (2016, Feb - April). A paradigm shift towards competence based curriculum: The Experience of Rwanda. *Saudi Journal of Business and Management Studies, 1*(1), 6 - 17.

[55]Republic of Rwanda. (2015, April 23). *Rwanda unveils competence-based curriculum to guarantee a better quality of education*. Retrieved July 3, 2017, from http://www.gov.rw/news_detail/?tx_ttnews%5Btt_news%5D=1162&cHash=2eb4ec079e9cef10a276c58b67074406

[56]NewTimes. (2015). *Rwanda Education Board: New competence based curriculum is aligned to national development goals*. Retrieved July 03, 2017, from NewTimes: http://www.newtimes.co.rw/section/advertorial/744/

that demand deep-thinking instead of just rote memory[57]. According to the Rwanda Education Board (REB), the competences can be divided into two broad categories: basic and generic[58].

School Context

REAP2 will continue to work with the same schools targeted in REAP1. These schools were selected in close collaboration with government stakeholders and other NGOs. Emphasis was placed on selecting schools which were not receiving any other intervention, and which were particularly marginalized with regards to the access and attainment of girls.

The 28 project schools are spread across 8 sectors of Nyaruguru: Munini, Muganza, Rusenge, Ngera, Ngoma, Nyabimata, Nyagisozi, and Nyanza.

Mean student to teacher ratio for each sector compared to each school are shown in Table 1. In almost all sectors mean student to teacher ratios in project schools exceeded wider sector means. Means across intervention sectors ranged from 62 students per teacher to 68 students per teacher.

Table 1. Student to Teacher Ratio: Intervention Schools by Sector

Sector	Sector Mean	Intervention Group Mean	Difference
Munini	68.40	68.0	-0.4
Ngera	61.71	62.60	0.89
Ngoma	66.29	64.50	-1.79
Muganza	60.00	60.67	0.67
Nyabimata	60.17	66.75	6.58
Nyagisozi	61.00	61.33	0.33
Rusenge	64.33	67.0	2.67
Nyanza	61.00	62.12	1.12
District Level	60.49	64.33	3.84

High student ratios present in intervention areas suggest schools have high class sizes, inhibiting the time a teacher can spend with each student.

Schools are in rural areas often resulting in increased travel time for students. On average 18% of parents in intervention areas report that the closest primary school is more than a 1 hour walk away. On average 42.3% of parents report that the closes secondary school is more than a 1 hour walk away.

[57]Ngendahayo, E., & Askell-Williams, H. (2016). *Rwanda's New Competence-Based School Curriculum New Approaches to Assessing Student Learning Needed.* Publishing Higher Degree Research.

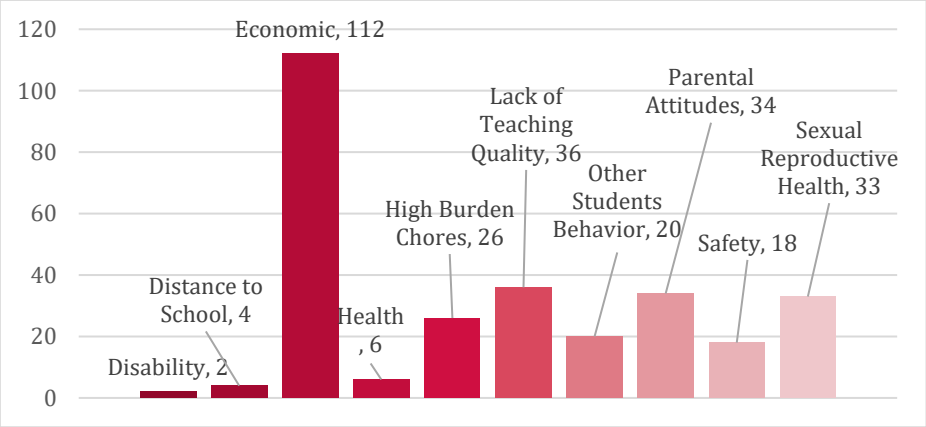
[58]Rwanda Education Board, Ministry of Education. (2015). *SUMMARY OF CURRICULUM FRAMEWORK PRE-PRIMARY TO UPPER SECONDARY 2015.*Basic: literacy, numeracy, ICT, citizenship and national identity, entrepreneurship and business development, science and technology, communication in the official language. Generic: critical thinking, creativity and innovation, research and problem solving, communication, cooperation and interpersonal relations and life skills, life-long learning. Literacy: Read a variety of texts accurately and fast. Express ideas, messages and events through writing legible texts in good hand-writing with correctly spelt words. Communicate ideas effectively through speaking using correct phonetics of words. Listen carefully for understanding and seeking clarification when necessary. Numeracy: Compute accurately using the four mathematical operations. Manipulate numbers, mathematical symbols, quantities, shapes and figures to accomplish a task involving calculations, measurements and estimations. Use numerical patterns and relations to solve problems related to everyday activities like commercial context and financial management. Interpret basic statistical data using tables, diagrams, charts and graphs.

Educational Barriers

There are several key barriers in intervention areas affecting the ability of marginalized girls to access and learn in school. Over 63% of the population lives below the income poverty line at PPP $1.25 a day and many cite their poverty, food insecurity, health threats from poor water supply, harmful traditional practices and HIV/AIDS as the main reasons of why 4% of children of school age are out-of-school in Rwanda[59].

A review of qualitative evidence from this study finds that the most prevalent barriers mentioned by project stakeholders include economic hardship, lack of teaching quality, negative parental attitudes, and a high chore burden. Frequencies of codes for these barriers are shown in Figure 1.

Figure 1. Frequencies of Educational Barriers Coded



Project stakeholders consulted as part of this study included parents, school stakeholders, district officials, marginalized girls, and project staff. Each of the key barriers listed in qualitative sessions are summarized and discussed below.

Table 2. Project Stakeholder Views on Barriers to Girls' Education[60]

Barrier	Stakeholder Views
Economic Hardship	*"I left the school because we were poor in my family."* *"I don't have any friend in class. Because they are poor in their families, so this automatically pushes them to leave the school to join the tea picking for money. Yeah, there are many youths engaged in tea picking."* *"The girl goes to each employment and work for money to stay alive."* *"The main problem is of poverty and lack of school materials, pens, notebooks, school uniform and etc., the fact of children like to go to work in town to satisfy their need is also a factor of girls being absent at school."* *"The causes, reason that motivate girls' drop out is mainly poverty, desire to resembles like others who are actually getting salary, and this push them going to town to find their way out."*
Perceived Lack of Teaching Quality	*"I used to be disturbed by teachers' behaviors like teachers who spent their time doing other things outside the lessons from class"*[61]

[59] Project Proposal

[60] OS Qualitative Coding Report Produced April 2017 on 'Barriers to Girls Education' by thematic code

[61] FGD with Girls on Teaching Quality & Extended Learning Opportunities

Barrier	Stakeholder Views
	"Some teachers maltreat students which allows me to qualify them as careless teachers" *"Some teachers come and write the notes only without explanation. It is because they don't like their profession"*
Parental Attitudes	*"Because parents don't consider the importance of learning"* *"The parents sometimes don't care about our education sometimes because them also did attended the school anymore."* *"The behavior of parents may contribute to the child's like or dislikes of the school environment, word of discouragement, i.e. a parents might ask for a notebook or a pen to her mother and a parent response is like "Do you study to lead a country?" and he throw to him or her bad examples of those who studied and now jobless."* *"Illiterate parents who are not able to help a child to revise or lack of time to do so by parents who have studied discourage child's motivation and will to study."*
Sexual and Reproductive Health (Menstrual Management & Early Pregnancy)	*"Some of the girl go into menstruation and last for 5 days or a week so this is hindering girls' education."* *"Menstruation period affect the way our girls study because sometimes they are absent while in period, there is confusion for girls and sometimes traumatic due to comparing period as a sickness considering it as a fact of being wounded."* *"There are but some are ashamed to inform someone in charge of the [changing] room, so they opt to quit the school immediately."* *"In our visit to villages, we found out that there were many girls not attending school, and the school is doing great to make sure that the conditions are conducive to girls; the school prepared the separate toilets, girls' changing room."* *"Girls used to drop out from school because of unwanted pregnancies and sometimes lacking school materials but frequently it is because of pregnancy, so it is very complicated to attend school while you are breastfeeding"*
High Chore Burden	*"I agree [that parents should be allowed to keep children from going to school] because of many home duties and works, sometimes without any persons to sustain them"* *"I miss [school] time to help my parents for home duties and lack the time to do my homework"* *"As girls' growing seemingly to their mother with many tasks at home, this makes the girl also home duty responsible; all those home duties deprive girls the rights for education."* *"In addition, another thing that is eminent in the village is that girls still disallowed to come at the school for home activities, cooking, home keeping, and many others…there is still a need for sensitization for parents to change minds because they think that caring for a girl is to care someone who is belonging to another family and chose to exploit her potential whilst they are using her instead of enforcing her education."*
Safety	*"We have the problems as we can meet with the gangsters when we return home too night."* *"I dislike the robbery at school as sometimes the students steal each other the school's materials."* *"The girls challenged in way to or from school when frightened to be raped."*

Barrier	Stakeholder Views
	"It happens that girls in way coming or going to schools meet with the drunk; this can be problems as the sexual violence can take place in these situations."
Disability	*"Due to general body, the disability can be challenge, like when girl is disabled, and their fellows' laugh or shout on the disabled girls with many informal names, this challenges the disabled students by discouragement or hate the school."*

The most common barrier to girls' education, listed by stakeholders consulted, was economic hardship. In principle, school is free and compulsory for primary and lower secondary. However, attending school carries associated costs such as costs for matriculation[62], school materials and transport[63] that disproportionally burdens the poor and extremely poor. Project staff report that orphans often face higher degrees of economic hardship, particularly in the case where they live in child-headed households.

Alongside economic barriers, schools and communities lack the resources and capacity to fully support learning. A 2014 study by UNESCO found that there are approximately 143 pupils for every Kinyarwanda text book in Grade 1 and 190 pupils for every mathematics text book", for example[64].

The second most prevalent barrier listed by project stakeholders was poor teaching quality. Several girls mentioned that teachers' behaviour is often not conducive to student learning. Some girls mentioned that they felt their teachers did not care for them, were not visibly interested in improving their learning and do did not take their profession seriously.

Teaching practices in target schools are not inclusive, or outcome based[65]. In 2016, HPA assessed teaching and learning in REAP1 schools and found that "some teachers exclude, discriminate against or pigeonhole girls, limiting their learning and participation"[66]. This finding is supported by research and consultations conducted by ADRA with MINEDUC.

Negative parental attitudes are a cross-cutting barrier mentioned by several stakeholders. Girls mentioned that parents sometimes aren't aware of the importance of learning and are therefore unwilling to invest in girl's education. Others commented that their parents don't demonstrate an interest in what they do in school. Several girls explained this may be because some parents did not go to school and therefore do not know how to actively support the education of their children.

Project staff support this finding and report that girls are consistently discriminated against, with girls' education viewed less important than boys'. Girls are encouraged to marry at an early age, and they often take on household and income-generating responsibilities due to poverty or illnesses in the family, interrupting or ending their schooling.

Poor sexual and reproductive health was the fourth most prevalent barrier mentioned by project stakeholders. Specifically, stakeholders reported that girls often struggled to attend school or learn in school when they were menstruating. Although REAP1 targeted this specific barrier through the construction of girls' changing rooms, some stakeholders reported that girls sometimes feel ashamed to ask to use these facilities. Additionally, girls and parents reported cases were girls had dropped out of school due to teenage pregnancy. These findings highlight the fact that girls need access girl-friendly sexual and reproductive health advice to reduce the risk of teenage pregnancy and improve menstrual management.

Safety, specifically concerns about it on the way to and from school, was an additional barrier that came up on qualitative sessions. Some girls reported concerns about the safety of coming home at night, or in the case that they lived far away from the school and the walk through very rural areas would take a long time. In these cases, girls mentioned the possibility of running into robbers or boys with some citing the risk of sexual assault.

[62] U.S. Department of State (2004) Country Reports- 2004; FGD with Mothers of out-of-school girls); KII with School Director,

[63]Project proposal

[64]UNESCO 2014

[65]Project Proposal

[66]Project Proposal

Quantitative results indicate that not speaking the language of instruction further inhibits girls' ability to access the curriculum, as discussed later in this report. The language of instruction for P4-S6 is English. Only 24% of girls in intervention areas do not speak the LOI at the time of the baseline.

Along with these barriers, project staff additionally report that schools have poor facilities particularly a lack of potable water and separate latrines for girls, which often demotivates girls to attend school.

A review of barriers to girls' education in intervention areas suggest that educational marginalization is due to economic hardship, negative parental attitudes, poor teaching quality, and low sexual and reproductive health resulting in poor menstrual management, and increased risk of teenage pregnancy.

1.2 Project Theory of Change and Assumptions

In response to these barriers and through funding from the UK Department for International Development's (DFID) Girls Education Challenge[67] (GEC), HPA, ADRA, LCD and FFG adopted a multi-sector, multi-partner approach to promote the learning and transitions of marginalized girls across 28 schools.

The Rwanda Education Advancement Programme Phase 2 (REAP2) will run from July 2017 - December 2019.

The programme argues that girl-friendly learning environments are created through the provision of targeted support to schools and communities, and through the replication of best practices in the wider education system. REAP's theory of change is presented in Annex 14 and can be understood through the5 target project outputs.

Output 1: Improved school and community capacity to support learning

Output 1 aims to address the following barriers identified by the project and project stakeholders: poor teaching quality in target schools, lack of English proficiency among teachers, and a lack of extended learning opportunities for girls to build basic literacy and numeracy skills.

Activities

To improve teaching quality at the school level, ADRA Rwanda will train 252REAP2 teachers in gender responsive pedagogy, and improved literacy and numeracy instruction.

The teacher training curriculum was developed to align with Rwanda's outcome-based approach and has been endorsed by MINEDUC. The training includes modules on gender-sensitive teaching practices, the specific needs of girls, and best practices for teaching and assessing literacy and numeracy in an outcome-based curriculum.

To enable girls of all levels of ability to access learning opportunities, ADRA will also run remedial learning sessions for girls who are behind in school or who have dropped out. These sessions will enable girls to catch up in literacy and numeracy to re-enter formal schooling or to equip older girls with the necessary literacy and numeracy skills to enter TVET. Remedial learning sessions will be facilitated by teachers trained by ADRA.

ADRA has identified poor English skills amongst teachers as a key gap to the teaching of English literacy. To support a lack of English proficiency amongst teachers, ADRA will establish Teacher English discussion circles to provide a space for teachers to practice their English in an informal setting. These groups will also be guided by mentors (leveraging on cohort teachers from ADRA English Mentoring and training project in the Eastern Province), who will be assigned to schools (each school will have 1 mentor). The mentors and teachers will collaborate with the head teachers to develop periodic work-plans

To address shortages of educational materials in schools, HPA will provide extra English, Kinyarwanda and maths textbooks to target schools. Textbooks will be aligned with the national competency-based curriculum and will focus on addressing skill gaps for P4 – S6 learners and those with no to very little proficiency.

To encourage girls to celebrate learning achievements, HPA will organize 84 graduation ceremonies for girls and boys progressing from primary school to secondary schools; from lower secondary to upper secondary or TVET

[67] For more information about the Girls' Education Challenge, please visit: https://www.gov.uk/international-development-funding/girls-education-challenge

and from secondary school to university, or the labour market. Graduation ceremonies will aim to provide a fun way to celebrate a successful transition and promote motivation and engagement in school.

To create girl-friendly learning environments at the community level, LCD will establish Community Study Groups in project communities.

LCD will establish 75 CSGs with one CSG in each village surrounding target schools. CSGs will be held in community spaces agreed by members. These could include churches, a community building or a well-known location. The group will be run outside of school hours to enable students to participate. Each session will last between 1.5 and 2 hours. Sessions will be facilitated by a trained community tutor, who will be a recent secondary school leaver.

Community tutors will be trained and supported by LCD staff to set up CSGs, identify stronger and weaker learners and differentiate in their teaching approaches. They will be provided with a curriculum of fun, participatory, exercises to facilitate Kinyarwanda, English and Mathematics learning in line with the national outcome-based curriculum. Stronger learners will be paired with those with weaker proficiencies to reteach and reinforce key concepts.

CSGs will be comprised of both in-school and out of school boys and girls. On average, the project expects CSGs to each be comprised of 50 members[68]. In groups larger than 20 members, parents and youth will be enlisted to volunteer in rotation to help manage CSGs and small group work, as well as to support with walking participants home after dark. By engaging parents and conducting activities at the village level, the project aims to promote local values in favour of education and conducive to accessible learning.

Intermediate Assumptions

The intermediate assumptions associated with this output are listed below. These assumptions were developed after a review of the project's theory of change. For the purposes of the evaluation, we have selected assumptions linking outputs to intermediate outcomes and outcomes. This selection of assumptions was made from existing project assumptions as the evaluation focuses on reporting findings at the intermediate outcome and outcome level. Over the three years of the project, the external evaluation will aim to validate each of these assumptions.

- **Assumption 1: Improved teaching quality will lead to improved learning outcomes.**
- **Assumption 2: Extended learning opportunities will support girls to improve their learning outcomes**.
- **Assumption 3: Better access to teaching and learning materials will lead to improvements learning**.
- **Assumption 4**: **Celebrating successful in-school transition will improve the self-efficacy and self-esteem of girls, and in turn improve their transition rates.**

Output 2: Improved school management and school budget use in support of girl's education

Output 2 aims to address the following barriers identified by the project and project stakeholders: inability of schools to manage initiatives aimed at improving school access for girls, and low capacity amongst school stakeholders to set and monitor improvement targets.

Activities

To improve school management and budget use in support of girls' education, LCD will train school leadership, including PTAs and SEOs to develop, monitor, report, and share learning on school improvement plans (SIPs). In

[68]Based on LCD consultation with ADRA on average sizes

its GEC1 project in Ethiopia[69]. LCD implemented supported schools to develop, implement, and monitor SIP plans and audits with PFM frameworks to ensure the needs of the most marginalised girls are met.

An initial component of the SIP focuses specifically on equipping stakeholders to conduct a School Performance Review and Gender Audit to identify gaps to girl's education outcomes and implementation strategies to address these. LCD will work with MIEDUC and REB to review the SIP process and develop indicators to measure performance change at the school level.

The SIP process is made up of 9 steps:

1. Develop and refine indicators and SPR data collection tools.
2. Train district officials in SPR data collection methodology
3. Collect data on schools
4. Input data into SPR database and analyse
5. Develop school, cluster, zone, SPR reports
6. Facilitate Social Accountability Monitoring and School Performance Appraisal Meetings (SPAMs)
7. Develop School Improvement Plans (SIPs)
8. District holds Education Conference
9. Implement improvement targets.

LCD will provide training to sector and district education staff in the SIP data collection process. District officials will undertake data collection activities to ensure local ownership of the process, supported by LCD REAP2 staff. Data collection will take place in all project schools annually and will cover the following domains:

- Quality of Teaching (including lesson observations and a Gender Responsive Pedagogy checklist)
- Learner Environment (including girl-friendliness rankings for every school)
- Leadership and Management (including governance checks and an assessment of progress with gender mainstreaming and analysis of the role of women in school management via the gender balance of the PTA and School Improvement Committee)
- Community Participation (including participation and representation of women).

LCD will support sector/ district staff and head teachers to co-facilitate School Performance Appraisal Meetings (SPAM) in every school for as many community stakeholders as possible to engage with the reports, identify strengths and weaknesses, and set improvement targets for their school in their School Improvement Plan (SIP). A gender lens will be used to discuss girls' education issues. A sector-wide conference will then enable an integrated sector education plan to be developed which will then feed into the district education plan.

Schools and districts will be supported throughout the project to monitor progress towards the targets set on their SIPs and to revise the targets iteratively based on the annual SIP findings.

Intermediate Assumptions

The intermediate assumptions associated with this output are listed below. These assumptions were developed after a review of the project's theory of change. For the purposes of the evaluation, we have selected assumptions linking outputs to intermediate outcomes and outcomes. This selection of assumptions was made from existing project assumptions as the evaluation focuses on reporting findings at the intermediate outcome and outcome level. Over the three years of the project, the external evaluation will aim to validate each of these assumptions.

- **Assumption 5: Schools need support developing and implementing initiatives in support of girls' education.**

[69]"In Ethiopia, with GEC, Link has collected data annually in all project schools (123 schools in 2016), brought together over 36,000 school stakeholders to review SIP data and supported every project school to develop a SIP and Gender Action Plan annually. During their GEC1 mid-term review in 2015, it was found that 95% of Gender Action Plan targets were either partially achieved or fully achieved." Project Proposal REAP2

- **Assumption 6: School improvement planning will lead to improved access of marginalized girls to schools.**

Output 3: Girls who are behind in school or have dropped out supported to develop basic literacy and numeracy and transition back into school, skills training, or livelihoods activities

Output 3 aims to address the following barriers identified by the project and project stakeholders: lack of learning opportunities for out of school girls to improve their basic literacy and numeracy skills, lack of access of girls to internships and employment opportunities.

Activities

The REAP1 Endline Study found that most non-readers were out of school girls and that both literacy and numeracy are usually acquired through formal schooling. Findings from qualitative assessments revealed that many school drop outs feel embarrassed to return to younger grades and that many of those who did not re-enrol in school preferred to transition to job or income opportunities rather than going back to school[70].

Among 456 girls who were supposed to go back to school during GEC 1, only 163 have been enrolled so far. REAP2 will endeavour to offer work skill training to out-of-school girls who do not wish to return to school, while not explicitly aiming to enrol any more OOS into primary or secondary school.[71]

Lacking basic numeracy and literacy skills, out of school girls are unlikely to excel in IGAs, TVET institutions and formal employment. Girls additionally face barriers enrolling in school due to a lack of basic skills inhibiting their ability to access the curriculum.

REAP2 will offer remedial learning for OOS girls, identified through MDCs and community structures such as Ubudehe. After-school remedial tutorials will be offered by ADRA in schools through specially-trained teachers to girls who are behind in school or have dropped out.

In schools, teachers will be trained to identify girls and boys with different types of marginalisation and to address each accordingly with tailored teaching and remedial learning approaches and non-discriminatory.

HPA will link OOS girls who do not want to reenrol (those of legal age where they are not mandated to be in school) to TVET, employers and income opportunities through internships, and savings groups to increase their economic resilience.

During REAP1, 20%-25% of OOS girls transitioned per year to TVET, jobs, and IGAs. By the end of REAP2, 65% or 293 additional girls will transition to TVET, employment or successful income generation.

PFM frameworks will be developed in the target schools with mandatory budget lines for school costs of most vulnerable girls to continue their learning. These will be tied to the school's Ships within the objectives of Output 2.

Development of the PFM process will be carried out by members of the school management and PTAs, who will be trained in the following skills:

1. Budgeting, treasury and cash management, procurement and contracting, audit and control, and administrative systems (e.g. IT and/or book keeping skills) for financial management and control.
2. The technical and institutional aspects of PFM
3. School governance and public accountability
4. Need diagnosis and intervention design
5. The topics known to be of interest to specific schools and transition systems
6. REAP/HPA policies for use of SMC implementation mechanisms and details of the relevant instruments

---

[70] GEC-T Project Proposal

[71] *Ibid*.

It is expected that beyond technical skill improvements, PTA members will demonstrate a supportive attitude towards girls' education. REAP2 staff will establish mechanisms to ensure that PFM frameworks are sensitive towards the local needs of marginalized girls as demonstrated through monitoring and evaluation data.

Intermediate Assumptions

The intermediate assumptions associated with this output are listed below. These assumptions were developed after a review of the project's theory of change. For the purposes of the evaluation, we have selected assumptions linking outputs to intermediate outcomes and outcomes. This selection of assumptions was made from existing project assumptions as the evaluation focuses on reporting findings at the intermediate outcome and outcome level. Over the three years of the project, the external evaluation will aim to validate each of these assumptions.

- **Assumption 7: Out of school girls lack basic literacy and numeracy skills inhibiting their ability to successfully re-engage with school or participate in TVET, IGAs, or work-readiness training.**
- **Assumption 8: Girls need better access to internship opportunities to be able to successfully enter the workforce.**

Output 4: Improved enabling environment through a reduction in barriers to girls' education:

Output 4 aims to address the following barriers identified by the project and project stakeholders: poor sexual reproductive health resulting in improper menstrual management techniques, and increased risk of teenage pregnancy, economic hardship preventing girls from being able to afford costs associated with attending and learning in school.

Activities

For girls to attend and succeed in school key barriers to girls' education need to be addressed. The project has previously identified the effects of economic hardship, teenage pregnancy and poor sexual and reproductive health on school attendance and enrolment[72].

To address economic barriers preventing girls accessing school and learning, HPA will continue to provide technical support and mentorship to school businesses and IGAs. School businesses generate income to invest in girl-friendly improvements and IGAs provide funding to support the most marginalized girls to access school.

The project will organize training workshops for all mother daughter club (MDC) members. Training will cover the IGA management topics, use of profit, creation and sustaining saving groups and collaboration with micro-finance institutions. Additionally, the project will provide mentorship and monitoring through the provision of technical assistance directly to SBs and IGAs through field officers.

To address the barriers to girls' access and enrolment caused by teenage pregnancy, early marriage, and poor sexual and reproductive health, HPA will run youth friendly sexual health service corners in project health facilities nearby within target communities through funding from Irish Aid. Youth friendly sexual health service corners will be run by Community Health Workers trained in STI/HIV and case management and who will conduct additional outreach activities within schools and communities.

To further reduce the burden of economic hardship on school enrolment, FFG will establish alumni networks in project schools. In Year 1, FFG will focus on providing training to school stakeholders and supporting the initial establishment of alumni networks. In Year 2, FFG will provide support to early alumni networks and work with schools to strengthen financial mechanisms to ensure transparency and trust. During Year 3, FFG will continue to provide support to alumni networks and support networks to fundraise for scholarships. Alumni networks will aim to fundraise 5 scholarships by the end of the project.

72

Intermediate Assumptions

The intermediate assumptions associated with this output are listed below. These assumptions were developed after a review of the project's theory of change. For the purposes of the evaluation, we have selected assumptions linking outputs to intermediate outcomes and outcomes. This selection of assumptions was made of existing project assumptions as the evaluation focuses on reporting findings at the intermediate outcome and outcome level. Over the three years of the project, the external evaluation will aim to validate each of these assumptions.

- **Assumption 9: Poor sexual and reproductive health is a barrier affecting the access and learning of girls in schools.**
- **Assumption 10: Marginalized girls need financial support to be able to afford school costs.**

Output 5: Commitment for replication of best practices

Output 5 aims to address the following barriers identified by the project and project stakeholders: lack of awareness amongst community, district and national stakeholders as to best practices to support girls' education.

Activities

REAP2 will continue the advocacy activities to ensure that the District of Nyaruguru commits to continuing and taking ownership of best practices as well as to promote national level replication of these best practices through a variety of networks including:

- ✓ **School and community structures:** School Management Committees / boards and PTAs will have strong ownership and involvement in many of the project activities. The PTA with the whole school also run the SB, SIP, and graduation ceremony activities.
- ✓ **District government:** including the education, finance, and infrastructure units as well as DEOs, SEOs, and the Mayor Office of the Nyaruguru district.
- ✓ **Private sector:** TVET representatives and private sector entrepreneurs involved in the internship and job placement programmes.
- ✓ **Joint Action Developmental Forum (JADF):** This is a District level network gathering all developmental actors in the district including NGOs, CSOs, Private Sector and Government.
- ✓ **Rwanda Education National Coordination Platform (RENCP):** At National level, RENCP is composed by all NGOs working in Education across the country.
- ✓ **Rwanda Education Board (REB) and the Ministry of Education (MINEDUC):** HPA has been working closely MINEDUC with Girl's Education and Crosscutting Unit. For matter of sustainability and replication of REAP2 approaches the REAP2 partners will plan to engage more with REB which is charge of teacher training, quality of education, curriculum development, textbooks/readers distribution, and M&E.
- ✓ **Ministry of Gender and Family Promotion (MINGEPROF):** HPA has developed relationships with key representatives to further the project's advocacy for girls' education and transitions including local District officer for gender and family promotion.
- ✓ **Network of International NGOs (NINGO):** The project will keep engaging with NINGO which gathers all INGOs working in Rwanda. This network is very key for advocacy at high level and apart from lesson learning, it helps to analyse and provide inputs into different policies being developed by the government of Rwanda
- ✓ **The new competence-based curriculum and textbook initiative**: Since March 2016 a new competence-based curriculum is being rolled out and this project's teacher training and remedial learning delivered by ADRA Rwanda will be in line with the new curriculum.

To fulfil its sustainability objectives, REAP will aim to increase its influence on government and networks to ensure changes brought about by the project are continued and replicated. The project will seek to demonstrate incidences of government commitment to take up a project approach by:

1. **Training and involvement of Nyaruguru local authority and DEO to endorse and monitor SIP**: Involving Nyaruguru Local Authority, Nyaruguru DEO, and the SEOs is also essential to ensure that government structures are overseeing these school / community led approaches, so that this can continue after the NGO partners leave. HPA will training and involve the Nyaruguru local authority and DEO to endorse and monitor SIPs and PFM frameworks. Within the objectives of other outputs, DEOs and SEOs will be trained to support PTAs in the implementation of SIPs. DEO and the SEOs will be trained and supported to conduct monitoring of school budgets which will include the income from the SB which will received additional support and mentorship until Year 2 when they will be expected to be sustainable. The Nyaruguru DEO has also reviewed the teaching training curriculum to ensure they are relevant to the skills level and context of teachers in Nyaruguru.
2. **Advocate for SIPs to be integrated into the Nyaruguru plan:** advocacy will occur through bi-annual meetings with Vice mayor of the district, DEO, and District Planning officers.
3. **Advocate for replication of project best practices:** HPA already has an office, team, and very constructive relationships with Nyaruguru Mayor, and has proven its ability to advocate effectively for replication even at national levels. While many projects lobby for replication, REAP1 has proven to be particularly successful at this – national replication is now underway for the replication of REAP1's MDC and girls' changing room, and in October 2016 the First Lady of Rwanda visited the project and met with MDC members at the national celebration of Rural Women's Day and the International Day of the Girl Child (attended by DFID, USAID, UNICEF, UNESCO, JICA, members of Parliament, national ministries etc.) to bring attention to HPA's pioneering models. Similar strategies will be applied to REAP2's advocacy for the innovative approaches in the second phase of GEC. For matter of sustainability and replication of REAP2 approaches the REAP2 partners will plan to engage more with the REB which is charge of teacher training, quality of education, curriculum development, textbooks/readers distribution, and M&E. This will bring them on board to adopt the Gender Audit approach which will be piloted in Rwanda for the first time by REAP2. Engaging with REB will not substitute the existing engagement with the Girl's Education Unit which has been working closely with REAP1 since GEC 1.
4. **Regular newsletters and project Facebook and Twitter updated to engage youth:** The project will use social media channels but also will try to supplement these communication channels with other means such as community meetings and posters. These strategies will aim to disseminate key project learning to a diverse audience.

Intermediate Assumptions

The intermediate assumptions associated with this output are listed below. These assumptions were developed after a review of the project's theory of change. For the purposes of the evaluation, we have selected assumptions linking outputs to intermediate outcomes and outcomes. This selection of assumptions was made of existing project assumptions as the evaluation focuses on reporting findings at the intermediate outcome and outcome level. Over the three years of the project, the external evaluation will aim to validate each of these assumptions.

- **Assumption 11: Advocacy engagements and sharing learning with key stakeholders at the community, district, and national level will lead to replication of best practices.**

Link between intervention activities, intermediate outcomes, and outcomes

Output level activities are expected to enable the intervention to achieve several higher-order objectives. A summary of how various intervention components will lead to the achievement of intermediate outcomes and final outcomes is shown in Table 3.

Table 3. Project Design and Intervention

Intervention types	What is the intervention?	What Intermediate Outcome will the intervention will contribute to and how?	How will the intervention contribute to achieving the learning, transition and sustainability outcomes?
Teacher Training	Teacher training in child-centred, gender responsive pedagogy, and improved	Teachers adopting improved instructional practices, child-	Improved teaching quality will result in girls being

Intervention types	What is the intervention?	What Intermediate Outcome will the intervention will contribute to and how?	How will the intervention contribute to achieving the learning, transition and sustainability outcomes?
	instructional practices	centred pedagogy and gender responsive practices will lead to improved teaching quality.	better able to access the curriculum and learn in school.
Teacher Support	Establishment of Teacher English Discussion Groups	Teacher English Discussion groups will improve the existing capacity of teachers to speak English, the accepted LOI, which will result in improved teaching quality.	Improved teaching quality will result in girls being better able to access the curriculum and learn in school.
Extended Learning Opportunities	Community after school reading clubs where community tutors with support from teachers' tutor, organise reading / numeracy games and child-centred books are shared between students; After school remedial learning opportunities	CSGs and remedial lessons will offer extended learning opportunities for girls resulting in improved motivation and subsequently improved attendance.	Extended learning opportunities will result in improved learning for marginalized girls.
Teaching and Learning Materials	Training in material production	Accessible teaching and learning materials will result in improved teaching quality.	Improved teaching quality will result in girls being better able to access the curriculum and learn in school.
Celebrating Successful Transition	Organization of graduation ceremonies for girls and boys who successfully transition	By celebrating successfully in-school transitions, girls will be motivated to succeed in school.	This will contribute to improved transitions.
School Governance	School leadership training; School Improvement Plans (SIPs); Review of School budgets; PFM Frameworks in schools with mandatory budget lines for schools' costs for most vulnerable girls	Improved school governance will result in a renewed emphasis on the part of schools to address the barriers preventing girls from accessing and learning.	This will result in improved learning outcomes and access to school.
Learning Events	Sector Conferences to share SIPs; SIP reports shared with relevant stakeholders	Sharing learning will promote replication of best practices.	This will result in improved sustainability of intervention activities and achievements.
Economic Opportunities	Place girls in internships; Establish savings groups for girls	By providing girls with improved access to jobs and job placements they will be provided with improved economic opportunities.	This will result in improvements in girls transitioning to work.
Life Skills	Referral to other existing vocational and technical training service providers	Improved referral mechanisms to TVET and other training service providers will result in improved economic opportunities.	This will result in improvements in girls transitioning to work and vocational training.
Mentorship to existing businesses and IGAs	Follow up, mentorship to school businesses and MDC to become sustainable / self-managing	School business will be better able to support vulnerable girls to enrol and access school, contributing to improved school attendance.	This will result in improved in-school transitions as well as improved learning.
Sexual and reproductive health	Youth friendly sexual health service corners, community health workers trained in family planning, HIV/STI case management	Improved sexual and reproductive health contributes to girls' life skills.	This will result in improved transitions within school and reduced cases of teenage pregnancy.

Intervention types	What is the intervention?	What Intermediate Outcome will the intervention will contribute to and how?	How will the intervention contribute to achieving the learning, transition and sustainability outcomes?
Alumni Scholarships	Set up alumni network and scholarships	By providing scholarships to girls, they will be better able to access school, resulting in improved attendance.	This will result in improved attendance, learning and sustainability.

1.3 Target beneficiary groups and beneficiary numbers

REAP2 targets marginalized girls across 28 schools in Nyaruguru District. The poorest performing schools in attendance and tests scores in Nyaruguru were selected to participate in the project. Intervention schools were selected in close cooperation with government stakeholders and other NGOs, seeking to provide services where other education interventions did not exist. Target schools were previously supported through the first phase of the GEC (REAP1).

All girls attending project schools are assumed to experience one or multiple forms of marginalization. The Endline study of REAP 1 reported that 76% of girls in the treatment sample lived in a household experiencing low to extreme hardship[73].

REAP2 will target the same schools targeted in REAP1 and will follow-up with the same out-of-school girls who did not wish to return to school at the project's conclusion. The transition and learning of girls will be supported from early primary school through to secondary school, and to vocational training, where relevant.

The project places special emphasis on reaching the most marginalised girls. The most marginalized are identified by communities through local community processes such as Ubudehe[74] or by MDC mothers whose work takes place in the communities surrounding project schools and receive several specialized interventions.

Estimated beneficiary numbers by characteristic are shown in Section 3.1.

2. Baseline Evaluation Approach and Methodology

This section outlines the approach to evaluation and the methodology for this study. Data used in this report will aim to describe the intervention context prior to the GEC Transitions intervention and 5 months after the conclusion of the original GEC1 REAP project. This report follows the analytical and logistical strategies contained in the project's Monitoring Evaluation and Learning Framework[75] and the Inception Report[76].

[73] Navarrete, A. & Ambrose, T. (2017) REAP Endline Study Report [Unpublished] p. 30

[74] *Ubudehe* was reintroduced into Rwandan life in 2001 and it is a cultural practice dating back to at least one century. Ubudehe refers to a community practice where members come together to solve problems of collective action within a community. It is a process whereby the community comes together to assess their current situation and decide on the ways to most effectively and efficiently promote participatory development, democracy, reconciliation and unity.

[75] MEL Plan – see Annexes

[76] Inception Report – see Annexes

2.1 Key evaluation questions & role of the baseline

Over the course of three years, this evaluation study will assess the relevance, effectiveness, efficiency, impact and sustainability of the project well as report the findings and the lessons learnt throughout the process.

In selecting an evaluation approach, this evaluation follows the five key principles of evaluation according to GEC-T guidance[77].

1. **Establish a reliable counterfactual:** To demonstrate that outcomes have been caused by the intervention, rather than by other contextual factors (such as natural progressions or individual self-selection) the project will employ a two-arm quasi-experimental approach in the measurement of the project's impact. In doing so, the project will utilize 'a difference-in-difference' technique to measure the changes in learning and transitions over and above a control group.
2. **Conduct a mixed-methods evaluation:** Answering research questions requires a high-degree of data triangulation and building on the findings of one method with another method. The baseline study will seek to inform the development of research tools for later evaluation periods, potentially expanding the breadth of inquiry across different dimensions.
3. **Track a cohort of girls longitudinally on individual-level outcomes:** data is gathered at the individual level, tracking participants longitudinally and merging all data by case in horizontal form. As such, three studies will be conducted: one before the intervention at *baseline*, one during the intervention at *midline* and one after the intervention at *endline*.
4. **Integrated research for outcomes and intermediate outcomes:** research questions, assumptions and performance measures were traced and developed through a holistic review of REAPS theory of change. As such, change is explored using school-, community- and household-based research strategies.
5. **Adopt a gender equality and social inclusive lens to review intervention activities and achievements:** the evaluation will assess the extent to which the intervention is gender sensitive and socially inclusive with emphasis placed on often excluded populations including girls who experience disability. GESI will be assessed against the GESI Continuum provided by the GEC.

The role of the baseline study will be to create a reliable counterfactual and gather important benchmark information for the set-up of learning and transition targets. This baseline will also verify REAP's theory of change at the outcome-level and provide a detailed picture of the educational and social context of Nyaruguru.

Girls were sampled from school registries following a multi-stage sampling technique in November 2017. Data for the baseline study was collected through household visits and occurred between December 6th – December 22th, 2017.

Table 4 below summarizes the key programme-level evaluation questions for the study. These aim to describe the intervention context, confirm the project's theory of change and provide a narrative for the following research dimensions:

Table 4 Key Evaluation Questions and Sub-questions

Programme-Level Questions	Sub-questions
Process **Was the GEC successfully designed and implemented? Was the GEC good Value for Money?**	Output-level questions and effectiveness: 1. Who did the project Target? 2. How well were target groups reached? 3. Have the project's target groups changed since Baseline? 4. Were there challenges engaging or reaching any specific target group? 5. What part of intervention(s) were adapted to ensure inclusion of the group and sub-groups because of the challenges faced?
Impact	6. How have marginalised girls' learning outcomes changed comparison to: a) a non-treatment group; b) their male counterparts?

[77]Source: MEL Guidance Part Two

Programme-Level Questions	Sub-questions
What impact did GEC funding have on the transition of marginalised girls through education stages and their learning?	7. What impact has the GEC funding had on marginalised girls' transition rates at the various stages of their education and life?
Effectiveness **What works to facilitate the transition of marginalised girls through education stages and increase their learning?**	8. To what extent has improved attendance contributed to transition and learning outcomes? 9. To what extent did parental involvement in education improve learning? 10. How has teacher quality affected transition and learning of marginalised girls? 11. Have community study groups affected transition and learning of marginalised girls? 12. What impact has life skills training had on transition and learning of marginalised girls? 13. What impact do school-level governance and management changes have on attendance, transition and learning of marginalised girls? What is the added benefit of school businesses and school improvement plans? (SIPs) 14. What impact do saving groups have on transition rates of marginalised girls to Junior High School? 15. To what extent does teacher training on learner-centred approaches and gender-responsive pedagogy (GRP) lead to improved literacy and numeracy? 16. To what extent does quality teaching improve the performance of girls in class?
Sustainability **How sustainable were the activities funded by the GEC and was the program successful in leveraging additional investment?**	17. To what extent has school governance and management been strengthened because of the project? 18. To what extent are community members' and girls' attitudes and perceptions of girls' education changing? 19. To what extent is teacher quality changing? 20. What is the likelihood that SIPs processes and school businesses will continue after REAP? Why? 21. To what extent have public-sector educational actors and institutions been strengthened in relation to supporting quality learning and girls' transition?
Learning **Was the project's approach to learning fit-for-purpose?**	22. How effective were the project's learning and adaptation mechanisms, and were they used to inform evidence-based changes to the project? 23. How inclusive was the project's learning and adaptation process, and were participants able to engage with the project in a meaningful way? 24. Has the project ensured the integrity of a robust research process? 25. How has the project contributed to the GEC learning process and what value has it added to the sectoral evidence basis? 26. Has the project adequately captured and learnt from any unintended effects? 27. To what extent did communities demonstrate independent capacity to develop or enhance initiatives that respond to their local needs to build on the changes that have taken place?

2.2 Outcomes and Intermediate Outcomes

Through multi-dimensional intervention, REAP will aim to significantly improve the learning outcomes of marginalized girls in Nyaruguru and secure their transition through key stages of education, training or employment. To ensure the sustainability of these outcomes, the project will also aim to gain local and national commitment to reproduce REAP approaches in education policies, support schools to continually invest in girls' education, and create local independent structures in communities such as Community Study Groups and Mother Daughter Clubs to promote learning for marginalized girls at the project's conclusion.

To accomplish, the project has created a set of interventions operating in the school and communities and an advocacy component that targets policy makers. At an intermediate outcome-level, these interventions will aim to:

1. Improve the *attendance* of marginalised girls' in schools throughout the life of the project.
2. Improve the *quality of teaching* as perceived by parents and students, improvements in teachers' pedagogical practice as well as on the quality of curricula and teaching resources[78].

[78] Due to the timing of the baseline study, this study presently excludes classroom observations.

3. Improve the *life skills* of marginalized girls by building their capacity to save, demonstrate work readiness, and income-generating potential.
4. Improve the *economic empowerment* of marginalized girls and ensure the most vulnerable can off-set or cover the associated costs of attending school.

Table 5 below summarizes the research strategies to evaluate these outcomes. At baseline, outcome measures are instead used to depict pre-intervention conditions.

Table 5 Outcomes for Measurement

Outcome	Level at which measurement will take place	Tool and mode of data collection	Rationale	Frequency of Data Collection
Kinyarwanda Literacy	Individual-level; home-based	Kinyarwanda EGRA	Learning is measured against a literacy and numeracy proxy.	Each Evaluation Point
English Literacy	Individual-level; home-based	English EGRA		Each Evaluation Point
Numeracy	Individual-level; home-based	EGMA (in Kinyarwanda)		Each Evaluation Point
Transitions	Individual-level	HHS, FGDs, KIIs	Transitions will be explored using a DiD technique over a bundle of questions in HHS.	Each Evaluation Point
Sustainability	School-, community- and system-level	SIPs, budget audits, classroom observations, saving groups data, girls survey, HHS, short survey representatives of key organization, KIIs and FGDs.	Data to be used to evaluate progress on the Sustainability Plan and the Sustainability Scorecard	Each Evaluation Point
Intermediate Outcome 1: Attendance	Individual-level	Book registries available in treatment schools	Attendance to school is a core aspect to learning and transitions	Annually; Annual spot checks
Intermediate Outcome 2: Teaching Quality	Individual-level; school-based	Classroom Observations, pre- and post- training tests, teacher's self-assessment tool, Girls' Survey, School checklist (textbook ratio etc.), KIIs and FGDs	A barrage of qualitative and quantitative tools will be used to assess teaching quality. Lesson observations are key to assessing uptake of improved teaching practices	Each Evaluation Point (classroom observations at midline and Endline as schools will be closed during the baseline study)
Intermediate Outcome 3: Life Skills	Individual-level	Girls' Survey, FGDs	SW and SWRT related skills will contribute to greater work preparedness and therefore a higher likelihood of improved job survival.	Each Evaluation Point
Intermediate Outcome 4: Economic Opportunities	School-level	FGDs, KIIs, School budget, HHs, Girls Survey,	A barrage of qualitative and quantitative tools will be used to assess changes in economic opportunities (access) to school	Each Evaluation Point

2.2.1 Measuring Sustainability

Sustainability will be measured at three levels (school, community, and system) against a Sustainability Scorecard[79] during the Endline phase of the study.

The score card provides a rating 0 to 4 on how far changes introduced by the project have been institutionalized by people or institutions in each of these three levels. Ratings will be determined by at Endline, based on progress against selected indicators and the qualitative, quantitative, and financial data provided to support such progress.

The table below considers REAP's sustainability mechanisms in light with the chosen sustainability indicators:

Table 6 Sustainability Mechanisms and Indicators

Sustainability Level	Qualitative Indicators	Quantitative Indicators
School	▪ Drivers and barriers of profitability for school businesses ▪ The expected drivers and barriers for the continuation of school- and community-owned free or low-cost activities; ▪ The capacity of school management to promote and work towards improving girls' education and service delivery without REAP support ▪ The use and maintenance of facilities and resources to ensure the longevity of outputs ▪ The improvements in teaching quality as experienced by girls, teachers and head teachers	% PTAs and teachers in REAP schools have the capacity and willingness to uphold school businesses and teaching quality after the end of REAP2 % of school businesses who are profitable and sustainable % increase in teacher demonstrated capacity for 1) improved teaching methods and 2) English language competency; % increase in teacher demonstrated capacity for quality teaching % of teachers holding remedial learning sessions without direct financial transfers from REAP2 % of REAP2 PTAs that conducted annual SIP and budget audits in the past year DEO and SEO are participating in SIP annual process
Community	▪ Positive norm changes with respect to girls' education among caregivers and community members ▪ Increased capacity for girls to make decisions affecting her own life ▪ Barriers and drivers towards the management of saving groups ▪ Improved capacity of members of the private sector to provide decent work for marginalized girls ▪ Drivers and barriers towards continuing the work of community-based groups such as CSGs, MDCs or Alumni Networks ▪ Use and sources of locally produced learning materials ▪ Increased capacity for youth corners within health facilities to deliver SRH services	% of operational saving groups % marginalised girls with school costs reduced / covered by other sources (ex. SB, MDC, scholarships) by year % of school budget covered by SB profit, by year % of Community Study Groups meeting regularly, by year # of locally made learning materials produced each year % girls using youth SRH corners
System	▪ The influence of the project on government and agents of change in the policy domain have on the replication of project lessons locally and nationally in: ○ Public policy ○ Budgetary allocations in PFM frameworks ○ SIP implementation ▪ Improved institutional and personal linkages between school leadership, district officials and members of	# and % of policy makers in key organizations stating (a) understanding of the GEC / REAP (b) commitment for replication of at least one best practice of REAP2, per year as indicated by short survey. Number of incidences where government, donor, and NGO girls' education projects directly report incorporating learning or models from the REAP project in their projects or policies, per year

[79] GEC-T MEL Guidance Part 2 Chapter 7

Sustainability Level	Qualitative Indicators	Quantitative Indicators
	the private sector	

The following describes the sources, both qualitative and quantitative, that REAP will use to verify progress against indicators for sustainability at each level, and where measurement will take place.

Table 7 Sustainability Outcomes for Measurement

Sustainability Level	Where will measurement take place?	Sources of Verification	Rationale	Frequency of data collection
School	Schools	ADRA teacher classroom observation tool, external evaluations, teacher, parent, and student interviews, Girls' survey, HHS, remedial session attendance lists, SIPs; SIP meeting minutes, verified by PTA, DEO and SEO interviews; Documentation of DEO endorsement check.	Assess school-level qualitative and quantitative indicators.	Endline
Community	Household	HHS, KIIs, FGDs with caregivers; Community Study Club attendance lists; List and photo bank of locally made learning materials	Assess community-level qualitative and quantitative indicators.	Endline
System	Public records as well as meeting spaces	Quote/documentation of commitment, verified by key informant interview; Policy review, verified by key informant interviews	Assess system-level qualitative and quantitative indicators.	Endline

2.3 Evaluation methodology

To measure the change attributable to the project across learning and transition outcomes, REAP will conduct a hypothesis-driven, empirical research through the establishment of a two-arm experimental, *difference-in-differences* technique. This is because REAP does not enable a randomized selection of participants into the programme, but rather has chosen to intervene in the schools with the highest proportion of marginalized girls.

Once midline data is gathered in 2018, we will apply this technique to measure the changes on the dependent variables (learning and transitions) between treatment and control across two evaluation periods, namely from baseline-to-midline, and then midline-to-endline at the individual level. A single cohort will be tracked for both learning and transition.

The DID technique defines the project's "additionality" as the difference in outcomes between treatment and control groups over time. This assumes that the average change in the comparison group represents the counterfactual change in the treatment group if there were no treatment (parallel trend assumption). This is calculated in the following way:

1. First, the *first difference* is calculated by measuring change over time within each experimental group. The difference across two-time periods is taken within each group: change in the treatment group ($\text{Treatment}_{\text{Period 2}} - \text{Treatment}_{\text{Period 1}}$) and change in the control group ($\text{Control}_{\text{Period 2}} - \text{Control}_{\text{Period 1}}$). This step aims to capture within group changes across a given GEC outcome.
2. Second, without group differences are measured. That is, the difference over and above the control group experienced by the treatment group ($\text{Treatment}_{\text{First Difference}} - \text{Control}_{\text{First Difference}}$). This step will calculate the project's achievement and eliminate time trends in findings due to the parallel trend assumption.

Through DiD, the project's additionality is measured. The significance of this difference is calculated using a standard (OLS) regression[80]:

$$yi = \alpha + \beta * Ti + ui$$

Where yi are the changes in the learning scores or transition difference scores for each cohort girl between two evaluation periods, α is an intercept, β is the achievement, and Ti is a 'dummy' variable taking value 0 for girls in the control group and taking value 1 for girls in the intervention group.

For this evaluation, the quantitative approach will predominantly aim to provide a numerical measurement of the change that may be caused by the project and provide key social demographics. The qualitative approach will aim to build a clear and nuanced picture of what change is or is not taking place and why and document the context in which the intervention takes place during the baseline phase.

Research strategies will also be integrated across outcomes and intermediate outcomes to be able to statistically link outcome indicators[81]. For this evaluation, we conducted a review of REAP's theory of change depicting the key impact pathways of the project[82], i.e. the theoretical connections between project activities and the impact they generate. This enables a more thorough identification of REAP's assumptions, risks and performance measures evaluated in this report.

The table below provides an overview of the expected transitions of girls currently enrolled in lower secondary over the years of the evaluation. When the row turns grey in the table, a transition between schools or employment is expected to occur.

Table 8 Benchmarking for learning and transition (Box 3)

Baseline Grade (November 2017)	Midline Grade (November 2018)	Endline Grade (November 2019)
Project Grades		
P4 (learning only)	P5	P6
P5	P6	S1
P6	S1	S2
S1 (learning only)	S2	S3
S2	S3	S4
S3	S4	S5
S3	TVET or Work	TVET, or Work
S4 (learning only)	S5	S6
S5 (transitions only)	S6	TVET, Work, or University
S6 (transitions only)	TVET, Work, or University	TVET, Work, or University
Out-of-school	TVET or Work	TVET or Work
Benchmark Grades		
P5	N/A	
P6		
S1		
S2		
S3		
S4		
S5		
S6		

[80] For transitions, a logistic regression is used to predict changes in the transition status of the girl.

[81] Source: MEL Guidance Part Two

[82] C.f. Mayne, J. (2015). Useful theory of change models. *Canadian Journal of Program Evaluation*, 2, 119-42. Available at https://www.evaluationcanada.ca/system/files/cjpe-entries/30-2-119_0.pdf

2.4 Baseline data collection process

In this section, outline the process to collect baseline data (both quantitative and qualitative). Provide details on the following areas.

2.4.1 Pre-data collection

Prior to the country visit, the evaluation developed both quantitative and qualitative frameworks and instruments.

The project selected to track a single cohort for both learning and transition using a multi-stage sampling technique. In the first stage, treatment and control schools are selected through hierarchical cluster analysis using school-level district data. At the second stage, we use stratified random sampling to select girls based on their school enrolment status and target grade-level. The qualitative sampling framework was derived from the MEL plan and from the performance measures generated through review of the project's TOC.

Random sampling occurred prior to the country visit of the international consultants and was overseen by the local consultant. To ensure the right sample composition, girls were sampled from school registries using a random lottery method. Once sampled, girls were interviewed to obtain contact information and all participants were given a unique ID matched to their personal information. During this exercise, historical attendance data was also gathered for those girls sampled and a spot-check was conducted in all schools.

Quantitative and qualitative research instruments were designed in close collaboration with HPA and the FM and were largely based on the MEL plan and the review of the TOC. Learning tools were piloted in three non-intervention schools in November 2017 and calibrated for the baseline, midline and Endline periods (see Annex 9 for details). All instruments were translated into Kinyarwanda and instructions were delivered to participants in Kinyarwanda to ensure the equal participation of marginalized girls in the study, improve validity, and ensure inter-rater reliability.

This information was contained an access-restricted Cohort Tracking Dataset that enumerators used to locate households, gather informed parental consent, and administer the surveys during the school holidays. This cohort tracking dataset was updated to track participants at future evaluation periods.

Training exercises were conducted separately for quantitative enumerators and qualitative research assistants. All field workers have been selected through a formal application process advertised online, and through professional networks and newspapers. The application process consists in an application form and a phone interview. A 5-day enumerator training was conducted in Kigali and provided detailed instructions on the administration of research tools, interview techniques, the sampling processes, the evaluation design, research ethics, and child protection (including training on identifying different forms of abuse).

2.4.2 During data collection

Data for the baseline study was collected through household visits and occurred between December 6th – December 22th, 2017, corresponding to the school holidays. Qualitative data collection was divided in two phases: phase one occurring at the same time of the data collection exercise and phase II occurring in January 2018.

Learning test data was collected through paper surveys and answers were later transferred to electronic form using mobile phone technology. This is because administering learning tests are specifically designed to be carried out in paper form, due to the expected manipulation of the clipboard, use of the stop watch, and administering the test itself.

To reach sites, enumerators followed the cohort tracking dataset and the guidance of the HPA team at the Huye office. Teams of five enumerators were distributed in 4x4 vehicles, departing to sampling sites at dawn. Targets were tracked daily by the Field Manager and reported to the consultants. The local operational staff reported all developments using weekly field reports and supervised the quality of the test administration procedure by observing enumerator practices and completing individual enumerator reports. Interviews where arranged through local leaders and scheduled within a three-days of the visit whenever possible.

Enumerators were tasked to report any suspected breach to child protection following child protection training.

At baseline, the following sample sizes were achieved for the tracked learning cohort:

Table 9 Learning Sample

Original Cohort Membership (Grade at Baseline Nov 2017)	Treatment N	Control N	Total *N*	Sample Distribution (% from Total)
Tracked Cohort				
OOS	17	27	44	5%
P4	103	96	199	23%
P5	103	93	196	23%
P6	97	95	192	23%
S1	28	35	63	7%
S2	36	28	64	8%
S3	36	33	69	8%
S4	11	15	26	3%
Total Sampled for the entire data collection	**431**	**422**	**853**	**100%**
Benchmarking				
S5	6	-	**6**	**-**
S6	7	-	**7**	**-**
Total	**444**	**-**	**444**	**-**

For learning assessments, the following sample sizes were achieved:

Table 10 Learning Tests Sample

Original Cohort Membership (Grade at Baseline Nov 2017)	*EGRA English (n=554)*		*EGRA Kinyarwanda (n=602)*		*EGMA (n=612)*		SeGRA English *(n=217)*		SeGRA Kinyarwanda *(n=221)*		SeGMA *(n=237)*		Total Assessments
	C	T	C	T	C	T	C	T	C	T	C	T	
OOS	14	6	16	11	16	12	8	4	8	4	10	5	114
P4	82	91	94	98	96	102	-	-	-	-	-	-	563
P5	80	96	90	102	93	103	-	-	-	-	-	-	564
P6	89	93	94	97	93	97	-	-	-	-	-	-	563
S1	-	-	-	-	-	-	31	25	33	25	35	28	177
S2	-	-	-	-	-	-	25	32	27	31	28	36	179
S3	-	-	-	-	-	-	31	36	32	35	33	36	203
S4	-	-	-	-	-	-	14	11	15	11	15	11	77
Total Sampled for the entire data collection	265	286	294	308	298	314	109	108	115	106	121	116	2440
Benchmarking													
S5	-	-	-	-	-	-	18	5	18	5	19	6	71
S6	-	-	-	-	-	-	15	7	16	7	19	7	71

For in school and between school transitions, data will be obtained from schools-level sampling. For work-based transitions, we use HHS data. In the HHS, we asked the caregivers through to list all the girls aged 9-12 and, for

each girl, we recorded (1) her current age (2) what she was doing last year, and (2) what she was doing today. Through this latter method, we recorded data for 1937 girls inclusive of the tracked cohort and sample sizes are shown below.

The following sample sizes were achieved:

Table 11Transition Sample

Original Cohort Membership (Grade at Baseline Nov 2017)	Treatment N	Control N	Total *N*	Sample Distribution (% from Total)
Tracked Cohort				
OOS	17	27	44	5%
P4	103	96	199	23%
P5	103	93	196	23%
P6	97	95	192	22%
S1	28	35	63	7%
S2	36	28	64	7%
S3	36	33	69	8%
S4	11	15	26	3%
S5	6	9	15	2%
Total Sampled for the entire data collection	**437**	**431**	**868**	**100%**
Benchmarking				
S5	-	10	**6**	-
S6	-	19	**7**	-
TVET or Other Vocational Training*	-	2016: 0 2017: 1	**0**	-
Working*	-	2016: 13 2017: 12	**13**	-
Inactive*	-	2016: 64 2017: 71	**64**	-
University*	-	2016: 0 2017: 0	**0**	-
Total	**-**	**508****	**508**	**-**

* Data from Women Sibling statistics from the HHS
** Totalling 2016 values

During the data collection exercise, no child safeguarding issues were raised through research activities. Additionally, there were no reported breaches of HPA's child protection policy involving HPA staff, HPA representatives, or REAP intervention activities. Two child protection issues were raised by girls based on purported events which occurred in schools and communities. However, these occurred outside of intervention activities and research activities. HPA is investigating these further in line with their child protection protocols.

2.4.3 Qualitative Approaches

Whenever possible dimensions are explored using quantitative or qualitative sources of data and are triangulated through a mixed-methods approach. The qualitative approaches employed aimed to build a clear and nuanced picture of the intervention's context and underlying dimensions.

Sampling for qualitative sessions was heterogenous and aimed to capture the diversity of intervention settings. Sessions conducted as part of the study's qualitative work are shown and summarized in Table 12. Sessions were conducted with participants until the QRAs in consultation with the field team, felt they had reached data saturation of given research areas

Table 12. Summary of Qualitative Sessions Conducted at Baseline

Session	Number of Sessions
FGD with Marginalized Girls on Gender	2
FGD with Marginalized Girls on Sexual and Reproductive Health	2
FGD with Out of School Girls	2
FGD with Mothers and Female Caregivers on School Engagement and SRH	2
FGD with Girls on Attendance and Parental Engagement	3
FGD with Girls on Teaching Quality and Extended Learning Opportunities	3
Free Listing Exercise with Marginalized Girls	5
Interview with District Director of Education	1
Interview with District Education Officer	1
Interview with Headteacher	3
FGD with Girls on Literacy and Numeracy	2
Force Field Exercise with Parents and Community Members	2
Total Sessions	28

Two Qualitative Research Assistants (QRAs) were selected and trained on qualitative research techniques, probing, best practices, session recruitment, and data management. All qualitative sessions were recorded, transcribed, and coded based on a meta-coding scheme. Eclectic coding techniques were also conducted to ensure all salient discourses were captured in the analysis phase.

Throughout qualitative research activities, researchers shared field notes with the evaluation team to review findings in relation to data saturation and to update and review existing lines of inquiry. This process was chosen to ensure that qualitative research conducted as part of the study was adaptable to research findings.

Qualitative sessions were conducted over 15 days with QRAs conducting up to 2 sessions per day. Focus group discussions were comprised of between 6 and 10 participants, per group.

With regards to the selection of schools, emphasis was placed on selecting schools which either had very high gender parity or student-teacher ratios or very low gender-parity or student-teacher ratios. This approach was chosen to ensure the Baseline was able to capture diversity with regards to intervention contexts.

2.4.4 Post data collection

To ensure all tools were completed successfully and correctly prior to data entry, we conducted a two-stage quality check on paper surveys.

For each enumerator, 8 full cases are selected randomly from the paper copies from each enumerator. In stage 1 these cases are checked for completeness and correctness. This involves a check that all responses were filled in correctly across all surveys, including a check on the manual addition of totals for the learning subtask scores. Enumerators were then being given the opportunity to make corrections prior to data entry.

In stage 2, the 8 cases will be checked against the final endline dataset produced by the electronic data entry, with adaptations made to the dataset for data entry mistakes. If 2 copies had consistent errors in stage 1 and 2, an additional 8 paper copies will be checked from the same enumerator until no mistakes are found.

Once the data is entered, we perform extensive data quality checks as part of the verification and validation process. These included range, skip, consistency, typographical and label checks to ensure that all variables in the data can be used in standard form. Based on a unique ID code system data will be merged horizontally across future evaluation periods.

2.5 Challenges in baseline data collection and limitations of the evaluation design

This study has several limitations to its scope and application.

First, intervention schools are in predominantly rural sites, which may not represent the overall population of Rwanda. Findings from this study cannot be extrapolated to areas outside of the sampling scope. The primary aim of the study was to evaluate REAP and therefore findings are limited to this context.

Second, the data relies on retrospective self-reported data. There is therefore the possibility that participants had difficulties recalling important information or providing socially desirable responses to sensitive items, leading to respondent bias. This could be the case for SRH responses, which had lower than average response rates than the rest of the questions asked to girls.

Third, some of the out-of-school girls that we intended to sample through random selection were not present at home the time of the study. In multiple instances, parents or a member of the household mentioned that these girls left to bigger towns or cities to find work. As such, the sampling of out-of-school girls might be not be representative of this population.

Fourth, school-level sampling introduces an exclusion bias for girls who are not in-school and whose transition rates are to be recorded. To calculate work-based transition benchmarks, we therefore used data from the HHS and asked caregivers to list the pathways of girls aged 9-21 living in the same household.

Finally, GPS coordinates were difficult to record for all households due to limited access to appropriate devices for a portion of the enumerator team. For most cases, mapping information was recorded. This information will be further developed during future evaluation periods.

3. Key Characteristics of Baseline samples

3.1 Project beneficiaries

REAP2 targets marginalized girls across 28 schools in Nyaruguru District. The poorest performing schools in attendance and tests scores in Nyaruguru were selected to participate in REAP. Intervention schools were selected in close cooperation with government stakeholders and other NGOs, seeking to provide services where other education interventions did not exist. All girls attending those schools are therefore assumed to experience one or multiple forms of marginalization. The endline study of REAP 1 reported that 76% of girls in the treatment sample lived in a household experiencing low to extreme hardship[83].

REAP2 targets the same schools targeted in REAP1 and follow-ups with the same out-of-school girls who did not wish to return to school at the project's conclusion. The transition and learning of girls will be supported from early primary school through to secondary school, as well as to vocational training institutions, where relevant.

The project places special emphasis on reaching the most marginalised girls who are enrolled in remedial learning and economic resilience opportunities. The most marginalized are identified by communities through local community processes such as Ubudehe[84] or by MDC mothers whose work takes place in the communities surrounding project schools.

---

[83] Navarrete, A. & Ambrose, T. (2017) REAP Endline Study Report [Unpublished] p. 30

[84] *Ubudehe* was reintroduced into Rwandan life in 2001 and it is a cultural practice dating back to at least one century. Ubudehe refers to a community practice where members come together to solve problems of collective action within a community. It is

The stratification criteria above were created with the following beneficiary numbers in mind: 6,959[85]

Table 13 Estimated Direct Beneficiary Numbers

Characteristic	Sub-type	Direct Beneficiary Population	Percentage Within Group
Total of Girl Beneficiaries	*Total No. of Estimated Beneficiaries at Baseline*	6,859	100%
Age (Girls)	*5-8 Years (not directly targeted)*	0	0%
	9-11 Years	3,224	47%
	12-13 Years	2,400	35%
	14-15 Years	823	12%
	16-19 Years	343	5%
	> 19 Years	69	1%
School Status (Girls)	*In-school*	6,566	96%
	Out-of-School: Have attended school but dropped out	293	4%
	Out-of-school: Have never attended school	0	0%
School	*Lower Primary*	0	0%
	Upper Primary	4,953	75%
	Lower Secondary	1,355	21%
	Upper Secondary	258	4%
Work Training, TVET, Internships, Savings or Work	*Work-related Training*	293	100%
Level of Hardship (irregular access to food, cash, medicine, and water)[86]	*No Hardship*	1,646	24%
	Low to Moderate Hardship	4,527	66%
	Moderate to Extreme Hardship	755	11%
Social Groups (Girls)[87]	*Suffering some form of Disability*	672	9.8%
	Young mothers / expecting	0	0.1%

3.2 Representativeness of the learning and transition samples across regions, age groups, grades and disability status

This section discusses the representativeness of different subgroups in the sample. The table following reports a breakdown of the sample by region.

a process whereby the community comes together to assess their current situation and decide on the ways to most effectively and efficiently promote participatory development, democracy, reconciliation and unity.

[85] HPA (2016) GEC-T REAP 2 MEL Plan p.59

[86] Figures are estimations obtained from Endline demographic statistics and school population data. See for reference, REAP Endline Study report p.31.

[87] Figures are estimations obtained from Endline demographic statistics and school population data. See for reference, REAP Endline Study report p.31.

Table 14. Evaluation sample breakdown (by region)

		Control		Treatment	
		n	Column N %	n	Column N %
Sector	**Busanze**	27	5.9%	0	0.0%
	Cyahinda	20	4.3%	0	0.0%
	Kivu	26	5.7%	0	0.0%
	Mata	123	26.7%	0	0.0%
	Muganza	71	15.4%	62	14.0%
	Munini	0	0.0%	72	16.2%
	Ngera	0	0.0%	93	20.9%
	Ngoma	0	0.0%	73	16.4%
	Nyabimata	48	10.4%	44	9.9%
	Nyagisozi	0	0.0%	64	14.4%
	Ruheru	25	5.4%	0	0.0%
	Ruramba	89	19.3%	0	0.0%
	Rusenge	31	6.7%	36	8.1%
	Total	460	100%	444	100%

The tables below show the sample breakdown by grade level, age and disability status.

Table 15. Evaluation sample breakdown (by grade)

Grade Level	Control	Treatment	Control	Treatment
	n	%	n	%
P4	96	20.9%	103	23.2%
P5	93	20.2%	103	23.2%
P6	95	20.7%	97	21.8%
S1	35	7.6%	28	6.3%
S2	28	6.1%	36	8.1%
S3	33	7.2%	36	8.1%
S4	15	3.3%	11	2.5%
S5	19	4.1%	6	1.4%
S6 (benchmark only)	19	4.1%	7	1.6%
Out of School Girls	27	5.9%	17	3.8%
Total	460	100.0%	444	100.0%

Table 16. Evaluation sample breakdown (by age)

Age Group	Control		Treatment	
	n	%	n	%
Aged 6-8	0	0.0%	1	0.2%
Aged 9-11	57	12.4%	56	12.6%
Aged 12-13	124	27.0%	124	27.9%
Aged 14-15	117	25.4%	119	26.8%
Aged 16-17	78	17.0%	80	18.0%
Aged 18-19	38	8.3%	36	8.1%
Aged 20+	46	10.0%	28	6.3%
Total	460	100.0%	444	100.0%

Table 17. Evaluation sample breakdown (by disability)

Impairment Type	Control		Treatment		Household Survey and Girls School survey – Washington Group and child functioning questions
	Count	Column N %	Count	Column N %	
Visually Impaired	3	0.7%	10	2.3%	Washington Group
Hearing Impaired	6	1.3%	2	0.5%	Washington Group
Mobility Impairment	5	1.1%	4	0.9%	Washington Group
Cognitive Impairment	6	1.3%	6	1.4%	Washington Group
Self-care Impairment	3	0.7%	3	0.7%	Washington Group
Communication Impairment	1	0.2%	3	0.7%	Washington Group

Girls with Disability* (% Overall)	19	4.1%	14	3.2%	Washington Group

**NOTE: Some girls experience multiple forms of impairment. Impairment status is reported per girl. 19 girls in the control group experience one or multiple forms of impairment; 14 girls in the treatment group experience one or multiple forms of impairment*

Table 18. Disability Groups by Severity and Type (Treatment and Control)

Disability Group by Severity		Control		Treatment	
		n	%	n	%
Visual	*Disabled*	3	0.7%	10	2.3%
	At Risk (Some Difficulty)	17	3.9%	4	0.9%
	No Disability	411	95.4%	418	96.8%
	Total	431	100.0%	432	100.0%
Hearing	*Disabled*	6	1.3%	2	0.5%
	At Risk (Some Difficulty)	6	1.3%	6	1.4%
	No Disability	444	97.4%	430	98.2%
	Total	456	100.0%	438	100.0%
Mobility	*Disabled*	5	1.1%	4	0.9%
	At Risk (Some Difficulty)	6	1.3%	3	0.7%
	No Disability	447	97.6%	437	98.4%
	Total	458	100.0%	444	100.0%
Concentrating	*Disabled*	6	1.3%	6	1.4%
	At Risk (Some Difficulty)	22	4.8%	19	4.3%
	No Disability	428	93.9%	415	94.3%
	Total	456	100.0%	440	100.0%
Self-Care	*Disabled*	3	0.7%	3	0.7%
	At Risk (Some Difficulty)	14	3.1%	8	1.8%
	No Disability	429	96.2%	429	97.5%
	Total	446	100.0%	440	100.0%
Communicating	*Disabled*	1	0.2%	3	0.7%
	At Risk (Some Difficulty)	18	4.1%	3	0.7%
	No Disability	420	95.7%	433	98.6%
	Total	439	100.0%	439	100.0%

3.3 Educational Marginalisation

Educational marginalization can be understood as a form of acute and persistent disadvantage rooted in underlying social inequality[88]. Educational marginalization needs to be understood through girls' inherent characteristics as well as barriers preventing girls accessing and learning in school. Characteristics are understood as the fixed aspects and girls' identities and barriers are understood as the specific barriers preventing girls from accessing and learning in school at the home, school, and system level.

Barriers and characteristics will be reported and discussed at all points of the external evaluation. Emphasis has been placed on understanding these dimensions through both qualitative and quantitative methods.

Table 19 reports girls' characteristics across both the intervention and control groups. Both universal and contextual characteristics are reported.

Table 19. Girls' Characteristics

Characteristic		Control		Treatment		Total	
		n	%	n	%	n	%
3+ Children Per Adult	*Less than 3 Children Per Adult*	419	91.1%	404	91.2%	823	91.1%
	More than 3 Children Per Adult	41	8.9%	39	8.8%	80	8.9%
Hardship Group	*No Hardship*	137	29.8%	160	36.0%	297	32.9%
	Moderate Hardship	235	51.1%	216	48.6%	451	49.9%
	Extreme Hardship	88	19.1%	68	15.3%	156	17.3%

[88] UNESCO (2009) Educational Marginalization in National Education Plans: definition available at: http://unesdoc.unesco.org/images/0018/001866/186608e.pdf

Characteristic		Control		Treatment		Total	
		n	%	n	%	n	%
Chore Burden Dummy (1 = whole day/ half day) - Girls View	*Other*	330	71.7%	299	67.3%	629	69.6%
	High Chore Burden	130	28.3%	145	32.7%	275	30.4%
Difficulty to Afford School	*No*	83	19.8%	90	21.5%	173	20.6%
	Yes	337	80.2%	329	78.5%	666	79.4%
Child lives without either Biological Parent	*Lives with Either Parent*	419	91.1%	400	90.1%	819	90.6%
	Live without both parents	41	8.9%	44	9.9%	85	9.4%
	other	0	0.0%	0	0.0%	0	0.0%
Orphan Type	*Non-Orphan / death not mentioned*	419	91.1%	373	84.0%	792	87.6%
	Single Orphan	39	8.5%	62	14.0%	101	11.2%
	Double Orphan	2	0.4%	9	2.0%	11	1.2%
Girl has been Pregnant	*Never been pregnant*	441	97.4%	440	99.3%	881	98.3%
	Been Pregnant	12	2.6%	3	0.7%	15	1.7%
Girl is Married or Living with a Man as if Married	*Not married or living as if married*	452	100.0%	441	100.0%	893	100.0%
	Refused	0	0.0%	0	0.0%	0	0.0%
Girls is a Mother	*Not Mother*	427	98.8%	431	99.5%	858	99.2%
	Mother	5	1.2%	2	0.5%	7	0.8%
Negative Parental Values Dummy	*Other*	442	96.1%	431	97.1%	873	96.6%
	Negative Parental Values	18	3.9%	13	2.9%	31	3.4%
Does not speak LOI (English used P4 or P6 and up)	*Speaks LOI*	363	78.9%	336	75.7%	699	77.3%
	Doesn't Speak LOI	97	21.1%	108	24.3%	205	22.7%
HoH No Formal Schooling	*Other*	289	62.8%	286	64.4%	575	63.6%
	No formal schooling	171	37.2%	158	35.6%	329	36.4%
Primary and Secondary is at 1-3 hour walk	*No*	406	88.3%	417	93.9%	823	91.0%
	Yes	54	11.7%	27	6.1%	81	9.0%
Teaching Quality Group (Low <3 on mean of 14 items)	*Other*	416	96.7%	403	97.1%	819	96.9%
	Low Teaching Quality	14	3.3%	12	2.9%	26	3.1%
Girls' View: Insufficient Learning Materials	*No*	449	97.6%	435	98.0%	884	97.8%
	Yes	11	2.4%	9	2.0%	20	2.2%
Girls' View: seats for every student	*No*	402	87.4%	407	91.7%	809	89.5%
	Yes	58	12.6%	37	8.3%	95	10.5%
Girls' View: Use of areas to play and socialize	*No*	396	86.1%	404	91.0%	800	88.5%
	Yes	64	13.9%	40	9.0%	104	11.5%
Girls' View: Teachers Punish Students Physically	*Other*	117	25.4%	124	27.9%	241	26.7%
	Physical Punishment from Teacher	343	74.6%	320	72.1%	663	73.3%
Girls' View: Teacher is Absent from Class	*Other*	396	86.1%	395	89.0%	791	87.5%
	Agree or Strongly Agree	64	13.9%	49	11.0%	113	12.5%
Girls' View: Teacher Makes Me Feel Welcome	*Other*	435	94.6%	432	97.3%	867	95.9%
	Strongly Disagree or Disagree	25	5.4%	12	2.7%	37	4.1%
Girls' View: Teacher treats girls and boys differently	*Other*	451	98.0%	435	98.0%	886	98.0%
	Unfairly	9	2.0%	9	2.0%	18	2.0%
Girls View: Does not feel Safe Travelling to School	*Other*	435	94.6%	432	97.3%	867	95.9%
	Don't feel safe	25	5.4%	12	2.7%	37	4.1%
Girls View: Feels Safe at School	*Yes/Other*	447	97.2%	441	99.3%	888	98.2%
	No	13	2.8%	3	0.7%	16	1.8%

A large proportion of girls in both the intervention and control group are either single or double orphans:15.4% of girls in the intervention group and 8.0% of girls in the control group. National statistics report that 17% of all orphans in Rwanda are orphaned due to AIDS and 83% due to other factors (UNICEF Rwanda Statistics, 2012).

Literature focused on the Sub-Saharan African region, has found that orphans exhibit more severe psychological and mental health symptoms than non-orphans[89]. This can be due to the loss of their parents or the quality of care

[89] Ruiz-Casares et al., 2009; Escueta et al., 2014

orphans receive after their parent's death[90]. The large proportion of orphans in the intervention group suggests that the project is appropriately targeting girls who face higher degrees of marginalization and vulnerability.

Hardship was assessed through a 4-item scale, with respondents being asked the items shown in Table 20. Responses were averaged to create a mean hardship score. Households with average scores of 3 or more (Many days / Most days) were categorized as facing extreme hardship. Households with average scores of 2 (A few days) or more, but less than 3 (Most days), were categorized as facing moderate hardship.

Table 20. Hardship Items

How many days, in the past year, have you or anyone in your family:		Intervention (Baseline; n = 435)	Control (Baseline; n = 426)
Gone to sleep at night feeling hungry	Never	36.8%	34.7%
	A few days (< 10 days)	38.4%	44.4%
	Many Days (> 10 days)	16.1%	15.7%
	Most days / Always	7.6%	4.0%
Gone without medicines or medical treatment	Never	40.5%	31.9%
	A few days (< 10 days)	22.1%	23.9%
	Many Days (> 10 days)	9.7%	8.2%
	Most days / Always	26.4%	34.7%
Gone without clean water for home use	Never	60.2%	52.6%
	A few days (< 10 days)	28.3%	33.8%
	Many Days (> 10 days)	7.4%	8.9%
	Most days / Always	3.0%	4.2%
Gone without cash income	Never	14.7%	10.8%
	A few days (< 10 days)	14.3%	16.9%
	Many Days (> 10 days)	20.7%	22.1%
	Most days / Always	47.1%	47.2%

In both groups, most girls live in households which face moderate to severe levels of hardship: 64.9% in the intervention group and 69.9% in the control group. Of the hardship items, the most common item households having gone without is cash income. The high proportion of girls who live in households facing moderate to severe levels of hardship, suggests that project beneficiaries face an economic burden, which may affect their ability to support girls to attend and learn in school.

Qualitative findings, as discussed in Section 1.1, highlight the role of economic hardship as a barrier to girls' access and attainment in school. Economic hardship was the most prevalent barrier reported across sessions with project stakeholders, with several girls and parents citing the fact that poverty results in them not being able to afford school materials and other associated costs.

As with hardship, there is a large proportion of household heads who have had no formal schooling. In the intervention group, for example, 36.3% of household heads have not had any formal education. There are two reasons why this may affect educational access and attainment of girls.

Firstly, the literature suggests that more years of schooling are usually associated with higher income[91]. As sending girls to school, usually requires some financial cost, this is likely to influence their educational access.

Secondly, parents who have attended school are more likely to support their children in school, acting both as role models, and as active advocates of education. Studies in Rwanda have examined the intergenerational transmission of education. One such study found that parental educational level, when controlling for child's age, parents age, and gender, predicted educational attainment of children in the household, with each additional year of parental education increasing their children's education by 0.3 years[92]. The same study, found for educational levels of the highest educated female adult, was a stronger predictor of educational attainment for girls in the

[90] Atwine et al, 2005; Taddesse et al., 2004

[91] see Chevalier et al, 2003; Blanden et al., 2005; Black and Devereux, 2011

[92] Walque (2005). World Bank: Parental Education and Children's Schooling Outcomes: Is the Effect Nature or Nurture?

household than the educational levels of the highest educated male[93]. These findings support the role of parental levels of education in girls' educational achievements. It is more likely that parents who have attended school are able to provide a home environment conducive for children to do the same.

In both the intervention and control groups, almost half of girls come from female headed households: 47.1% in the intervention group and 44.4% in the control group. On average, households which are female headed, experience higher levels of hardship. A linear regression finds that sex of the head of household was able to predict mean hardship score at highly significant levels ($p<0.0005$). This finding suggests that female headed households face higher levels of economic hardship.

In both groups, a large percentage of girls are reported as not being able to speak the language of instruction: 24.8% in the intervention group and 21.4% in the control group. Kinyarwanda is used as the language of instruction in P1-P3, while English is used from P4-S6[94]. In later years of primary school, teachers report that they sometimes use Kinyarwanda to help learners understand their lessons. Rwanda has been characterized as having undergone several radical shifts in language of instruction[95]. Most students speak Kinyarwanda at home and it is likely that those who do not speak English well, will struggle to keep up with lessons, especially as the progress through school.

This study found that there were no married girls and no mothers in the intervention group. However, 0.3% of the intervention sample had been pregnant and were under the age of 16. This suggests the project is correctly targeting sexual and reproductive health in some of its activities.

Barriers

Table 21presents some of the barriers identified to learning and transition. Barriers have been categorized into two levels: home/community, and school.

Table 21. Barriers to Learning and Transition

Barrier	Intervention (Baseline; n = 435)	Control (Baseline; n = 426)
Home/Community		
Fairly or very unsafe to travel to schools in the area (according to parents)	1.6%	1.9%
Girls who don't feel safe traveling to school	2.7%	5.4%
Travel long distances (1 hour- 3 hours or more) to get to school	5.7%	9.2%
Poor parental attitudes to girls' education (based on 8-item scale)	2.9%	3.9%
Spend half a day or more on chores in the household or work (high chore/work burden)	31.5%	28.9%
School		
Girls who don't feel safe at school	0.7%	2.8%
Not enough seats for every student	8.3%	12.5%
Insufficient learning materials	2.0%	2.4%
Doesn't use areas where children play/ socialise	8.9%	13.8%
Agrees teacher is often absent from class	11.1%	15.2%
Agrees teacher treats boys and girls differently in the classroom	2.0%	1.9%
Agrees teacher does not make them feel welcome	2.7%	5.4%
Teachers use physical punishments on students if they get things wrong in a lesson (corporal punishment)	72.3%	74.7%
Low perception of teaching quality (7-dimension scale; 14 items)	3.0%	3.0%
Attends school half the time	2.1%	4.1%
Attends school less than half time	1.2%	1.0%

Most girls feel safe traveling to and from school and most parents feel it is safe for girls to do so. Although more girls than parents feel unsafe, overall only 2.7% of girls in the intervention group reported feeling unsafe traveling to and from school.

[93] ibid

[94] Nzabalirwa, 2014

[95] Samuelson and Freedman, 2010; World Bank, 2011

Only 0.7% of girls report feeling unsafe at school. However, 72.3% of girls in the intervention group report that their teacher uses physical punishments on students if they get something wrong in a lesson. Although corporal punishment is technically not condoned in schools, according to the Global Initiative to End Corporal Punishment of Children (2015), this is not enforced. Government policy allows the Discipline Board of the School to enforce appropriate punishments in the interest of "educating the student". The literature agrees that corporal punishment in schools has adverse effects on students' educational attainment, access, and psychological well-being[96]. Furthermore, children learn through challenge, and by making mistakes[97]. By punishing students for answering questions incorrectly, this practice may have an adverse effect on the learning outcomes and educational access of students in project schools.

With regards to the learning environment and teaching quality, 11.1% of girls in the intervention group reports that their teachers are often absent from lessons and 8.3% of girls in the intervention group report that there are not enough seats for all students in class.

Based on a scale of 8 items, most parents have positive attitudes towards girls' education. However, 31.5% of girls in the intervention group spend half a day or more on chores or jobs around the household. This means that they have less time to spend on educational activities such as after school clubs or homework. The project should seek to address the distance between parental attitudes and their behaviours to ensure the home environment is conducive to girls educational learning and access.

3.4 Intersection between key characteristics and barriers

Table 22summarizes the intersection between key characteristics and barriers identified in the Baseline Study. This aims to demonstrate how characteristics and barriers intersect to produce unique forms of marginalization, not visible in wider population statistics. Proportions which are visibly greater than population proportions are shaded in blue and discussed below the table.

Table 22. Intersection between Key Characteristics and Barriers

Key Barriers& Characteristics	Head of the household has no education	Female Headed Household	Girl does not speak LOI	Household Faces Severe Hardship	Girls who experience a form of impairment	Single Orphan	Double Orphan	Out of School
High Chore Burden	28.5%	26.6%	**36.2%**	25.9%	**45.5%**	36.7%	18.2%	**65.2%**
Teachers use physical punishments on students if they get things wrong in a lesson (corporal punishment)	74.1%	74.1%	64.3%	**85.0%**	69.7%	68.9%	63.6%	10.9%
Agrees teacher is often absent from class	13.0%	13.5%	15.1%	**17.0%**	9.1%	**18.9%**	9.1%	2.2%
Low perception of teaching quality (7-dimension scale; 14 items)	3.4%	2.5%	**4.0%**	5.1%	**16.7%**	3.7%	**10.0%**	**33.3%**

[96] Society for Adolescent Medicine, Position Paper: Corporal Punishment in Schools, 32:5 J. Adolescent Health 385, 388 (2003).

[97] Chaiklin, S. (2003). "The Zone of Proximal Development in Vygotsky's analysis of learning and instruction." In Kozulin, A., Gindis, B., Ageyev, V. & Miller, S. (Eds.) Vygotsky's educational theory and practice in cultural context. 39-64. Cambridge: Cambridge University.

Key Barriers& Characteristics	Head of the household has no education	Female Headed Household	Girl does not speak LOI	Household Faces Severe Hardship	Girls who experience a form of impairment	Single Orphan	Double Orphan	Out of School
Agrees teacher treats boys and girls differently in the classroom	2.2%	2.0%	**3.5%**	**4.1%**	**12.1%**	2.2%	0.0%	**10.9%**
Girls who don't feel safe traveling to school	2.8%	3.3%	**4.0%**	**8.8%**	**6.1%**	2.2%	0.0%	4.3%

Girls who do not speak the language of instruction, face on average, higher barriers to accessing and learning in school. On average, they report lower perceptions of teaching quality, are more likely to agree that teachers treat boys and girls differently, have a higher chore burden, and not feel safe traveling to school. Not being able to speak the language of instruction is likely to make it more difficult for students to access the curriculum and develop meaningful relationships with teachers. As the language of instruction is English in upper primary and lower secondary, this characteristic results in a significant barrier for girls.

Girls from households who face severe hardship were more likely to report teachers punishing students for getting things wrong in lessons and to notice teacher absenteeism. They were also more likely to agree that teachers treat boys and girls differently and not feel safe traveling to school.

Girls who experience some form of impairment (cognitive, mobility, communication, self-care, hearing, or vision), face significant barriers to education based on this review. Girls in this group reported spending much more time doing household chores each day than their peers. This is likely to influence their learning as on, top of coping with an impairment, they have less time to engage in school related activities each day. Girls who have an impairment also perceived teaching quality to be much lower than their peers (16.7% compared to 3.0%). This is likely due to the lack of inclusive teaching practices confounding their ability to access the curriculum. Additionally, they were more likely to report teachers as treating boys and girls differently and did not feel safe in higher proportions when traveling to school. Based on consultations, with project staff, girls in this group have no available means to access needed learning aids and equipment are therefore socially excluded from meaningfully engaging in learning experiences[98].

Out of school girls (OOS) on average reported a higher chore burden, with almost double the proportion engaging in chores or jobs for pay for half a day or more. This is to be expected as they are not enrolled in school. OOS girls also reported on average lower perceived degrees of teaching quality on the 7-dimension scale. This may be related to the fact that they have less interaction with teachers but could also explain some of their reasons for dropping out of school.

Throughout this report, characteristics and barriers have been used to identify sub-groups of the intervention population in the context of literacy, numeracy, and transition achievements.

3.5 Appropriateness of project activities to the characteristics and barriers identified

Intervention activities are relevant and well targeted to address several barriers and account for several characteristics resulting in educational marginalization.

Most barriers targeted by the theory of change have been validated. However, the project needs to consider additional activities to address the high chore burden faced by girls and should consider providing more targeted support to girls who experience disability or are at risk of experiencing disability.

With regards to economic hardship, the project is supporting schools to create budget lines specifically aimed at reducing costs associated with attending school for the most marginalized girls who cannot afford them.

[98]Discussion with REAP MEL Officer, February 2018

Additionally, the project is continuing to support school businesses and MDCs with IGA activities aimed at generating additional funding to support girls to enrol and attend school. Through the partnership with FFG, the project aims to create alumni scholarships, in the long term, to better support girls facing high degrees of hardship.

At baseline, a large proportion of the beneficiary population live in female headed households, which have been demonstrated to face higher levels of hardship. Through existing Mother and Daughter Clubs (MDCs), the project aims to encourage female caregivers to associate, and participate in income generating activities (IGAs) to support vulnerable girls to enrol and attend school. These activities are well suited to support female headed households.

A significant barrier faced by girls in project schools, and raised by this review, was the high chore burden they face. Almost a third of the beneficiary population engage in chores for half a day or more. This can have significant effects on their ability to participate in after school clubs and other project activities. The project currently conducts some outreach activities aimed at sensitizing parents to the risks of excessive chore burdens. However, activities targeting this barrier are limited to ad-hoc outreach initiatives and not incorporated into any activities listed in the project's workplan. The project should consider adopting conducting formalized activities sensitizing parents to the consequences of a high chore burden on the access and educational achievements of their girls. Of note is the fact that girls who experience disabilities face on average higher chore burdens than their peers. The project should provide targeted support to these girls to account for the effects of this barrier on the most marginalized.

The baseline found that a quarter of project beneficiaries do not speak the LOI, English and this group faces a higher chore burden, has a poorer view of teaching quality, and feels girls and boys are treated differently by their teachers. Several project activities, including Community Study Groups (CSGs) and remedial lessons, aim to improve the English language acquisition of this group. The project should remain sensitive to the fact that girls who do not speak English cannot access the curriculum and are at a higher propensity to experience exclusion in schools.

There are two main differences between the composition of the beneficiary population and what the project initially expected.

The baseline study determined that 15.2% of target girls live in households facing severe hardship and 49.7% live in households facing moderate degrees of hardship. The project expected only 11% of girls to live in households facing moderate to severe hardship. The estimate was calculated using the same hardship scale but was based on sample proportions in the REAP1 Endline. The Endline followed up on the initial sample selected for the REAP1 baseline, in 2014. As per sampling guidance for GEC-T a random sample of project beneficiaries was taken, suggesting that the baseline sample is representative of the beneficiary population. Project activities are well suited to support girls facing higher levels of hardship, as this is a key barrier targeted by several project activities.

The baseline study further determined that 5.2% of girls face some form of impairment (visual, cognitive, mobility, self-care, or communication). The project initially expected 9% of girls to face some form of impairment, also based on REAP 1 figures. As impairment status may change between periods, the project must remain sensitive to the needs of this population. Project staff report that teacher training components include a module on inclusive education. However, more active support monitoring girls with disabilities across intervention activities should be adopted to ensure the project remains inclusive of this group.

4. Key Outcome Findings

4.1 Learning Outcome

4.1.1 Learning Assessments

At the outcome level, the project aims to improve marginalized girls' learning outcomes in English and Kinyarwanda literacy and in numeracy. The project expects this to be achieved through improved teaching

quality, enhanced community support for learning, extended learning opportunities, the provision of educational materials, and improved access of girls to schools.

Wider literature argues that successful literacy and numeracy acquisition depends on both child-level and school-level factors though there is no clear answer on the relative importance of either factor. Child-centred studies focus on the home environment, the provision of additional learning opportunities[99], a child's oral language skills[100], his or her motivation to learn[101], and whether he or she has a pre-school foundation[102]. For numeracy, an emphasis is placed on the teaching of number concepts and arithmetic strategies[103]. Important school-level factors include the quality of resources, the accessibility of the learning environment and teaching quality[104].

For the purposes of the external evaluation, literacy is assessed in primary grade levels through the English and Kinyarwanda Early Grade Reading Assessment (EGRA), and in secondary levels through the English and Kinyarwanda Secondary Grade Reading Assessment (SeGRA). Numeracy in primary levels is assessed through the Early Grade Mathematics Assessment (EGMA) and, in secondary levels, through the Secondary Grade Mathematics Assessment (SeGMA).

Learning assessments were developed at baseline after a review of the national curriculum in Rwanda. Four versions of each assessment type were designed and piloted to a sample of girls in 5 primary and secondary schools[105]. Results on each subtask of the assessment were analysed to identify potential floor and ceiling effects, and to ensure test types were of similar levels of difficulty. After a calibration exercise conducted in collaboration with the Fund Manager and after consultation with GEC guidance, final tools were selected for each period. The full pilot report is included as an Annex to this report.

The subtasks included in each assessment are shown in Tables 23and 24. The final column in the tables describes how the subtasks were scored. All subtasks were scored out of 100 points[106]. Each subtask's score was calculated as the total of correct answers over the total number of items and expressed as a percentage. For EGRA subtasks 1-3, as these were timed, the maximum possible was set at the maximum number of items in each subtask. The word per minute score for the oral reading fluency subtask does not naturally cap at any value and the arbitrary maximum set by the GEC Fund Manager was 100 WPMs. This was decided upon as it reflects the expectation that by the end of primary school, all students should be able to read 90-120 WPMs (Abadzi, 2011).

Table 23. Literacy Assessment Subtasks

Subtask	Description	Scoring
Early Grade Reading Assessment (EGRA) English and Kinyarwanda		
Subtask 1: Letter naming	Phonological awareness. I.e. Mapping sounds onto letters	(Letters read correctly per minute[107] / 100) * 100

[99] INAS vulnerable group certificate

[100]Nag, S., Chiat, S., Torgerson, C., &Snowling, M. J. (2014). Literacy, foundation learning and assessment in developing countries. DFID publication retrieved from https://www. gov. uk/government/uploads/system/uploads/attachment_data/file/305150/Literacy-foundation-learning-assessment. pdf.

[101] Motivation Theories

[102]Gillen, J., & Hall, N. (2013). *The emergence of early childhood literacy*. The Sage handbook of early childhood literacy, 3-17.

[103] Op cit., Nag S et al.

[104] MINED 2015 Report

[105]60 girls for EGRA English, 83 Girls for EGRA Kinyarwanda, 70 Girls for EGMA, 82 Girls for SeGRA English, 56 girls for SeGRA Kinyarwanda, and 82 girls for SEGMA

[106]For girls where the number of units per minute exceeded the maximum agreed with the fund manager, these values were assumed to be the maximum i.e. what would derive 100 points. Unit per minute was used as the numerator, in line with international standards for assessing these subtasks- see EGRA Toolkit, RTI (2009)

[107]The per minute score was used as the subtask was timed, with girls being asked to stop after 60 seconds. For girls where the number of units per minute exceeded the maximum agreed with the fund manager, these values were assumed to be the

Subtask	Description	Scoring
Subtask 2: Familiar word	Assess ability of learners to identify familiar words. Familiar words are high-frequency words selected from first-, second-, and third-grade reading materials and storybooks in the language and context	(Words read correctly per minute[108] / 50) * 100
Subtask 3: Invented word	Assesses ability of learners to make grapheme-phoneme correspondences (GPCs) through reading of simple nonsense words	(Words read correctly per minute[109] / 50) * 100
Subtask 4: Short Passage (ORF)	A short reading passage to assess girls' ORF. Oral reading fluency (ORF) provides a well-documented measure of 'overall reading competence'[110].	(Words read correctly per minute / 100) * 100
Subtask 5: Reading Comprehension I	Comprehension is highly correlated with literacy and refers to a learner's ability to understand a text. It is measured through a series of comprehension questions.	(Comprehension questions answered correct / 5) * 100
Subtask 6: Reading Comprehension II (written answers)	This corresponds to the second subtask of the SEGRA assessment. It is a longer text with several comprehension questions. It is a written subtask.	(Total marks in comprehension questions/ 10) * 100
Secondary Grade Reading Assessment (SEGRA) English and Kinyarwanda		
Subtask 1: Short Passage (ORF)	This corresponds to the same passage used in EGRA, which measures Oral Reading Fluency (ORF)	(Words read correctly per minute / 100) * 100
Subtask 2: Long Paragraph I	Transition of primary to lower secondary: A longer, more complicated comprehension paragraph, with more *analytical* questions.	(Total marks in comprehension questions/ 10) * 100
Subtask 3: Long Paragraph II	Transition of lower to upper secondary: A longer, more complicated comprehension paragraph, with more *inferential* questions. **NOTE**: This task was only included in the Kinyarwanda assessment due to low levels of English proficiency, as demonstrated through the pilot exercise.	(Total marks in comprehension questions/ 10) * 100
Subtask 4: Short Essay Construction (Kinyarwanda Only)	Transition of upper secondary and beyond. Measure a girls' written ability in their strongest language. **NOTE**: This task was only included in the Kinyarwanda assessment This task was only included in the Kinyarwanda assessment due to low levels of English proficiency, as demonstrated through the pilot exercise.	(Total marks in written task / 10) * 100

Table 24. Numeracy Assessment Subtasks

Subtask	Description	Scoring
EGMA		
Subtask 1: Number identification	Number competence is reflected in counting procedures, fact retrieval, and accurate computation (Jordan, Kaplan, Ramineni, & Locuniak, 2009). The ability to identify numbers is a basic skill necessary for advanced numeracy.	(Total Numbers Correctly Identified / 20) * 100
Subtask 2: Quantity Discrimination	Quantity discrimination describes the ability to distinguish the magnitude of various numbers. Performance on comparisons of numerical magnitude are predictive of later mathematical achievement (De Smedt et al., 2009)	(Total Problems Solved Correctly / 10) * 100

maximum i.e. what would derive 100 points. Unit per minute was used as the numerator, in line with international standards for assessing these subtasks- see EGRA Toolkit, RTI (2009)

[108]As above

[109]As above

[110]Hasbrouck & Tindal. Oral Reading Fluency: 90 Years of Measurement. 2006

Subtask	Description	Scoring
Subtask 3: Missing Numbers	For this subtask, learners are asked to fill in missing numbers in a series of numbers forming a pattern. The ability to detect is an important early skill that can support later mathematical skills such as multiplication (Geary, 1994) and algebraic thinking (Sarama& Clements, 2009)	(Total Problems Solved Correctly / 10) * 100
Subtask 4: Word Problems	Basic mathematics problems with increasing difficulty.	(Total Problems Solved Correctly / 3) * 100
Subtasks 5A and 5B: Addition and Subtraction	Addition problems aim to test the extent to which learners can combine numbers. Subtraction problems aim to assess the extent to which learners can subtract one number from another. Arithmetic (addition, subtraction, multiplication and division) serves as the foundation for the skills necessary in later mathematics and science education (Ashcraft, 1982).	(Total Problems Solved Correctly / 40) * 100
Subtask 6A and 6B: Multiplication and Division	In the multiplication and division subtask learners are required to answer a series of multiplication and division questions of varying difficulty.	(Total Problems Solved Correctly / 20) * 100
Subtask 7: Longer Multiplications of integer and fractions, divisions, and order of operations.	Longer exercises graded 1 mark each for fraction multiplication, and simplification as well as area and volume mathematics problems. Same as Subtask 1 in SeGMA	(Total Problems Solved Correctly / 10) * 100
SeGMA		
Subtask 1: Longer Multiplications of integer and fractions, divisions, and order of operations.	Mathematic skills expected for girls transitioning from primary to lower secondary school.	(Total Problems Solved Correctly / 10) * 100
Subtask 2: Fraction addition, area and volume problems, equations with unknowns, simultaneous equations.	Mathematical proficiency expected for girls progressing from lower to upper secondary school.	(Total Marks / 10) * 100
Subtask 3: Sophisticated Word Problems	Multiple operations mathematics problems sourced also from the Kenyan Certificate for Secondary Education	(Total Marks / 10) * 100

To generate aggregate literacy and numeracy scores, all subtasks were weighted equally and averaged. Aggregate scores per grade level and learning outcome, are shown in the tables following.

4.1.2 Aggregate Scores and Distributions

For both the intervention and control group English proficiency visibly increases as girls progress through school. Mean literacy scores are low across all grade levels reflecting the low level of English language acquisition in Nyaruguru, in line with pilot findings.

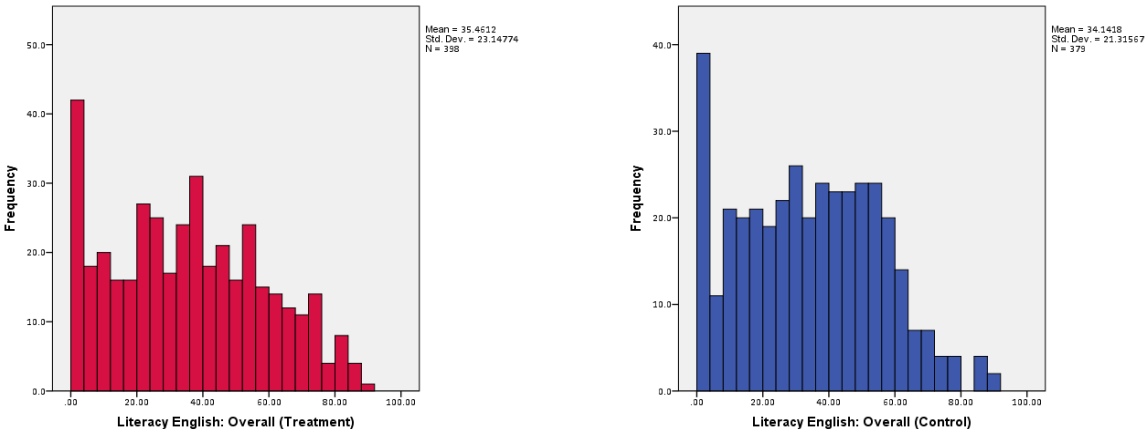
Table 25. English Literacy Aggregate Scores (EGRA/SeGRA)

Grade	Intervention Group Mean	Control Group Mean	Standard Deviation of Intervention Group
P4	22.22%	20.77%	20.51%

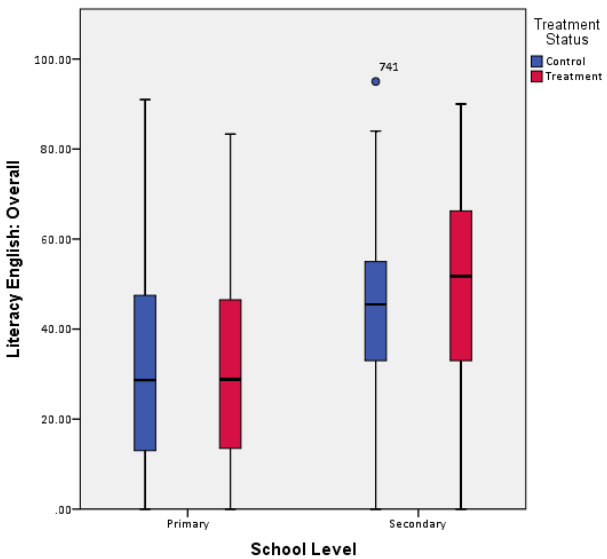
Grade	Intervention Group Mean	Control Group Mean	Standard Deviation of Intervention Group
P5	30.76%	33.04%	19.50%
P6	41.21%	39.97%	21.76%
S1	37.30%	42.56%	20.69%
S2	45.19%	38.42%	24.80%
S3	55.53%	45.40%	22.17%
S4	42.09%	36.50%	21.48%

The distribution of aggregate English literacy scores for both the intervention and control group are shown in Figure 2. The distributions are unimodal with a mode score of 0. Despite a visible leftward skew in both distributions, there is no clear floor effect.

Figure 2. Distribution English Literacy Scores



Comparisons between the intervention and control groups are shown in Figure 3. As with mean level findings, girls in later years of school have demonstrably higher levels of English language proficiency.



Girls tend to perform better on the Kinyarwanda literacy than on English literacy. The table following shows aggregate Kinyarwanda scores across grade levels. Although girls tend to do better in Kinyarwanda scores in later grade levels, differences to early grade levels are not as marked as with English scores.

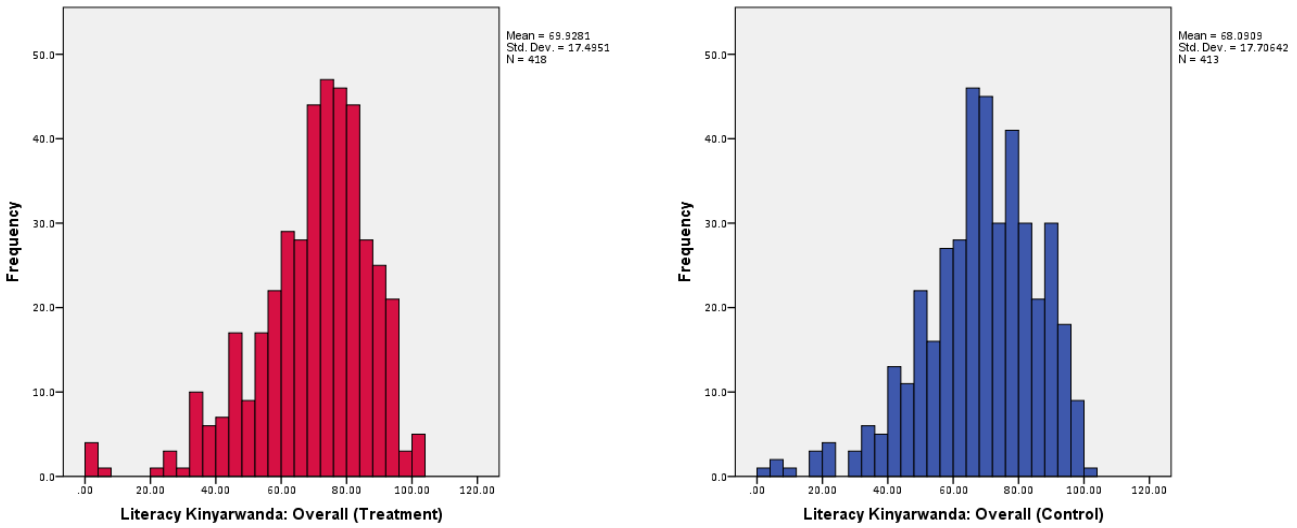
Table 26. Kinyarwanda Literacy Aggregate Scores (EGRA/SeGRA)

Grade	Intervention Group Mean	Control Group Mean	Standard Deviation of Intervention Group
P4	64.13%	60.61%	18.83%
P5	67.74%	70.83%	16.44%
P6	77.65%	73.73%	14.77%
S1	65.49%	63.04%	17.94%
S2	65.48%	67.80%	19.25%
S3	78.61%	72.42%	12.92%
S4	71.48%	70.49%	17.00%

Figure 3. Distribution of English Aggregate Scores Between Groups and Level of School

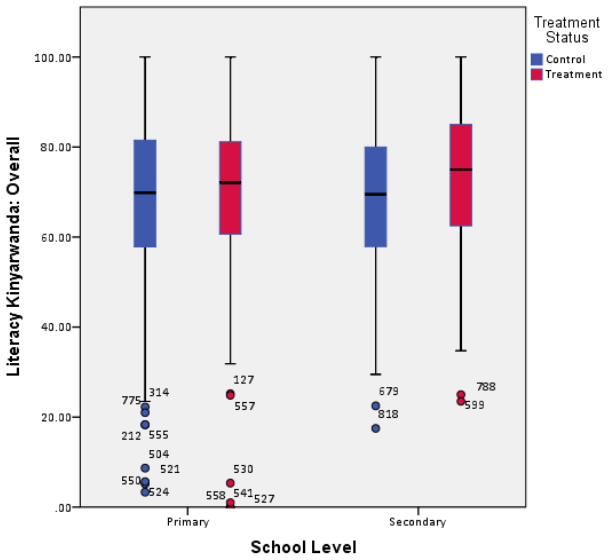
Distributions of Kinyarwanda scores are shown in Figure 4. For both the intervention and control groups this follows an expected normal distribution.

Figure 4. Distribution Kinyarwanda Literacy Scores



Comparisons between groups and schooling level for Kinyarwanda, demonstrate that mean scores don't vary greatly between grade levels. Aside from several outliers, most study participants in both groups fall within similar ranges. Results between school levels per group are shown in Figure 5.

Figure 5. Distribution of Kinyarwanda Aggregate Scores Between Groups and Level of School

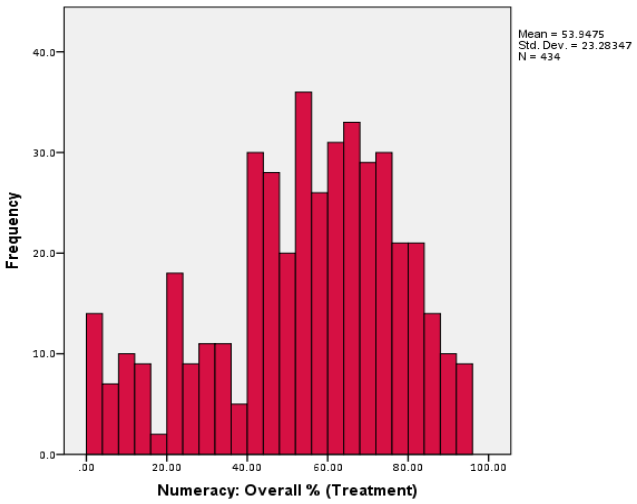


Numeracy scores across grade levels are shown in the table following. Secondary scores on average were lower than primary scores. This is likely due to the difficulty of the secondary assessment. However, as girls progress through primary schools mean numeracy scores increase. Progression in numeracy scores secondary school grade levels, by contrast, is not linear.

Table 27. Numeracy Aggregate Scores (EGMA/SeGMA Aggregate Scores %)

Grade	Intervention Group Mean	Control Group Mean	Standard Deviation of Intervention Group
P4	55.29%	58.81%	19.14%
P5	61.81%	66.62%	14.92%
P6	68.74%	71.26%	15.89%
S1	28.39%	24.14%	25.89%
S2	25.00%	27.14%	17.53%
S3	48.19%	29.39%	23.88%
S4	25.45%	40.67%	20.18%

The distribution of numeracy scores for both groups are shown in Figure 6. Both distributions are unimodal. The control group's mode was slightly higher than that exhibited in the intervention group. Despite having a rightward skew in distribution, neither group experienced visible ceiling effects. Based on a review of the distributions, both the intervention and control groups are comparable.



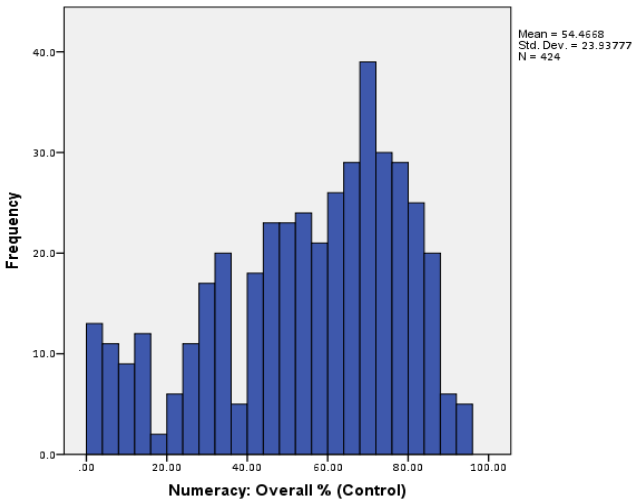


Figure 6. Distribution Numeracy Literacy Scores

Figure 7displays the box plots for numeracy scores between school levels and groups. The secondary assessment was more difficult with most girls scoring less than 40% in both the intervention and control group.

Predictors of literacy and numeracy achievements are discussed in more detail in the context of the interventions intermediate outcomes.

4.1.3 Foundational Literacy and Numeracy Skills Gaps

To understand and identify specific skill gaps across subtasks, girls were categorized into score bands. These bands were established by the Fund Manager and are applied across all GEC-T projects.

For English literacy at the primary level, approximately one quarter of the sample in both the intervention and treatment group were non-learners in letter naming knowledge, the most basic subtask. Most girls, however tended to perform better on earlier subtasks. In both groups, very few girls were 'established learners' or 'proficient learners' in the final two reading comprehension subtasks. On Subtask 6, the only written exercise, no girls were categorized as 'proficient learners'. To an extent, this is to be expected as these skills are addressed in later years of primary school and English is only the language of instruction in upper primary school.

For Kinyarwanda literacy at the primary level, girls tended to perform much better overall. This is likely because Kinyarwanda is the first language of most girls and they have been exposed to it throughout their primary education. Most girls were either 'established' or 'proficient learners' in the first subtask, letter naming knowledge. In both groups, most girls were also categorized as established or proficient learners for the final subtask, the written comprehension exercise.

Table 28. Foundational literacy skills gaps (Primary)

	Subtask 1: Letter Naming Knowledge		Subtask 2: Familiar Word		Subtask 3: Invented Word		Subtask 5: Reading Comprehension 1		Subtask 6: Reading Comprehension 2	
	T	C	T	C	T	C	T	C	T	C
English										
Non-learner 0%	25.2%	26.1%	10.2%	10.0%	18.4%	22.0%	51.7%	58.3%	59.7%	59.0%
Emergent learner 1%-40%	43.6%	46.0%	42.4%	44.8%	34.3%	33.0%	36.5%	30.3%	35.9%	33.7%
Established learner 41%-80%	19.8%	21.4%	33.9%	29.5%	30.2%	27.3%	9.2%	10.0%	4.4%	7.3%
Proficient learner 81%-100%	11.4%	6.5%	13.5%	15.7%	17.1%	17.7%	2.5%	1.3%	0.0%	0.0%
Kinyarwanda										
Non-learner 0%	1.3%	1.4%	2.3%	2.4%	2.9%	3.1%	5.1%	8.3%	10.2%	10.7%
Emergent learner 1%-40%	8.9%	10.2%	3.9%	7.1%	16.5%	19.0%	6.3%	7.7%	29.5%	28.7%
Established learner 41%-80%	39.3%	40.3%	46.3%	48.0%	58.1%	55.8%	34.0%	27.7%	46.3%	53.0%
Proficient learner 81%-100%	50.5%	48.1%	47.6%	42.6%	22.6%	22.1%	54.6%	56.3%	14.0%	7.7%

Oral Reading Fluency, measured in words per minute (wpm) is a widely-used measure of 'overall reading competence' and is understood as 'the ability to translate letters into sounds, unify sounds into words, process connections, relate text to meaning, and make inferences to fill in missing information'. Oral reading fluency is understood through a passage reading exercise and is measured in correct words per minute. Score bands for oral reason fluency are shown per group and assessment type in Table 30.

Table 29. Foundational literacy skills gaps: Oral Reading Fluency (Primary)

	Oral Reading Fluency (Primary)	
	T	C
English		
Non-reader: 0-5 WPM	18.1%	17.8%
Emergent reader: 6-44 WPM	42.7%	37.8%
Established reader: 45-80 WPM	28.0%	29.6%
Proficient Reader: 80+ WPM	11.3%	14.8%
Kinyarwanda		
Non-reader: 0-5 WPM	2.6%	2.4%
Emergent reader: 6-44 WPM	8.8%	9.5%
Established reader: 45-80 WPM	49.7%	48.3%
Proficient Reader: 80+ WPM	39.0%	39.8%

Across primary grade levels 39.3% of girls in the intervention group and 44.4% of girls in the control group were categorized as 'established' or 'proficient readers in English oral reading fluency, scoring over 45 words per minute on the subtask. However, relatively few of these girls were placed in these categories for the reading comprehension subtask, based on the same passage. This suggests that although these girls can read to some degree of fluency, they do not necessarily understand what they are reading.

For English literacy, 18.1% of girls in the intervention group are non-readers and 42.7% are emergent readers. The intervention should consider ensuring teacher capacity training is tailored to addressing this large group of girls with early skills.

Research into the relationship between reading comprehension and oral reading fluency in multi-language environments in the region has shown that the relationship is dependent on whether the language of the text is the reader's first language[111]. The view that reading comprehension is dependent on fluency, assumes that the learner also has oral language skills in the language in which they are reading[112]. Oral language skills enable learners to use word-decoding skills and rely on visual recognition once they become more accomplished[113]. Low comprehension scores can therefore be partially explained by the fact that English is not primarily spoken in Nyaruguru, beyond the classroom.

Qualitative findings further suggest that girls primarily read in Kinyarwanda in their free time. As several girls, explained:

> *"I read [in] Kinyarwanda because this is easy for me, and …there are funny stories which I understand very well because it is my native language."*[114]

> *"We usually read in the Kinyarwanda language because it is our native language. I can read and understand everything."*[115]

In Kinyarwanda oral reading fluency at the primary level, close to 80% of girls in both the intervention and control group were categorized as 'established' or 'proficient readers. Approximately two thirds of these girls

[111]Piper, 2016 Oral reading fluency and comprehension in Kenya: reading acquisition in a multilingual environment (Journal of Research in Reading)

[112] Piper 2016

[113]Just & Carpenter, 1987

[114]FGD with Girls on Literacy and Numeracy

[115]ibid

were categorized into the same categories for the reading comprehension task which relies on the same passage. Unlike with English, more girls were able to demonstrate that they had understood what they read.

At the secondary level, for English literacy, girls performed poorly. Most girls were categorized as either 'non-learners' (30.2% in intervention and 36.9% in control) or 'emergent learners (47.4% in intervention and 45.1% in control). The control and intervention group proportions were comparable. As with English results at the primary level, low levels of English literacy acquisition are to be expected, as the language is not primarily spoken in Nyaruguru.

Table 30. Foundational English literacy skills gaps (Secondary)

	Subtask 2: Reading Comprehension 1	
	T	C
Non-learner 0%	30.2%	36.9%
Emergent learner 1%-40%	47.4%	45.1%
Established learner 41%-80%	22.4%	18.0%
Proficient learner 81%-100%	0.0%	0.0%

At the secondary level, for Kinyarwanda literacy, girls in both the intervention and the control groups performed much better, with most girls being categorized as 'established' or 'proficient learners' in Kinyarwanda secondary subtasks 2 and 3. Girls performed less well in the fourth subtask, where they were asked to write a letter or essay. Only 6.9% of girls in the intervention group and 3.3% of girls in the treatment group were categorized as 'proficient learners' in this task. overall both the intervention and control group proportions were comparable.

Table 31. Foundational Kinyarwanda literacy skills gaps (Secondary)

	Subtask 2: Reading Comprehension 1		Subtask 3: Reading Comprehension 2		Subtask 4: Writing Skills	
	T	C	T	C	T	C
Kinyarwanda						
Non-learner 0%	2.6%	4.9%	6.9%	7.4%	21.6%	24.6%
Emergent learner 1%-40%	6.0%	10.7%	4.3%	8.2%	30.2%	26.2%
Established learner 41%-80%	48.3%	45.1%	42.2%	49.2%	41.4%	45.9%
Proficient learner 81%-100%	43.1%	39.3%	46.6%	35.2%	6.9%	3.3%

For English oral reading fluency at the secondary level, most girls were categorized as established or proficient readers' in both groups. For Kinyarwanda oral reading fluency at the secondary level, most girls were categorized as 'proficient readers' in both groups. Results are shown in Table 33.

Table 32. Foundational literacy skills gaps: Oral Reading Fluency (Secondary)

	Treatment	Control
English		
Non-reader: 0-5 WPM	7.4%	7.4%
Emergent reader: 6-44 WPM	14.8%	14.8%
Established reader: 45-80 WPM	36.1%	36.1%
Proficient Reader: 80+ WPM	41.7%	41.7%
Kinyarwanda		
Non-reader: 0-5 WPM	0.0%	0.0%
Emergent reader: 6-44 WPM	1.9%	1.9%
Established reader: 45-80 WPM	11.3%	11.3%
Proficient Reader: 80+ WPM	86.8%	86.8%

To further understand girls' relationship to reading, we asked them additional questions about their reading habits. Results for these items are shown in Table 34. 61.9% of the intervention group and 66.7% of the control group spend time outside of school and school work reading. Of these most girls read twice a week. In terms of

time spent reading, most respondents who read outside of school state that they read either less than one hour (44.6% in the intervention group) or between 1 and 2 hours (38.8%). Linear regressions using time spent reading as a predictor of oral reading fluency, were non-significant, however.

Table 33. Reading Habits

Item		Intervention	Control
Do you spend time reading outside of school or work? (All below items filtered to only include girls who answer yes to this question)	Yes	61.9%	66.7%
	No	37.8%	32.8%
How often do you read?	At least once a day	38.9%	41.0%
	At least every 2 days/ twice a week	32.7%	38.8%
	At least once a week	18.2%	15.0%
	At least once a month	7.3%	3.9%
	Less than once a month	2.2%	0.7%
How many hours a week do you spend reading on average?	Less than 1 hour	44.6%	42.2%
	Between 1 and 2 hours	38.8%	42.2%
	Between 2 and 4 hours	9.1%	6.9%
	Between 4 and 8 hours	5.5%	6.2%
	More than 8 hours	1.0%	1.8%

Focus group discussions further aimed to understand how and what girls read.

Several girls mentioned that they benefit from reading in groups as this allowed them to practice their skills and listen to others reading:

> *"Yes, I read several times with others, those are fellow students or other colleague of my generation…when I have a book with me because it helps us to support each other for better understanding what we are reading."*

> *"I like reading with my colleague, children neighboring my home because we share experience and get to know everything into the book we are reading"*

This suggests that the project will have some success promoting reading in the Child Study Groups, as these are focused on supporting girls to work with peers to improve their early reading skills. Some girls additionally saw value in pairing early readers with more advanced readers. This model should be considered in the structure of CSGs.

Interestingly, as well as reading in Kinyarwanda, several girls mentioned that they would also like better access to books in Kiswahili. This is likely because of the limited availability of books in Kinyarwanda and the prevalence of Kiswahili as a spoken language in neighboring countries:

> *"The problem we are facing is that there are few books at school in some subject and we don't get to read whatever we would like to read. For example, Kiswahili books are few and upper levels are the only accessing these books."*

"I also read in Kiswahili however there is limitation of books."

Access to books seemed to be a prevalent concern for girls across qualitative sessions, suggesting that the project is appropriately aiming to improve the access of teaching and learning materials in schools.

With regards to what girls read, girls mentioned reading story books, the bible, and magazines:

"Yes, we read books for fun. We get stories to tell others from books and magazines."

"We normally get books to read from school, and others from the church, story books and the bible"

Many girls seemed to value the importance of reading. Girls mentioned that they found reading to be an enriching experience and allowed them to share stories with their friends.

"Yes, we like reading because we get new skills and knowledge to share with others, sometimes we read fun stories and we share with our fellow students. The reason I love reading is that reading enrich mind and help us to know much in advance."

"I like reading with my colleague because it makes me happy. I discover new things from reading and explain it to my colleagues. We gain a lot from reading, give us wisdom to explain to others."

"It is indispensable because we discover new things."

Qualitative sessions further aimed to better understand what made it easy or hard for girls to learn to read and write. An overview of main qualitative findings is shown in the tables following. Girls mentioned that reading in groups, reading out loud, listening to others read, and practicing writing all improved their ability to read.

Table 34. What makes learning to read and write easier?

Reading in groups	*"The reason this method was used I guess that is to help people who don't understand to understand it more. Again, the teacher was giving us books we would get closer to those students who know and it and read together with them and afterwards the teacher would comment on as the brilliant students did explaining those with no knowledge of reading. "*
Reading out loud / Listening to others read	*"Yes, we like reading loudly because the time you are in front and you are reading to the whole class it is better to read loud so that everybody hears and understands to avoid children who do not hearing, and which may result in them being beaten. And it enables students to respond when questions arise."*
Mimicking others reading out loud repetition	*"Our teacher would go to the black board and read as we were repeating. The basics was the lesson on vowels and the alphabet. It was easy because I would repeat what the teacher has read to me and the teacher was also good because he was repeating many times for us to understand. It was not easy at the start, it was hard but with the help of the*

	teacher things went easy, the many times that he was repeating the easier it was to capture. " *"It was easy because I was imitating what my teacher writes or read."* *"He used to read and ask me to repeat after him."*
Practicing writing	*"Our teacher gave us chalk, and we were writing on the black board as we were repeating, while he holds our hand. After that exercise he ordered us to do it ourselves until we get to know how better to read and write."*

A summary of findings for what makes it difficult to learn to read and write are shown in the table following. Girls generally reported that a high chore burden and lack of access to reading materials resulted in them not being able to properly learn to read.

Table 35. What makes learning to read and write harder?

Access to reading materials	*"They say the books are not ready to be used by students."* *"The teachers should not keep letting students from rich families have access to books only and give the books to other students"*
Chores and household duties	*"I don't read at my best. I am always busy doing home activities, and found no time to spare in reading, this result into even forgetting what I have learnt because I have not reviewed in my notebooks. My parents would tell me to go for duties and me also I may have something that distracts me, playing with colleagues and end up not reading anything."*

Overall qualitative findings suggest that girls need support getting access to reading materials and reducing their chore burden. Girls additionally report that practicing core reading skills in groups, reading out loud or listening to someone read out loud, and imitating someone reading, were useful strategies which supported them to improve their reading skills.

For numeracy at the primary level, there is a clear progression in both the intervention and control groups with more girls being categorized into higher categories of achievement in earlier subtasks than in later subtasks. The final subtasks, which includes advanced multiplication problems and fractions, had the fewest proportion of 'proficient learners', 1.3% in both the intervention and control groups. This progression is to be expected as subtask difficulty increases sequentially. Table 37displays the proportion of girls in various categories of achievement across both the intervention and control group. overall, the two groups are comparable.

Table 36. Foundational numeracy skills gaps (Primary)

	Subtask 1: Number Identification		Subtask 2: Quantity Discrimination		Subtask 3: Missing Numbers		Subtask 4: Word Problems		Subtask 5: Addition and Subtraction		Subtask 6: Multiplication and Division		Subtask 7: Advanced Multiplication / fractions	
	T %	C %	T %	C %	T %	C %	T %	C %	T %	C %	T %	C %	T %	C %
Non-learner 0%	1.3	1.0	1.6	1.7	6.4	7.4	9.8	4.3	1.0	2.0	4.1	3.0	44.4	31.7

	Subtask 1: Number Identification		Subtask 2: Quantity Discrimination		Subtask 3: Missing Numbers		Subtask 4: Word Problems		Subtask 5: Addition and Subtraction		Subtask 6: Multiplication and Division		Subtask 7: Advanced Multiplication / fractions	
	T %	C %	T %	C %	T %	C %	T %	C %	T %	C %	T %	C %	T %	C %
Emergent learner 1%-40%	1.3	2.3	5.7	4.0	29.0	25.4	16.2	11.0	7.0	7.0	36.3	30.2	38.7	51.7
Established learner 41%-80%	29.2	27.4	34.6	33.1	53.2	51.2	27.3	28.4	50.2	40.5	51.0	56.4	15.6	15.3
Proficient learner 81%-100%	68.3	69.2	58.1	61.2%	11.5	16.1	46.7	56.2	41.9	50.5	8.6	10.4	1.3	1.3

For secondary levels in numeracy, most girls performed better in task 1, while fewer girls were in categorized as 'proficient learners' in task 2. This is to be expected as task 2 is more difficult. Proportions in each category were comparable between the intervention and control groups. Results are shown in Table 38.

Table 37. Foundational numeracy skills gaps (Secondary)

	Subtask 1: Advanced Multiplication / fractions		Subtask 2: Orders of operations and other advanced problems	
	T	C	T	C
Non-learner 0%	12.9%	9.8%	44.8%	47.5%
Emergent learner 1%-40%	36.2%	43.4%	37.9%	43.4%
Established learner 41%-80%	44.0%	42.6%	14.7%	7.4%
Proficient learner 81%-100%	6.9%	4.1%	2.6%	1.6%

To better understand numeracy achievements, girls in qualitative sessions were asked what makes it easier and harder for them to learn math. Results from the qualitative sessions are summarized in the tables following.

Girls reported that practicing exercises, being provided with real world examples, engaging with visual learning aids, and good teaching practices were all conducive to their learning of math. Participants tended to emphasize the role of a good teacher in promoting their early math skills, particularly when their teacher would repeat key concepts with examples.

Table 38. What makes learning math easier?

Qualitative Findings: What makes learning math easier?	
Practicing Exercises	My mathematics teacher, I like him because giving us many exercise
Real World Examples	Mathematics is easy because I have got to get viable and live examples; this made my learning of mathematics easy.
Teaching Practices	Learning mathematics from the teacher it is easy for us because he explains very well; there is the time it gets harder because of being the first time you see that exercises.

Visual Learning Aids	I like the teacher when she/he draws the chart or the diagram on the blackboard, she/he explains it then we know it since that day

Girls reported finding math harder to learn when teachers did not provide examples or explained things too quickly. Several girls emphasized the need for 'inherent' abilities such as having critical thinking skills or being adaptable.

Table 39. What makes learning math harder?

Qualitative Findings: What makes learning math harder?	
Lack of 'inherent' abilities	I see mathematics very complicated because it requires critical thinking. In my opinion I have seen that mathematics is difficulty because it requires deep thinking and being careful In my opinion I see that mathematics is harder to girls because boys adapt faster compared to girls.
Lack of Examples	The mathematics is difficult because the teacher doesn't give us more explanation and give the answer very quickly
Teaching Practices	Yeah, mathematics is very hard, but it depends on the teachers who teaches The mathematics is difficult because the teacher doesn't give us more explanation and give the answer very quickly I see that mathematics could be easy or difficulty due to the method and ways that the teacher is using to teach,

These findings suggest that teaching quality and practices play a strong role in promoting early mathematics skills. The project should consider some of the examples provided to include in teacher training, such as encouraging the use examples, where possible real-life examples, and to utilize visual learning aids.

4.1.4 Grade Level Achievements Compared to Competencies in National Curriculum

EGRA/SeGRA and EGMA/SeGMA were designed to ensure they include the appropriate foundational skills and difficulty levels for students in target grade levels. Results across grades can therefore be separated into grade appropriate tasks based on the expectations sent out in the national curriculum.

For English literacy the expected skills for each grade level are shown in Table 41. Across all grade levels, English literacy achievements per subtasks are lower than would be expected based on the competencies listed in the national curriculum[116]. This would suggest that there are challenges in Nyaruguru schools implementing the national curriculum for English literacy.

[116] National curriculum accessible here:
http://reb.rw/fileadmin/user_upload/documents/curriculum/primary/english_revised_primary_2010.pdf

The intervention and control groups are comparable across all grades and relevant subtasks for those grades, except for girls in S1. More girls in the intervention group performed better on the reading comprehension written task in S3, than in the control group. This may be because girls in the intervention group participated in GEC1, which focused on improving English literacy.

Table 40. English Literacy Grade Level Achievements in Context of National Curriculum

	Relevant Subtask	Proportion of Girls Established Learners		Proportion of Girls Proficient Learners	
		T	C	T	C
P4	**EGRA Subtask 1**: Letter Naming (P1-P2)	16.7%	12.6%	8.3%	3.4%
	EGRA Subtask 2: Familiar Word (P3)	22.4%	18.0%	7.1%	5.6%
	EGRA Subtask 3: Invented Word (P3)	20.4%	19.8%	9.7%	10.4%
	EGRA Subtask 4: Oral Reading Fluency (P4/P5)	16.0%	14.5%	7.2%	9.6%
	EGRA Subtask 5: Reading Comprehension 1 (P4/P5)	3.9%	3.1%	1.9%	1.0%
P5	**EGRA Subtask 4**: Oral Reading Fluency (P4/P5)	27.6%	36.6%	9.2%	12.2%
	EGRA Subtask 5: Reading Comprehension 1 (P4/P5)	7.8%	10.8%	1.0%	1.1%
P6	**Subtask 5**: Reading Comprehension 1 (P4/P5)	17.5%	14.9%	5.2%	2.1%
	EGRA Subtask 6: Reading Comprehension 2	12.4%	14.9%	0.0%	0.0%
S1	**SeGRA Subtask 2**: Reading Comprehension 1 (P6/S1)	14.3%	22.9%	0.0%	0.0%
S2	**SeGRA Subtask 2**: Reading Comprehension 1 (P6/S1)	22.2%	21.4%	0.0%	0.0%
S3	**SeGRA Subtask 3**: Reading Comprehension 2 (S3/S4)	18.2%	36.1%	0.0%	0.0%
S4	**SeGRA Subtask 3**: Reading Comprehension 2 (S3/S4)	13.3%	9.1%	0.0%	0.0%

For Kinyarwanda literacy the expected skills for each grade level are shown in Table 42alongside the results per grade level. Kinyarwanda literacy levels were similar between the intervention and control group across grade levels. For all grade levels, most girls achieved the level of competency set out in the national curriculum in both groups.

Table 41. Kinyarwanda Literacy Grade Level Achievements in Context of National Curriculum

	Relevant Subtask	Proportion of Girls Established Learners		Proportion of Girls Proficient Learners	
		T	C	T	C
P4	**EGRA Subtask 1**: Letter Naming (P1)	43.1%	45.3%	42.2%	35.8%
	EGRA Subtask 2: Familiar Word (P2)	53.0%	55.8%	38.0%	28.4%
	EGRA Subtask 3: Invented Word (P2)	51.5%	53.2%	21.2%	14.9%
	EGRA Subtask 4: Oral Reading Fluency (P3/P4)	46.9%	53.7%	35.7%	27.4%
	EGRA Subtask 5: Reading Comprehension 1 (P4/P5)	41.7%	30.2%	42.7%	50.0%
P5	**EGRA Subtask 5**: Reading Comprehension 1 (P4/P5)	35.9%	23.7%	52.4%	58.1%

Also see:
http://reb.rw/fileadmin/competence_based_curriculum/syllabi/LANGUAGES/UPPER_PRIMARY_ENGLISH_CURRICULUM.pdf

P6	**EGRA Subtask 6**: Reading Comprehension 2 (P6/S1)	55.7%	62.8%	22.7%	11.7%
S1	**SeGRA Subtask 2:** Reading Comprehension 1 (P6/S1)	53.6%	57.1%	39.3%	25.7%
S2	**SeGRA Subtask 3**: Reading Comprehension 2 (S2/S3)	41.7%	50.0%	41.7%	42.9%
S3	**SeGRA Subtask 3**: Reading Comprehension 2 (S2/S3)	36.1%	45.5%	61.1%	48.5%
S4	**SeGRA Subtask 4**: Written Essay Task (S4-S6)	54.5%	40.0%	9.1%	6.7%

Numeracy levels by grade level and matched to expected competencies from the national curriculum are shown in Table 43. Girls in grades P4-S2 demonstrated a degree of mastery over expected competencies. As some tasks in EGMA subtask 7 are addressed in later grade levels, it is understandable that not all girls in P6 had mastered these skills. The same is true for girls in S2 and girls in S6, where expected skills are likely taught in subsequent grade levels, as demonstrated by the higher achievement of girls in these later grades. Overall, the intervention and control groups had comparable levels of proportions of girls in the two highest proficiency categories.

Table 42. Numeracy Grade Level Achievements in Context of National Curriculum

	Relevant Subtask	Proportion of Girls Established Learners		Proportion of Girls Proficient Learners	
		T	C	T	C
P4	**EGMA Subtask 1**: Number identification (P1)	37.9%	34.4%	57.3%	63.5%
	EGMA Subtask 2: Quantity Discrimination (P1/P2)	36.9%	40.6%	50.5%	53.1%
	EGMA Subtask 3: Missing Numbers (P3/P4)	46.1%	43.8%	7.8%	11.5%
	EGMA Subtask 4: Word Problems (P3/P4)	27.2%	27.1%	36.9%	52.1%
	EGMA Subtasks 5A and 5B: Addition and Subtraction (P2/P3)	50.5%	43.8%	34.0%	39.6%
P5	**EGMA Subtask 6A and 6B**: Multiplication and Division (P4/P5)	47.1%	43.8%	5.9%	4.2%
	EGMA Subtask 6A and 6B: Multiplication and Division (P4/P5)	52.4%	62.4%	4.9%	11.8%
P6	**EGMA Subtask 7**: Longer Multiplications of integer and fractions, divisions, and order of operations. (P6-S3)	33.0%	34.0%	4.1%	0.0%
S1	**SeGMA Subtask 1**: Longer Multiplications of integer and fractions, divisions, and order of operations. (P6-S3)	35.7%	28.6%	2.9%	3.6%
S2	**SeGMA Subtask 1**: Longer Multiplications of integer and fractions, divisions, and order of operations. (P6-S3)	38.9%	46.4%	0.0%	0.0%
S3	**SeGMA Subtask 1**: Longer Multiplications of integer and fractions, divisions, and order of operations. (P6-S3)	63.9%	42.4%	9.1%	13.9%
S4	**SeGMA Subtask 2**: Fraction addition, area and volume problems, equations with unknowns, simultaneous equations. (S4-S6)	9.1%	20.0%	6.7%	0.0%

4.2 Subgroup analysis of the Learning Outcome

To better understand differences in learning outcomes between various subgroups of the intervention's target population, aggregate scores for these subgroups compared to the wider population are reported in Table 44. In the treatment group, where the subgroup performed lower than the wider population, a t-test was run to assess the extent to which these differences are statistically significant. If results were found to be statistically significant, a linear regression was run using sub-group status as a predictor of learning score. In these cases, results are discussed below the table.

Table 43. Learning scores across key subgroups

Characteristic		Average English Literacy Score		Average Kinyarwanda Literacy Score		Average Numeracy Score	
		T	C	T	C	T	C
All girls							
Cognitive Impairment	No	35.13%	34.15%	69.77%	67.99%	53.64%	54.50%
	Yes	51.77%	37.48%	76.50%	72.36%	69.17%	61.43%
Visual Impairment	No	34.64%	34.24%	69.54%	68.13%	53.85%	54.68%
	Yes	67.21%	15.00%	82.57%	57.94%	53.98%	43.02%
Hearing Impairment	No	35.26%	34.11%	69.87%	68.17%	53.71%	54.58%
	Yes	50.50%	41.25%	66.17%	60.00%	83.57%	55.26%
Mobility Impairment	No	35.16%	34.04%	69.81%	68.00%	53.61%	54.49%
	Yes	53.76%	48.00%	74.65%	72.72%	79.40%	63.48%
Self-care Impairment	No	35.19%	34.20%	69.83%	67.96%	53.63%	54.45%
	Yes	56.67%	33.00%	72.83%	80.49%	85.24%	74.37%
Communication Impairment	No	35.19%	34.24%	69.83%	68.01%	53.63%	54.56%
	Yes	56.67%	17.33%	72.83%	85.50%	85.24%	68.93%
Does not speak LOI	No	**37.56%***	35.18%	**72.31%****	69.13%	54.38%	54.80%
	Yes	**27.87%***	30.04%	**62.26%****	63.84%	52.29%	53.84%
Living in households facing severe hardship	No	36.83%	33.76%	**70.94%****	68.12%	53.78%	54.74%
	Yes	26.60%	35.92%	**63.90%****	67.77%	54.26%	53.97%
Living in households facing moderate hardship	No	36.21%	35.87%	**70.37%***	68.01%	54.79%	57.09%
	Yes	34.33%	32.44%	**69.33%***	68.09%	52.88%	52.19%
Living in female headed households	No	34.52%	34.04%	70.47%	69.32%	55.22%	54.21%
	Yes	36.13%	34.37%	69.20%	66.51%	52.33%	55.08%
Orphans	Non-Orphan	35.11%	33.93%	69.55%	67.80%	54.05%	54.80%
	Single	35.84%	36.21%	72.90%	70.58%	53.04%	50.60%
	Double	39.56%	48.17%	63.99%	74.92%	51.20%	79.29%

**** Statistically significant difference between subgroup and non-subgroup means with p <0.05; ** Statistically significant difference between subgroup and non-subgroup means with p<0.005***

A comparison of means between girls who speak the language of instruction and girls who don't, found that there is a statistically significant difference in English literacy mean scores ($p<0.05$), with girls who speak the LOI on average performing better. A linear regression found that whether a girl speaks the LOI was a statistically significant predictor of aggregate English literacy scores ($p<0.005$). The model was able to explain 3.1% of variance in aggregate literacy score ($r=0.031$), with not speaking the LOI accounting for a decrease of 9% on the literacy score. After finding a statistically significant difference in Kinyarwanda mean score between speakers and non-speakers ($p<0.005$), we conducted another regression on Kinyarwanda scores. This model was also statistically significant and was able to explain 6.1% of variance ($p<0.005$, $r=0.061$). Not speaking the LOI accounted for a decrease of 10% on the Kinyarwanda aggregate literacy score.

Qualitative evidence corroborated this finding, with several girls agreeing that:

> *"[As]many of the tutorials are in English … most of us are not able to understand."*[117]

These findings indicate that speaking the language of instruction, English for all targeted grade levels, results in better literacy scores. This makes intuitive sense as girls who speak the LOI are better able to access the curriculum and engage in learning opportunities in the classroom.

The review also found that girls living in households facing severe or moderate hardship scored less on Kinyarwanda literacy at statistically significant levels ($p<0.05$). A linear regression using a severe hardship dummy as a predictor was statistically significant ($p<0.005$) and explained 2.1% of variance in Kinyarwanda aggregate score. Living in a household facing severe hardship accounted for a 7% decrease in aggregate Kinyarwanda score. Similarly, a regression using a dummy for living in a household facing moderate degrees of

[117] FGD with Girls on Literacy and Numeracy 2

hardship was also significant (p<0.005). These findings indicate that girls who live in poorer households, face additional barriers to learning in school.

Several qualitative findings support the fact that it is difficult for households facing economic burdens to support their children to go to and learn in school. Although school is free, many out of school girls mentioned the need for school materials, which cost money:

"I didn't attend the school because there was no school uniform."[118]

"They continue to study because they can find school materials."[119]

"I left school when I finished primary school because I didn't find school materials."[120]

Beyond school materials, lack of financial security results in disparities in learning between girls who have materials and support and those who don't. As others, explained:

"They think that we dislike class, but it was the poverty in the family."

"It is because they come from rich families that they are bright in class."

Community stakeholders supported this view, with some community members claiming that lack of financial resources also resulted in discrimination in school:

"Lacking school materials causes shame." [121]

"Dirty clothes always due to lack of soap will lead to discrimination without intention from their peers. This will finally lead to drop out"[122]

To understand the possible effect of experiencing a disability or being at risk of experiencing a disability on learning outcomes, we conducted two regression tests for each learning outcome. The first used a dummy variable for disability status as the predictor, this includes all girls who experience some form or multiple disabilities (visual, hearing, cognitive, communication, self-care, mobility). The second model used a dummy variable which included all disabled girls as well as girls at risk of experiencing a disability based on the Washington Group questions. Results for the six regression models are shown in the table following.

Table 44. Disability Status & At-Risk Status as Predictors of Learning Outcomes

Independent Variable	Dependent Variable	Significance	R^2	Beta
Disability Status	Numeracy	Non. sig	0.00	2.24
Disability Status and At Risk		Non. sig	0.00	-.512
Disability Status	English Literacy	Non. sig	0.00	0.20
Disability Status and		Non. sig	0.00	2.411

[118]FGD with Out of School Girls

[119]ibid

[120]ibid

[121]Force Field Exercise with Community Stakeholders

[122]ibid

At Risk				
Disability Status	Kinyarwanda Literacy	Non. sig	0.00	0.57
Disability Status and At Risk		Non. sig	0.00	0.652

Results for all assessment types indicate that disability status or at-risk status are not statistically significant predictors of learning outcomes.

A similar analysis as done for girls' characteristics was conducted to understand the differences in learning outcomes between girls who experience different kinds of barriers to education. Aggregate scores for these girls compared to the wider population are reported in Table 46. In the intervention group, where the girls experiencing the given barrier performed lower than the wider population, a t-test was run to assess the extent to which these differences are statistically significant. If results were found to be statistically significant, a linear regression was run using barrier status as a predictor of learning scores.

Table 45. Learning scores across key-barriers

Barrier Experienced		Average English Literacy Score		Average Kinyarwanda Literacy Score		Average Numeracy Score	
		T	C	T	C	T	C
All girls							
Fairly or very unsafe to travel to schools in the area (according to parents)	No	35.21%	34.27%	69.91%	68.11%	53.83%	54.38%
	Yes	42.09%	29.34%	65.88%	64.99%	55.20%	65.82%
Girls who don't feel safe traveling to school	No	35.31%	33.91%	69.90%	67.89%	53.65%	54.80%
	Yes	34.74%	39.22%	68.33%	70.88%	61.55%	50.86%
Travel long distances (1 hour- 3 hours or more) to get to school	No	35.32%	33.45%	69.69%	67.66%	54.41%	55.50%
	Yes	34.92%	42.15%	72.35%	71.91%	44.86%	45.78%
Poor parental attitudes to girls' education (based on 8-item scale)	No	35.21%	34.38%	69.72%	68.22%	53.83%	55.02%
	Yes	38.05%	29.19%	74.10%	64.03%	54.65%	43.93%
Spend half a day or more on chores in the household or work (high chore/work burden)	No	33.90%	34.62%	67.85%	68.00%	54.36%	55.11%
	Yes	38.69%	33.15%	74.43%	68.19%	52.75%	53.35%
Girls who don't feel safe at school	No	35.14%	33.76%	69.84%	67.78%	53.95%	54.44%
	Yes	67.00%	49.83%	72.13%	78.84%	32.50%	61.04%
Girls who report insufficient learning materials at school	No	35.42%	33.95%	69.86%	67.84%	53.98%	54.54%
	Yes	28.67%	43.09%	69.50%	76.67%	47.32%	56.98%
Girls who report their not being enough seats for every student	No	35.17%	34.17%	69.75%	67.73%	53.83%	54.11%
	Yes	36.59%	34.30%	70.93%	70.30%	54.04%	58.20%
Girls who report teachers punishing students physically for getting something wrong in a lesson	No	42.01%	34.11%	69.41%	65.70%	51.45%	52.78%
	Yes	32.92%	34.22%	70.01%	68.80%	54.76%	55.18%
Girls who don't feel their teachers welcome them in the classroom	No	35.43%	34.18%	69.95%	68.30%	53.54%	54.28%
	Yes	30.73%	34.30%	66.52%	64.11%	64.64%	59.71%
Girls who agree teacher is often absent from class	No	35.45%	34.23%	70.07%	68.80%	53.74%	55.03%
	Yes	34.01%	33.93%	68.12%	63.72%	54.75%	52.08%
Girls who agree teacher treats boys and girls differently	No	35.56%	34.06%	70.07%	68.08%	53.90%	54.54%
	Yes	24.00%	40.35%	60.05%	66.77%	51.43%	57.13%

**** Statistically significant difference between those who experience the barrier and others with p <0.05; ** Statistically significant difference between those who experience the barrier and others with p<0.005***

Although none of the barriers exhibited mean differences at statistically significant levels, qualitative evidence highlighted several barriers to learning faced by girls.

One of the most surprising quantitative findings, highlighted earlier in the report, was that a large proportion of girls (over two thirds) in both the intervention and control groups report that teachers punish students physically when they get something wrong in class. Aside from the effect this has on girls' psycho-social wellbeing, this can

result in learners being unwilling to try to answer questions and can inhibit their learning in school. Physical punishments were raised as a significant issue in qualitative sessions:

"If I could change something, I would change the teachers who beat the students when they are late to school."

"Teachers maltreat the students with simple faults or mistakes."

"If I could change something, I would change the physical punishments made by the teachers"

Punishments reportedly range from being hit with a ruler, to being forced to kneel for long periods of time on hard floors.

On distance to school, several girls raised concerns caused by long distances. They mentioned:

"We have the [safety] problems as we can meet with the gangsters when we return home at night."

"I go home too late and as consequences, I lack the time to do my homework and back school with unfinished homework."

On parental attitudes, several girls sited the importance of having parents and caregivers supportive of their education. One girl appreciated her parents' encouragement when it came to read. She stated:

"Our parents encourage us to read too after class hours at school because they want us to know how to read and for me to know and teach others. The reason for our parents is that they think that we may play a role in own life and we would be successful at the workplace."

Others appreciated that they could ask their parents for additional support when they came across something they didn't understand:

"After class, I can revise my lessons and ask my parents for help and support."

Some girls, however, felt they did not have the support of their parents and this led them to lower educational achievements. They stated:

"It is difficult for me because my parents don't consider the importance of learning."

"Parent's don't' always support their children to go to school because … [they] consider their children as stupid."

One girl raised the issue that some parents don't support girls specifically because they feel boys are more important. She summarized her view:

"Most of the time, it is based on gender. The parents choose the boys saying that the boy will not get pregnant. {Moderator: Why do parents choose the boy?} Because boys are considered more a part of the family."

These barriers may result in reduced learning outcomes for marginalized girls and should be considered by the intervention as it progresses with planned activities.

4.3 Transition Outcome

A transition may be appreciated as between-school movements (such as from grade to grade), within school progressions and the transition into employment of marginalised girls aged 9-19[123]. Table 47below provides an overview of the expected transitions of girls enrolled in the programme between evaluation periods.

Table 46: Transition pathways

	Baseline point	Successful Transition	Unsuccessful Transition
Upper primary School	Enrolled in Grade 4, 5, 6	✓ In-school progression ✓ Moves into secondary school	× Drops out of school × Moves into work, but is below legal age of 16
Lower Secondary School	Enrolled in Grades S1, S2, S3	✓ In-school progression ✓ Enrols into or continues technical & vocational education & training (TVET[124]), Work Readiness (WR), or School-to-work-transition training (STWT), Age 14+[125] ✓ Work, internship, or employment, Age 16+ Moving from lower to upper secondary school will be counted as an in-school progression.	× Drops out of school × Moves into work, but is below legal age of 16 or is paid below minimum wage[126] × Is inactive (neither employed or unemployed)
Upper Secondary school	Enrolled in S4, S5, S6	✓ In-school progression ✓ Enrols into or continues technical & vocational education & training (TVET), Work Readiness (WR), or School-to-work-transition training (STWT), Age 14+[127] ✓ Work, internship, or employment, Age 16+ ✓ Enrols into University or Further Education Programmes	× Drops out of school × Moves into employment, but is paid below minimum wage × Is inactive (neither employed or unemployed)
Out of school (age 11-19)	Dropped out	✓ Re-enrol in appropriate grade level in basic education Age 9-19 ✓ Enrols into or continues technical & vocational education & training (TVET), Work Readiness (WR), or School-to-work-transition training (STWT), Age 14+[128] ✓ Work, internship, or employment, Age 16+	× Remains out of school or paid below minimum wage × Is inactive (neither employed or unemployed)

[123] GEC-T MEL Guidance Part 2 p.p. 44-45.

[124]The Technical, Vocational Education and Training (TVET) is composed of Vocational Training Centres, Technical Secondary Schools, and Polytechnics (awarding Diploma and Advanced Diploma).

[125] The Law of 1999 containing the Labour Code provides that children under the age of 16 may in no case work in an enterprise, even as apprentices.

[126] Baseline benchmarks do not distinguish between paid or unpaid work as internship schemes will be in most part be unpaid as they are focused on skills acquisition. Future studies will consider different types of "work" pathways.

[127] Ibid, 11.

[128] Ibid, 11.

	Baseline point	Successful Transition	Unsuccessful Transition
Benchmarking School-to-Work transitions (HHS Special Set of Questions)	Work, internship, or employment	✓ Enrols into or continues technical & vocational education & training (TVET), Work Readiness (WR), or School-to-work-transition training (STWT), Age 14+[129] to further professional development ✓ Continues Work, internship, or employment, Age 16+	× Becomes inactive or unemployed × Drops-out TVET training before completion
	TVET or Other Professional Training	✓ Work, internship, or employment, Age 16+	× Stays or Becomes inactive or unemployed × Drops-out TVET training before completion
	University	✓ Continues University ✓ Enrols into or continues technical & vocational education & training (TVET), Work Readiness (WR), or School-to-work-transition training (STWT), Age 16+[130] ✓ Work, internship, or employment, Age 16+	× Drops-out from University × Becomes unemployed or inactive
	Inactive (out-of-school)	✓ Returns to school ✓ Enrols into or continues technical & vocational education & training (TVET), Work Readiness (WR), or School-to-work-transition training (STWT), Age 14+[131] ✓ Work, internship, or employment, Age 16+	× Drops-out from school × Becomes inactive or unemployed × Drops-out TVET training before completion

In terms of **between- and within- school transitions**, the prevalence of out-of-school girls in Nyaruguru's was higher in primary school and lower in secondary school when compared to regional and national averages[132]. See table 48below.

In terms of gender differences, equal rates of out-of-school children exist between males and females for the Central Province and Rwanda. However, in Nyaruguru, more boys are out-of-school than girls in primary school, a trend that is reversed in secondary school where the rate of out-of-school girls in higher than boys.

This suggests that girls face additional barriers when progressing onto- and staying in secondary school and that these barriers are particularly strong in Nyaruguru.

Table 47 Enrolment Rates for Primary and Secondary school-age children for Nyaruguru, the Southern Province and Rwanda (Males and Females)[133]

	Currently Attending School (%)	No longer attending (%)	Never Attended (%)	Total out-of-school (%)[134]

[129] Op cit., 11.

[130] Ibid, 11.

[131] Ibid, 11.

[132] NISR (2012) RPHC4 District Profile, Nyaruguru. *Rwanda 4th Population and Housing Census*

[133] Ibid NISR (2012)

	M	F	M	F	M	F	M	F
Primary School Age (7-12)								
Rwanda	91.8	93.2	1	0.8	7.2	6	**8.2**	**6.8**
Southern Province	91.1	93	1.3	0.9	7.6	6.1	**8.9**	**7**
Nyaruguru District	88	90.3	0.9	0.6	11.2	9.1	**12.1**	**9.7**
Secondary School Age (13-18 years)								
Rwanda	74.4	74.5	20.7	21.4	5	4.1	**25.7**	**25.5**
Southern Province	75.8	77.9	19.7	18.9	4.5	3.2	**24.2**	**22.1**
Nyaruguru District	88	80.5	0.9	15.7	11.2	3.9	**12.1**	**19.6**

Since 2012, significant progress has been achieved in enrolment. By the endline of the GEC 1 evaluation in 2016, the enrolment rate for girls in project schools was 99.2% and of 96.7% for non-intervention schools[135].

In 2016, there were 45 tertiary education institutions of which 10 are public and 35 are private. The gender gap is the widest in public universities, whose student body was 70.0% of male. In private institutions, 51.8% of students were female[136].

Generally, enrolment into tertiary education has increased in Rwanda, though this trend only pertains to private institutions. In public universities, gross enrolment rates of males and females have decreased considerably in recent years[137].

As of 2012, 61.5% of the population aged 14-35 years had completed primary school, 18.7% completed secondary school, and 1.4% completed University[138]. Of the population 3 years and above in Nyaruguru, 56.9% of males and 51.6% of females completed primary school, 8.3% of males and 7.6% of females completed secondary school, and 0.9% of males and 0.4% of females finished university[139].

In terms of **school-to-work transitions**, currently 16.8% of Rwandan girls aged 15-17 years are employed compared with 20.8% of boys. In Nyaruguru 13.8% of girls aged 15-17 are employed compared to 13.1% of males.

The unemployment rate (%) among the active population aged 16 years and above in Nyaruguru is 3.4% for women and 2.7% for males. For females, this is slightly higher than the regional and national averages for both sexes (3.1% for the Southern Province and 2.6 for the entire Rwanda)[140].

However, Nyaruguru has almost double the national rates for inactive persons. In Nyaruguru, 46.8% of the resident population aged 14-35 self-labels as "inactive" (i.e. neither employed or unemployed), compared to 51.1% who are employed and 1.9% who mentioned were unemployed. This is much higher than the national average of inactive persons, which are 19.4% females and 17.2% for males for Rwanda[141][142].

Of the currently employed population aged 14-35 in Nyaruguru district (both sexes), 62.6% are self-employed, 17.6% are contributing family members, 14.8% are formal employees, and 0.4% are members of cooperatives[143].

---

[134]Total out-of-school (%) = No longer attending % + Never Attended %

[135] Navarrete, A. & Omarshah (2017) GEC Endline Evaluation Report for the Rwandan Education Advancement Programme [available upon request]

[136] MINEDUC (2016) 2016 Education Statistical Yearbook (p.54). Available online at: http://mineduc.gov.rw/fileadmin/user_upload/pdf_files/2016_Education_Statistical_Yearbook.pdf

[137] Ibid., 23, p.55

[138] Ibid. NISR (2012)

[139] Ibid. NISR (2012)

[140] NISR (2012) RPHC4 District Profile, Nyaruguru. *Rwanda 4th Population and Housing Census*

[141] Ibid, XX RPHC4, 2012

[142] Small differences exist between males and females in this regard (46.1% of females and 47.5% of males are inactive in Nyaruguru).

[143] Ibid, XX RPHC4, 2012

Given the small amount of formal employment opportunities, the acquisition of key life skills would seem as an appropriate mechanism to overcome barriers to learning and successfully transitioning through life.

While in Rwanda, the trend of student enrolment has increased until 2014, the number of students enrolling into TVET courses and vocational training colleges (VTCs) has gradually diminished overtime[144]. Moreover, 58.2% of TVET students and 58.9% of VTCs are male, which shows a gender gap in the demand for TVET courses worth exploring further[145].

4.3.1 Benchmarking

The table below presents the age (or age group), transition pathways, size and transition rate per age group for the benchmark sample.

To calculate transition benchmarks, we will rely on primary individual-level data from non-intervention areas gathered at baseline[146]. As such, our benchmark and control group are the same. Caregivers were asked what the girl was doing in 2016 and in 2017 and, if she had been in school, what was the girls' grade level in 2016 and 2017. Every case was then classified according to successful and unsuccessful transition types as described in Table 49.

To calculate school-to-work benchmarks, we asked caregivers during the HHS to list all girls of appropriate age (9-19) and up to three years higher (20-21) living in the same households. For each of those girls they mentioned, we then asked the parents (1) the girls' age; (2) what was the girl doing last year in November 2016 and (3) what the girl was doing this year. We have therefore gathered transition data for all girls living with tracked girls in the households. Data for 931 treatment and 1006 control girls aged 9-21 was gathered. For benchmarks indicators, only control data was used.

Results are shown in Table 49.

[144] Ibid, 23, P.45

[145] Ibid, XX RPHC4

[146] [TBD] We may also recalculate these to be instead drawn from a subsample of 150 as discussed during the inception phase. Given the rigour of the cluster analysis, we believe non-intervention clusters are comparable and thus a higher sample size would yield more reliable estimates.

Table 48: Benchmarking for the Transition Outcome (Benchmark group)

Ages		Girls in an In-school Transition pathway who were Successful or Unsuccessful			Girls in a Primary to Secondary School Transition pathway who were Successful or Unsuccessful			Out-of-school girls who Re-Enrolled in School			Out-of-school girls Transitioning into TVET			Out-of-school girls Transitioning into Employment			Totals		
		Successful	Total	% Successful	Successful	Total	% Successful	Successful	Total	% Successful	Successful	Total	% Successful	Successful	Total	% Successful	Successful	Total	Successful
		n	n	%	n	n	%	n	n	%	n	n	%	n	n	%	n	n	%
Girl's Age	9	3	4	75.0													3	4	75.0
	10	13	14	92.9													13	14	92.9
	11	34	38	89.5				1	1	100.0							35	39	89.7
	12	45	52	86.5	0	1	0.0	0	1	0.0							45	54	83.3
	13	50	60	83.3	2	6	33.3	1	2	50.0							53	68	77.9
	14	40	51	78.4	6	11	54.5	2	4	50.0							48	66	72.7
	15	35	35	100	10	12	83.3	1	4	25.0							46	51	90.2
	16	20	24	83.3	6	6	100	0	6	0.0	0	7	0.0	2	9	22.2	28	52	53.8
	17	32	34	94.1	4	4	100	1	9	11.1	0	9	0.0	4	12	33.3	41	68	60.3
	18	12	14	85.7	2	3	66.7	2	12	16.7	1	9	11.1	2	10	20.0	19	48	39.6
	19	10	12	83.3	2	2	100				0	10	0.0	5	13	38.5	17	37	45.9
	20	13	14	92.9							0	14	0.0	2	15	13.3	15	43	34.9
	21	14	15	93.3							0	10	0.0	4	12	33.3	18	37	48.6
	Total	**321**	**367**	87.5	32	45	71.1	8	39	20.5	1	59	1.7	19	71	26.8	381	581	**65.6**

Results show that overall transition targets decrease as girls grow older. The average successful transition rate when all pathways are considered is 65.6%. Girls aged 9-11, and girls aged 15 have considerably higher success rates than other age groups. Girls from 20-21 have the lowest success rates of all groups, suggesting that girls that are currently aged 17-19 are a special risk group to consider.

In terms of school transitions, the average transition rate is 79%. Fewer girls aged 9 and 14 progress within school than girls in other age groups.

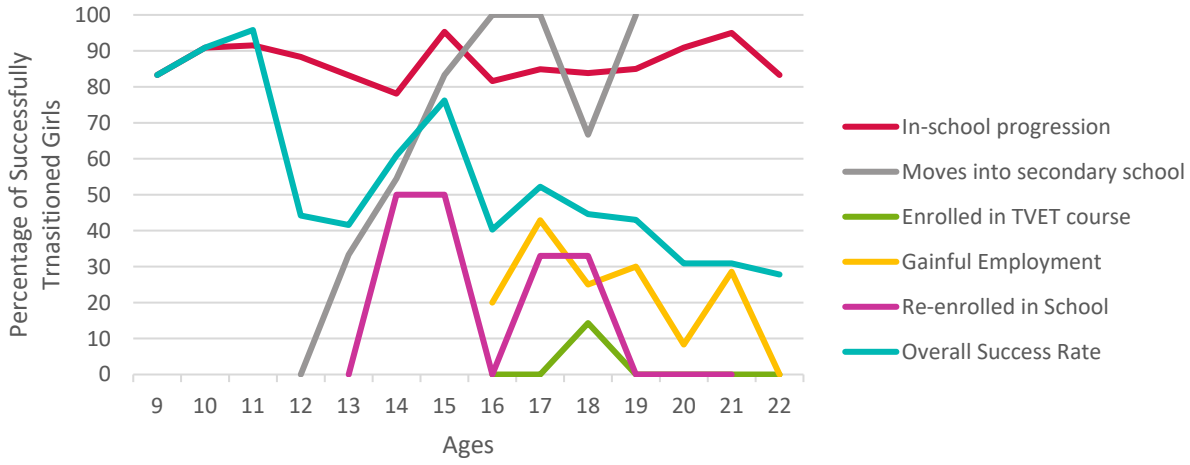
As girls grow older, they are more likely to transition into secondary school. On average, 71% of girls in P6 transitioned into secondary school, beginning to do so as early as 13 years old and as late as 19 years old. Girls aged 15-17, and 19 are the most successful at reaching secondary school.

TVET and other forms of professional training are rare transition pathways chosen by girls. Of all girls who were inactive in 2016, only 1.7% successfully transitioned into TVET. Of those that did, they were all 18 years old. The average transition rate into employment is 27% with 19 years old and 21 years old being experiencing the highest transition among all groups at a 39% and 33% rate respectively.

More 17 and 20 years old girls dropped out from school than other ages, supporting the hypothesis that older girls feel discouraged to continue in school when compared to the younger girls. Currently 2% of girls of out-of-school girls surveyed had dropped out the previous year. The average enrolment rate is 21%.

These transition patterns can be visually appreciated in the figure below:

Figure 7. Transition Pathways and Age Progression (Benchmark Group)



The table below shows the transition rates for the intervention group. For school-based transitions, the table shows data gathered for the intervention tracked-cohort. For work-based transitions, the table shows data gathered through the HHS in intervention clusters.

Figure 8 Baseline Transition Rates for the Intervention Group

Ages	Girls in an In-school Transition pathway who were Successful or Unsuccessful			Girls in a Primary to Secondary School Transition pathway who were Successful or Unsuccessful			Out-of-school girls who Re-Enrolled in School			Out-of-school girls Transitioning into TVET			Out-of-school girls Transitioning into Employment			Totals		
	Successful	Total	% Successful	Successful	Total	% Successful	Successful	Total	% Successful	Successful	Total	% Successful	Successful	Total	% Successful	Successful	Total	Successful
	n	n	%	n	n	%	n	n	%	n	n	%	n	n	%	n	n	%
9	2	2	100													2	2	100
10	17	19	89.5													17	19	89.5
11	32	34	94.1				1	2	50.0							33	36	91.7
12	53	59	89.8	0	2	0.0	1	1	100							54	62	87.1
13	44	53	83.0	4	5	80.0										48	58	82.8
14	37	47	78.7	5	8	62.5	1	3	33.3							43	58	74.1
15	48	52	92.3	7	9	77.8	0	3	0.0							55	64	85.9
16	20	25	80.0	4	4	100	0	5	0.0	0	3	0.0	1	3	33.3	25	40	62.5
17	30	39	76.9	4	5	80.0	1	10	10.0	0	10	0.0	2	11	18.2	37	75	49.3
18	19	23	82.6	1	1	100	0	7	0.0	1	7	14.3	1	7	14.3	22	45	48.9
19	7	8	87.5	0	0					0	7	0.0	3	9	33.3	10	24	41.7
20	7	8	87.5	0	0					0	27	0.0	4	30	13.3	11	65	16.9
21	5	5	100	0	0					2	19	10.5	3	19	15.8	10	43	23.3
Total	321	374	85.8	25	34	73.5	4	31	12.9	3	73	4.1	14	79	17.7	367	591	62.1

Girl's Age

As with the benchmark group, overall transition targets decrease as girls grow older. The average successful transition rate when all pathways are considered is 62%, 3.6% lower than control. Girls aged 9-15 have considerably higher success rates than other age groups. Transition rates begin to fall for girls aged 16-21, mostly due to the low work-based transitions, which are accounted for girls older than 16 years of age.

In terms of school transitions, the average transition rate is 78%, which is 1% lower than the control group. Fewer girls aged 14 and 17 progress within school than girls in other age groups.

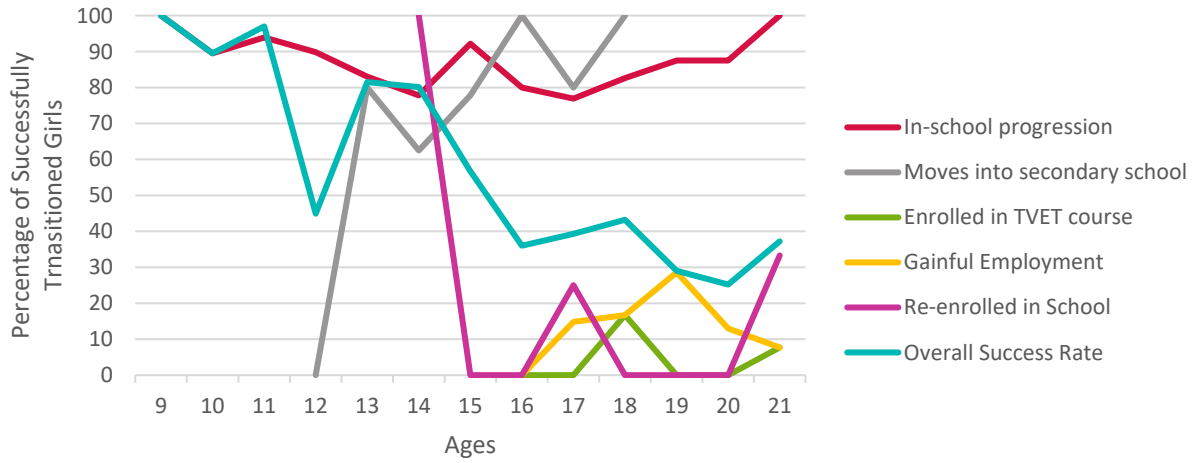
As girls grow older, they are more likely to transition into secondary school. On average, 74% of girls in P6 transitioned into secondary school, beginning to do so as early as 13 years old and as late as 21 years old. Only girls who are 14 years old have success rates lower than average.

According to qualitative sessions, this is largely the result of economic hardship and other personal motivations. For example, as girls get older, they are motivated to seek their own incomes and prefer to move onto vocational training. Many also mentioned that the school curriculum is irrelevant when it comes to their expectations about life, as more practical or vocational skills are preferred over those obtained in school.

However, TVET and other forms of professional training are currently rare transition pathways chosen by girls. Of all girls who were inactive in 2016, only 4.1% successfully transitioned into TVET, which is double the rate than control areas. Of those that did, they were 18 and 21 years old. The average transition rate into employment is 18% with 19 years old being experiencing the highest transition among all groups. This is considerable lower than in control areas, where the average transition into employment is 27%.

As in the control sample, more 20-21 years old girls dropped out from school than other ages, supporting the hypothesis that older girls face additional barriers to transition. Currently 2.1% of girls of out-of-school girls surveyed had dropped out the previous year. The average re-enrolment rate is 13% for school aged girls (9-18 years old).

Figure 9. Transition Rates by Age Progression (Intervention Group)



4.4 Sub-group analysis of the transition outcome

To understand if different barriers affect transition outcomes, we categorized all cases according to whether they successfully transitioned or not.

Findings indicate that girls that live without both parents find it more difficult to transition, as well as girls who do not speak the language of instruction, experience hardship, or whose parents have negative parental values towards girls' education. According to qualitative sessions, while school is free of fees, the cost of school materials and uniforms discourage those families in the poorest income strata to send their children to school. Some of these children, in turn, face discrimination from their peers due to their poverty, which demotivates them from attending school.

The largest difference in transition rates was seen for girls who have been pregnant, 58% of which were able to transition in secondary school. This resonates with the results from the Force Field analysis during qualitative exercises, where pregnancy was found to be a determinant factor to whether a girl is able or not to go back to

school. Likewise, mothers transition less than those who are not as "it requires a lot of things to accommodate the new born"[147].

In this regard, gender often places additional barriers to transitions. Parents often rely on girls to do house chores, leading to poor performance, and the belief that underperformers best belong outside the school. While in schools, girls often face threats of physical or sexual abuse from teachers.

In terms of school-related barriers, teachers' absenteeism and insufficient materials are important barriers to transition. Schools also fail to accommodate for children with disabilities, which face stigma and discrimination due to their impairment.

These findings are confirmed by qualitative sessions with stakeholders including girls. The table below includes the main categorical barriers girls drop-out from school or fail to transition according to multiple stakeholders.

Table 49 Barriers to Transition

Barrier	Stakeholder Views
Economic Hardship	"I left the school because we were poor in my family" "I left the school when I finished the primary school when I didn't find school materials" "I don't have any friend in class. Because they are poor in their families, so this automatically pushes them to leave the school to join the tea picking for money. Yeah, there are many youths engaged in tea picking." "I didn't attend the school because there was no school uniform" "The lack of food at my home can force to quit the school" "Losing both parents and one can also be root of school challenges to girls" "the number of children also play an important role from dropout, for example family with many students like from primary and secondary, if they don't have means to equip them, they opt to send at school those in secondary school, while those from primary, they choose to leave the school." "I dropped out of school because I could not pay for the school feeding".
Stigma towards poverty	"they send both children at school, but some children without school materials, so when the children don't have materials for school, their fellows laugh at them and this makes them drop out."
Unemployment	"The problem of unemployment is seriously knocking and demotivate girls' eagerness to attend school because they see some of educated person without job, and feel there is no importance to continue to go studying"
Negative Parental Attitudes	"Because the parents don't consider the importance of learning" "Because the parent used to consider their children stupid" "Illiterate parents families can be challenges for education, they discourage girls for education"
Little Parental support	"It is possible because there is a time that the family is living in misunderstanding, when the child get home from school and found none to care for her or him on how her or his study are going, no concern on the mark, score that the child is getting, when not going at school and none is asking why this all contribute to the behaviour which may cause a child to drop out of school."
Abuse	"some teachers most likely male teachers order the girls to spend the time with them, in the case the girls refused the girls will face consequences of having zero on her transcripts"
Pregnancy	"I can drop out school when I get pregnant"

[147] FGD with Parents

Barrier	Stakeholder Views
	"frequently it is because of pregnancy, so it is very complicated to attend school while you are breastfeeding"
Menstruation difficult to manage	"The poverty is the main that causes the drop out for girls, as they don't have the underwear clothes"
House Chores	"I miss the time to help my parents for home duties and lack the time to do my homework"
Lack of Teaching Quality	"Some teachers come in class and sit down busy with the phones until it rings for the next lessons" "some teachers maltreat students which render me to qualify them as careless teachers for their students" "The poor girls will separate with other students, teacher asking them the school materials always while they don't have will make them ashamed and don't come back in class next day."
Irrelevant curriculum	"I don't want to go back at school, but I want to join the TVET. Because the TVET are real things but writing, I cannot back school as it requires concentration and time consuming." "I would not go to school because It would take a long time to finish but I would go for vocation which may allow me finish earlier."
Poor school performance	"sometimes, students drop out school because of job searching to improve the life from their families while other drop pout because of weakness from class." "There is the problem that girls drop out and stop studying. The reason of stopping is that parents instruct them to quit because they are underscoring, incapable to learn and chose to take them out and send them for cultivation." "I dropped out from school because poverty and it was not my talent."
Lack of Motivation or Other Motivations	"I know someone who dropped out from school because they don't want to because he doesn't want to study in the nine years basic even if he did not pass the exam" "Desire to resemble like others who are actually getting salary, and this push them going to town to find their way out."
Stigma towards Disability	"Due to general body, the disability can be challenge, like when a girl is disabled, and their fellows' laugh or shout to the disabled girls with many informal names, this challenges the disabled students by discouragement or hate of the school."

During free listing exercises with girls, girls mentioned that classroom management practices, such as abusive forms of discipline discourage attendance to school: "the teachers who dismiss the students because of being late the whole day also prevent to students to succeed properly.".

Table 50Transition scores of key barriers

Barriers		Unsuccessful Transition		Successful Transition	
		n	%	n	%
Orphan Type	*Non-Orphan / death not mentioned*	132	17.3%	630	82.7%
	Single Orphan	19	19.0%	81	81.0%
	Double Orphan	2	18.2%	9	81.8%
Girl does not live with natural father or natural mother (not in household)	*Lives with either parent*	132	16.7%	658	83.3%
	Live without both parents	21	25.3%	62	74.7%
Does not speak LOI (English used P4 or P6 and up)	*Speaks LOI*	110	16.3%	564	83.7%
	Does not Speak LOI	43	21.6%	156	78.4%

Barriers		Unsuccessful Transition		Successful Transition	
		n	%	n	%
Spends half or the whole day doing chores	*Other*	101	16.4%	513	83.6%
	High Chore Burden	52	20.1%	207	79.9%
Head of Household has No Formal Schooling	*Other*	95	17.1%	459	82.9%
	No formal schooling	58	18.2%	261	81.8%
Experiences Hardship	*Moderate Hardship*	92	21.0%	347	79.0%
	Extreme Hardship	31	20.8%	118	79.2%
Pregnancy	*Never been pregnant*	146	17.1%	707	82.9%
	Been Pregnant	5	41.7%	7	58.3%
Child Marriage	*Not married or living as if married*	150	17.4%	712	82.6%
	Married or living as if married	0	0.0%	4	100.0%
Being a mother	*Not Mother*	144	17.4%	684	82.6%
	Mother	2	28.6%	5	71.4%
Primary or Secondary is at a 1-3-hour walk	*Less than 1hr walk*	143	18.0%	651	82.0%
	More than 1hr walk	10	12.7%	69	87.3%
School Safety	*Other*	149	17.4%	708	82.6%
	Fairly or Very Unsafe	4	25.0%	12	75.0%
Dummy Girls View: Insufficient Learning Materials	*Sufficient Materials*	148	17.4%	705	82.6%
	Insufficient Materials	5	25.0%	15	75.0%
Dummy Girls View: seats for every student	*Sufficient Seats*	145	18.5%	637	81.5%
	Insufficient Seats	8	8.8%	83	91.2%
Dummy Girls View: Use of areas to play and socialize	*.00*	142	18.4%	629	81.6%
	1.00	11	10.8%	91	89.2%
Teachers Punish Students Physically	*Other*	66	29.2%	160	70.8%
	Physical Punishment from Teacher	87	13.4%	560	86.6%
Agree teacher is absent from class often	*Other*	121	15.9%	641	84.1%
	Agree or Strongly Agree	32	28.8%	79	71.2%
Teacher treats girls and boys differently	*Other*	148	17.3%	709	82.7%
	Unfairly	5	31.3%	11	68.8%
Low teaching quality dummy (<3 on mean of 14 items)	*Other*	115	14.4%	684	85.6%
	Low Teaching Quality	7	26.9%	19	73.1%
Negative Parental Values Dummy	*Other*	145	17.2%	700	82.8%
	Negative Parental Values	8	28.6%	20	71.4%

When disability groups are compared, only persons with hearing impairments seem to transition at lower rates than their non-hearing disabled peers. This suggests that additional efforts must be taken to accommodate the needs of persons with hard or no hearing.

Table 51 Transition Rates by Disability Group

Impairment Type		Unsuccessful Transition		Successful Transition	
		n	%	n	%
Visual Impairment	Not Visually Impaired	152	17.7%	709	82.3%
	Visually Impaired	1	8.3%	11	91.7%
Hearing Impairment	Not Hearing Impaired	149	17.2%	716	82.8%
	Hearing Impaired	4	50.0%	4	50.0%

Mobility Impairment	No Mobility Impairment	151	17.5%	713	82.5%
	Mobility Impairment	2	22.2%	7	77.8%
Cognitive Impairment	No Cognitive Impairment	152	17.6%	710	82.4%
	Cognitive Impairment	1	9.1%	10	90.9%
Self-care Impairment	No self-care impairment	152	17.5%	715	82.5%
	Self-care Impairment	1	16.7%	5	83.3%
Communication Impairment	No Communication Impairment	153	17.6%	716	82.4%
	Communication Impairment	0	0.0%	4	100.0%

4.5 Cohort tracking and target setting for the transition outcome

While in those schools learning can be tracked from baseline-to-endline for a sub-set of girls, the project took caution to select only schools where all transition pathways can be observed (i.e. in schools that offer both primary and secondary school levels) and, when primary schools were selected, only girls in P4 will be sampled at baseline and followed through in the years (P5 at midline and P6 at endline)[148].

Transition will be observed for all tracked girls from P4 to S5. To track the cohort, contact information has been gathered and stored into the cohort tracking dataset to be used during future evaluation points.

A potential challenge to future evaluation periods is that girls transition into different schools depending on their school performance. For example, top performers in Rwanda are usually selected to attend the best secondary schools and offer room and board to students. For future evaluation studies, we expect to record the names of schools girls have transitioned to determine whether the girl might have successfully transitioned even when she moved outside the sampling area.

Targets for transitions are set automatically by the outcome spreadsheet and can be seen below:

Table 52: Target setting

	Baseline	Midline	Endline
Target generated by the outcome spreadsheet	**8%**	**8%**	**8%**

4.6 Sustainability Outcome

The project aims to ensure its achievements are sustained after the conclusion of REAP2. To do so, it has selected several indicators to be measured at each evaluation point. Sustainability will be measured at three levels (school, community, and system) against a Sustainability Scorecard.

At the point of the Baseline, the project had not begun most of its activities. Therefore, although the scorecard has been completed, the Baseline Study has focused instead on discussing sustainability achievements to date only in relevant areas at selected levels.

The scorecard is presented in Table 54.

Table 53. Sustainability Scorecard

[148]To avoid losing P5 and P6 participants at endline in primary schools that do not have a secondary school (given that they girls could transfer to secondary schools outside the project area) only girls in P4 will be sampled for learning in these schools to avoid losing participants due to re-allocations outside the project area at endline. The evaluation will therefore predominantly select schools in clusters offering grade levels up to Junior Secondary (Primary +9BYE) and Senior Secondary (Primary+12BYE) to draw participants from.

	Community	School	System
Indicator 1	Percentage of community-managed volunteer-led 1) after school Community Study Groups (CSG) meeting regularly	20% of school budget covered by the REAP school businesses	0 incidences of government commitment to take up a project approach
	Score: N/A	**Score**: 2 - Emerging	**Score**: N/A
Indicator 2	65% Mother Daughter Clubs meeting regularly	Percentage increase in teacher demonstrated capacity for 1) improved teaching methods and 2) English language competency;	2 policy makers in key organizations stating (a) understanding of the GEC / REAP (b) commitment for replication of at least one best practice of REAP2
	Score: 2 - Emerging	**Score**: N/A	**Score**: 2 - Emerging
Baseline Sustainability Score (0-4)	**Score**: 2 - Emerging	**Score**: 2 - Emerging	**Score**: 2 - Emerging
Overall Sustainability Score (0-4, average of the three level scores)		**2 - Emerging**	

4.6.1 Community-level Sustainability

At the community-level, the project aims to ensure both CSGs and MDCs meet regularly. The project argues that his is a reasonable indicator of interest and commitment to the REAP aims and objectives. At the baseline, this indicator was difficult to assess, as CSGs had not begun project activities. However, MDCs operating in target communities and inherited from REAP1 have continued to meet regularly, indicating a strong commitment to supporting the most marginalized of girls to enrol and attend school. MDCs have continued to participate in community days to select marginalized girls to receive IGA funds. IGAs have also continued with support of the project.

Within the community, a review of parental attitudes indicates that they are mostly positive and in favour of girls' education with only 2.9% of parents in the intervention group exhibiting poor attitude towards girls' education on a mean score comprised of 8 attitudinal items. Several parents highlighted that they had changed their perceptions towards the importance of girls' education. In one such case a parent summarized a common sentiment:

"Before we would not hear about the education of girls but now it has become a big topic and they are important for our futures"[149]

4.6.2 School-level Sustainability

At the school-level, several schools are still benefiting from school businesses with an average of 20% of the school budget across project schools being sustained by profits from the business. Although some school businesses are not yet profitable, the project has continued to provide technical and mentorship support to ensure these activities remain sustainable.

Headteachers report being made more aware of the needs of girls in their communities after exposure to the project. One head teacher summarized how the process for managing drop-out has changed:

"What the school does if there is a girl who dropped out, the first thing is to look on whether the child is still in the village and whether she has gone. After this we

[149]FGD with Parents and Caregivers on Parental Attitudes

look deeply into the cause of dropping out. Then we advise accordingly… Sometimes, the cause is from the child herself and we speak to her directly. Other times we speak to the parents."[150]

4.6.3 System-level Sustainability

At the system-level, the project has developed a strong relationship with several district officials, including the District Education Officer and the District Gender Officer. The DEO summarized how things have changed since the project began:

"Before, in the primary or in the secondary schools, the numbers [of girls] were few…But today, the number of girls enrolled is greater than for the boys even if the difference is slightly small."[151]

He furthered argued that this was due to:

"HPA, other NGOs and parent's commitment to send their children to school. This has changed drastically."[152]

Although there has been no commitment on the part of government or other stakeholders to replicate project activities, REAP has been referenced several times on radio and local TV stations as an innovative approach to support girls' education. According to project data, REAP was mentioned 19 times on national television (Rwanda TV), at the start of the project.

REAP2 will also aim to achieve sustainability through influencing policy makers to commit to continuation and replication of the project approaches. As part of Rwanda's decentralisation effort, all districts including Nyaruguru must sign a "Performance Contract" at the beginning of the year which commits them to what they will prioritise in the coming year and they are meant to use their Capitation Grants (funding from Central Government) to reach these goals. Provincial and Central Governments then hold Districts accountable to these performance contracts, as do citizens.

Through advocacy activities the project management is making sure that at the end of the project there will be a very high commitment from part of the government and local authorities to replicate project activities and good practices. The government manifested a strong support to the project. Furthermore, SBs have been managed by the schools, with the involvement of PTCs as well. The project is currently in the process of integrating school business into the district management and by the end of the project, gained their commitment to monitoring the process and obtain their support to supervise school businesses at the project's conclusion.

At the system-level, the scorecard has been set at 2, indicating that there is evidence of improved capacity of local officials to support girls' education through existing functions. The DEO and DGO both provided clear examples of how they were targeting girls' enrolment and supporting schools to better engage with at risk girls.

4.6.4 Summary Actions to Ensure Sustainability

The following table summarize the project strategies to ensure sustainability at each level. The table was completed by members of the implementing staff of REAP2.

Table 54 Actions to Promote Sustainability at Each Level

Changes	Community	School	System
Change: what change should happen by the	a) SB and MDC will fund their own activities and provide	a) Improvement in financial and management skills for	a) Increased commitment from part of the government

[150] In-depth Interview with Head Teacher

[151] In-depth interview with DEO

[152] ibid

Changes	Community	School	System
end of the implementation period	profit to cover girls'-school related costs after the project ends. b) Positive parental attitude towards girls' education. c) Decrease of household chores that currently prevent girls from attending CSGs and remedial classes. d) The after-school reading clubs will be self-sustained through community management. e) Saving groups will continue to exist and will be transformed into cooperatives. f) Different services targeting the most vulnerable girls at the community level will replace those that are being provided by REAP. g) MDCs will get a status of cooperatives, with formal statutes, and they will be registered under that Rwanda Cooperative Agency. h) CHWs will be financially assisted by MDCs to maintain sexual health corners.	PTAs to be able to manage school businesses autonomously. b) PTA / SIP tracking of attendance will be sustained through local ownership and SEO/ DEO continued oversight. c) Alumni networks will fund scholarships. d) Teachers will continue mentoring the after school remedial learning classes for girls who are behind in schools or those who have dropped out, including non-readers. e) SIPs will be developed and integrated into the district plan to allow its implementation in all Nyaruguru district schools. f) Teachers will continue using the child centred gender inclusive, responsive pedagogy g) PFM frameworks and PTA's SIP will ensure that quality teaching will be continued and monitored. DEO & SEO will monitor this effort.	and local authorities to replicate project activities and good practices. b) By the end of the project, the management of those school business will be supervised by the district. c) Project best practices are scaled up by the government or by other stakeholders by the end of the project.
Activities: What activities are aimed at this change?	a) Follow up, mentorship to school businesses and MDC to become sustainable / self-managing. b) Community after school reading clubs where community tutors with support from tutor, organise reading / numeracy games and child-centred books are shared between students. c) IGA support and seed money for tutors. d) Start up savings groups for girls. e) Establishment of youth friendly sexual health service corners.	a) School leadership training. b) Establish PFM frameworks in schools with mandatory budget lines for school costs of most vulnerable girls. c) Development of School improvement plans (SIP). d) SIP audits conducted by each PTC with supervision by the SEOs. e) School budget reviews. f) SIP reports collated / shared with DEO. g) Teacher training in child-centred and gender responsive pedagogy. h) Teacher training in literacy	a) Training and involvement of Nyaruguru local authority and DEO to endorse and monitor SIP. b) Advocate for SIP to be integrated into the Nyaruguru plan. c) Advocate for replication of project best practices. d) Quarterly newsletter publication.

Changes	Community	School	System
	f) Training of Community Health Workers on family planning, HIV/STIs case management. g) Referrals to other existing services targeting most vulnerable girls. h) After school remedial learning / tutorial classes for girls who are behind in school or have dropped out, including non-readers.	and numeracy instruction. i) Teacher English discussion groups. j) Extra English, Kinyarwanda and maths readers topping up inadequate DFID/MoE-funded readers; and locally produced child friendly books. k) Community Health Workers trained on family planning, HIV/STIs case management. l) Set up alumni network for scholarships. m) Roll out training to whole PTCs across 28 schools.	
Stakeholders: Who are the relevant stakeholders?	a) Girls b) Parents c) Community members d) Potential employers e) Women's associations f) MDCs and PTAs g) Local leaders h) CSG i) Alumni networks j) After-school Community Study Clubs k) Community volunteer tutors	a) The Government and the District Authorities b) Ministry of Education and Rwanda Education Board c) Workforce Development Authority d) The key education partners Nyaruguru e) Other local and international NGO partners f) Associations for children rights g) Churches operating in Nyaruguru (most of schools are owned by churches) h) Women's associations i) MDCs and PTAs j) Local leaders k) SEOs and DEOs l) Head teachers and teachers	a) The Government and the District Authorities b) Ministry of Education and Rwanda Education Board c) Workforce Development Authority d) Associations for children rights e) Churches operating in Nyaruguru (most of schools are owned by churches) f) Women's associations g) The key education partners in Nyaruguru h) Other local and international NGO partners i) Associations for children rights j) Churches operating in Nyaruguru (most of schools are owned by churches) k) TVET institutions
Factors: what factors are hindering or helping achieve changes? Think of people, systems, social norms etc.	Hindering: a) Economic hardship. b) Parents who have negative parental values towards girls' education. c) Volunteer retention of the tutors can be difficult without incentives.	Hindering: a) Majority of the schools in intervention areas are behind in implementing competence-based curriculum in English. b) Little culture of speaking English in schools. c) SB cover school related	Hindering: a) Governments may not be responsive to advocacy. b) Lack of budgets to replicate all the project best practices nationally. c) Policies against physical punishment are not

Changes	Community	School	System
	d) Parents who put high chore requirements on their daughters. e) Girls' lack of awareness on TVET and its benefits. Helping: a) The commitment of parents to run school IGAs in their MDCs hoping to get some income. b) Community leadership and support for project activities. c) Inclusion of most marginalised girls into project activities. d) Community proactively supporting girls' education. e) Girls' self-esteem and confidence. f) Teenage pregnancy. g) Internships take a lot of work to coordinate. But some businesses may continue to offer them in a more informal way after the project ends.	costs, but not fully. Economic barriers could still affect attendance to some degree after the project ends if SB profit cannot cover an adequate portion of school budgets. d) Some teachers might be transferred to other schools outside of the project implementation areas. e) SB, MDC and alumni networks could face issues of mismanagement of funds etc. after the project ends. f) Teachers' absenteeism and insufficient materials are important barriers to transition. g) Lack of seats in school to accommodate all pupils. h) Physical punishment of pupils. Helping: a) A safe and girl-friendly school environment, ex. separate girls' and boys' toilets. b) Career aspirations and perception that there are good options for girls after school.	enforced. Helping: a) REB and MICEDUC are interested in SIP development because the existing one seems to be inadequate. b) District leadership.

Sustainability crosscuts across the project's other two outcomes Learning and Transition as well as most of REAP's activities and approaches, by working with sustainable school and community structures, by engaging PTA, communities and SEOs and DEOs in School Improvement Plans (SIP) as well as engaging policy makers to replicate REAP2 best practices in the longer term. Sustainable funding is one key component of this. By setting up sustainable finance-generating structures, systems and practices, REAP will ensure that not only the target students themselves will benefit from improved life chances, but also future generations of students in these schools which will have profit-generating SBs, MDCs and alumni-funded scholarships for years to come. Advocating to policy makers for commitment for replication of best practices is another key means securing sustainability.

The main change that the project would like to achieve is that the activities implemented and supported throughout the three years of implementation will become self-sustained after the end of the project. Like this the project will achieve real sustainability and it will have tangible impact on the chances of marginalised girls.

By the end of the project, 100% of the SBs will be profitable and these profits will be used to continue covering the school related costs of the most vulnerable girls for years to come. The MDCs will be fully self-sustaining by the end of the project, with the skills to accept and support new members and the financial sustainability of their matured IGA. REAP2 will support the community volunteer tutors for the community after-school Community Study Clubs with IGA support so that they will be incentivised for their role in a sustainable way. The project will provide them with IGA support and seed money, and by the end of the project 20% of the IGA will be generate

profit. The rest of these IGAs will start generating profit after the project. The teenage pregnancy prevention interventions will achieve sustainable behaviour change beyond the project life

The teenage pregnancy prevention interventions will achieve sustainable behaviour change beyond the project life. REAP2 will work with CHW and youth corners to offer family planning services, alongside behaviour change communication (radio, etc.) to create behaviour change among the target girls as well as boys in REAP2 catchment areas. The project will also create lasting behaviour / attitudinal change among communities and parents in terms of engaging collectively on girls' education. Parents and other community members will get involved in monitoring the quality of the education in their daughters' schools, and volunteering in the evenings to supervise Community Study Clubs and walking girls in small groups home from the club activities to ensure their safety. This participation will be sustained throughout the project life with minimal support from project staff, to ensure that it will continue sustainably after the project ends.

School level

Ensuring that activities and approaches are owned by school structures and communities is essential for the long-term sustainability of the project. Involving Nyaruguru Local Authority, Nyaruguru DEO, and the SEOs is also essential to ensure that government structures are overseeing these school / community led approaches, so that this can continue after the NGO partners leave. School Management Committees / boards and PTAs will have strong ownership and involvement in many of the project activities. The PTA with the whole school also run the SB, SIP, and graduation ceremony activities. Community structures also have a central role in organising, managing, supervising and supporting after school study groups, reader / book sharing schemes, feeding views into SIPs, MDC and engaging in alumni networks to fund girls' scholarships. Furthermore, alumni initiatives will be in place in the target schools to raise money for performance and need-based scholarships for the most marginalised to proceed to post-secondary education.

System level

REAP2 will also achieve sustainability through influencing policy makers to commit to continuation and replication of the project approaches. As part of Rwanda's decentralisation effort, all districts including Nyaruguru must sign a "Performance Contract" at the beginning of the year which commits them to what they will prioritise in the coming year and they are meant to use their Capitation Grants (funding from Central Government) to reach these goals. Provincial and Central governments then hold Districts accountable to these performance contracts, as do citizens.

Through advocacy activities the project management is making sure that at the end of the project there will be a very high commitment from part of the government and local authorities to replicate project activities and good practices. The government is very supportive to the project. Furthermore, SBs have been managed by the schools, with the involvement of PTCs as well. The project is currently in process of integrating school business into the district management and by the end of the project, the school businesses will be supervised by the district.

5. Key Intermediate Outcome Findings

5.1 Attendance

Selection of IO indicators, methodology for measuring them, and relevant project activities

Project activities aim to improve the attendance of girls in schools by targeting barriers which reduce girls' access and by making learning environments girl-friendly. The project argues that improved attendance will lead to both improved ability of girls to successfully transition, and improved learning outcomes.

The project is continuing to provide technical support and mentorship to school businesses and IGAs established in REAP1. School business generate income to invest in girl-friendly improvements and IGAs provide funding to support girls who can't afford school materials. FFG will also establish alumni networks in project schools to finance scholarships for girls in need. In addition to these activities, the project has set up youth friendly SRH

corners in target schools aimed at preventing barriers caused by low sexual and reproductive health including poor menstrual management, early marriage and teenage pregnancy.

To measure attendance changes, the external evaluation will rely on the measures shown in Table 56.

Table 55. Measuring Attendance

Quantitative Measures	Qualitative Measures
• **Attendance data collected at the individual level: Average attendance rates for a 1-month period (September 2017 was selected as there are no seasonal or other activities which would affect attendance)** • **Parents perceptions of extent to which girls attend or miss school (item included on household survey)**	• Perceptions of girls, parents, and other stakeholders on the drivers and barriers to school attendance

Findings

Attendance results across target grade levels are reported in the table following. Attendance represents the average percentage of time girls attended school for the month selected. Across all grade levels in both the treatment and control groups mean attendance rates were high and ranged between 95% to 98%. The poorest performing grade level in the treatment group was girls in P4. However, girls in this grade level attended school 97.45% of the time on average.

Table 56. Attendance Rates by Grade Level

Grade	Control		Treatment	
	Mean	Standard Dev.	Mean	Standard Dev.
P4	98.12	3.32	97.45	9.72
P5	96.71	4.49	98.56	5.29
P6	95.95	10.06	97.82	5.17
S1	99.52	1.50	99.04	3.85
S2	95.23	19.12	98.97	3.10
S3	98.81	2.69	98.23	4.92
S4	100.00	.00	99.55	1.51

To better understand the validity of attendance data, the study also conducted a spot check on target schools on a random day to compare head count attendance to registry attendance. Results are shown across grade levels in the table below. All head count data matched registry data and no discrepancies were found across groups and grade levels. This suggests attendance measures based on registry are valid.

Table 57. Spot Check Data by Grade Level

Grade	Control		Treatment	
	Mean Registry Attendance	Mean Head Count Attendance	Mean Registry Attendance	Mean Head Count Attendance
P4	No data	No data	96.30	96.30
P5	93.10	93.10	86.88	86.88

P6	100.00	100.00	100.00	100.00
S1	100.00	100.00	100.00	100.00
S2	95.00	95.00	95.00	95.00
S3	100.00	100.00	100.00	100.00
S4	80.00	80.00	100.00	100.00

The household survey additionally, included several items on girls' attendance. Households, for example, were asked how frequently their girl attends school Results are shown for both the intervention and control groups in Table 57.[153]

Table 58. Household Response: How often has the girl attended school?

Response	Intervention Group	Control Group
More than half the time	90.7%	87.8%
About half the time	2.0%	4.2%
Less than half the time	1.1%	0.9%
Don't Know	6.1%	7.1%

Most households report that their girls attend school more than half the time; 90.7% in the intervention group and 87.8% in the control group. To understand why girls sometimes miss school, parents of girls who sometimes miss school, were asked for the reason.

Interpretation and Reflection

Table 59. Why does the girl sometimes miss school? (Multiple Response Allowed)

Response		Intervention Group	Control Group
No money for school levies	Mentioned	9.1%	0.0%
	Not Mentioned	90.9%	100.0%
Illness	Mentioned	20.0%	22.2%
	Not Mentioned	80.0%	77.8%
Pregnancy	Mentioned	0.0%	11.1%
	Not Mentioned	100.0%	88.9%
Marriage	Mentioned	0.0%	0.0%
	Not Mentioned	100.0%	100.0%
Menstruation	Mentioned	0.0%	0.0%
	Not Mentioned	100.0%	100.0%
School unsafe	Mentioned	0.0%	0.0%
	Not Mentioned	100.0%	100.0%

In the intervention group, households responded that the girl missed school either because of illness or because of not having money for school levies. In the control group, as well as these reasons, pregnancy was also mentioned.

[153]The EE is still currently analyzing attendance data at the individual level to better. This will likely provide a more valid measure of attendance.

To further understand why girls attend school and why they don't, girls were asked these questions during qualitative sessions.

Several girls listed that one reason they attend school, is because they expect this will lead to better job opportunities in the future:

"At school, the students learn there many things needed for finding a job"[154]

"I go to school because I don't want to be a street girl."[155]

"In the future I would wish to continue studying and be a teacher, because I would like to help my fellow to learn and know like I have been taught by teachers."[156]

"I would like to continue my studies and be a nurse because it will play a role into my life. We all wish we could continue to study because It helps us in our lives."[157]

If girls understand the relevance of school to their future aspirations, this will likely lead to improved attendance. Several other girls mentioned the relevance of skills learned in school:

"I go to school to know more things."[158]

"Skills from school can be changed into essential knowledge that can help us in daily life. [For example,] how improve our lives and protect ourselves from harm …We can also learn the ways to can teach others in our generation."[159]

"At school, we learn how to behave in our daily life."[160]

Whether school has a real-world application, seemed important to several of the interviewees. The project should consider encouraging teachers and CSG tutors to utilize real life in examples in their sessions to motivate girls to participate.

When asked whether it's ok for parents to keep girls at home for other activities, such as chores or earning money at home, several girls agreed:

"I agree because the parents have many activities at home." [161]

"I agree, because there are many home duties and work, sometimes without any person to sustain them."[162]

"I don't have a brother, so my parents are responsible for all home activities."[163]

---

[154]FGD with Girls on Attendance

[155]ibid

[156]FGD with Girls on Teaching Quality

[157]FGD with Girls on Attendance

[158]ibid

[159]ibid

[160]ibid

[161]FGD with Girls on Attendance 2

[162]ibid

Girls reported that these activities involved:

"Collecting wood, fetching water, cooking and other many more."[164]

"Keeping domestic animals, fetching water, and collect firewood."[165]

Based on these reports, a high burden of household chores can influence school attendance, despite it not being mentioned by parents as a reason for a girl staying home.

The project expects that improved attendance outcomes will lead to improved learning outcomes, as girls will spend more time in school, exposed to improved teaching practices. While there is no quantitative evidence to link attendance and learning outcomes, this will be further explored once attendance data at the individual level has been analysed.

5.2 Teaching Quality

Selection of IO indicators, methodology for measuring them, and relevant project activities

Based on consultations with project staff, teaching practices in target schools are not inclusive, or outcome based[166]. In addition to this, a 2016 review by HPA on teaching and learning in REAP1 schools found that "some teachers exclude, discriminate against or pigeonhole girls, limiting their learning and participation". This finding is supported by research and consultations conducted by ADRA with MINEDUC.

To address this barrier the project has several intervention activities aimed at improving teaching quality. Specifically, with the support of ADRA the project will train 252 REAP2 teachers in gender-inclusive pedagogy, child-responsive teaching practices, and improved literacy and numeracy instructional practices.

To understand teaching quality the study relied on the measures shown in Table 59.

Table 60. Measuring Teaching Quality

Quantitative Measures	Qualitative Measures
• **Girls' perceived teaching quality as measured through a 7-dimension scale which includes the extent to which teachers' care, control, clarify, challenge, captivate, confer, and consolidate**	• Girls' perceptions of teaching quality based on focus group discussions and in-depth interviews. • School stakeholder perceptions of teaching quality.

[163]ibid

[164]ibid

[165]ibid

[166]Interview with REAP Project Staff. November 2018

Quantitatively, teaching quality at Baseline was assessed through 7 dimensions and 14 items. Students were asked the extent to which they agree or disagree with each item. For each item a mean score was calculated. The perceived teaching quality dimensions defined below:

- Care: teachers 'ability to show concern with learner's academic and emotional wellbeing
- Control: teachers' ability to control the classroom (classroom management) and ensure learners are on-task
- Clarify: teachers' ability to clarify questions from students on content covered in class
- Challenge: teachers' ability to provide learning opportunities at the appropriate level of challenge
- Captivate: teachers' ability to motivate students to want to learn
- Confer: teachers' ability to integrate and show value for student voice
- Consolidate: teachers' ability to synthesize and reinforce content of lessons

This scale and dimensions was adapted from Measures of Effective Teaching project, implemented by the Gates Foundation[167]. The approach was developed by Tripod Education Partners[168].

Findings

Girls responses to the 7 perceived teaching quality items are shown in Table 60.

Table 61. Perceived Teaching Quality

Dimension	Items	Intervention Group Mean	Control Group Mean
Care	My teacher(s) make me feel that they really care about me.	4.09	4.09
	My teacher(s) really try to understand how students feel about things.	4.11	4.12
Control	Students in my class(es) treat the teacher with respect	4.25	4.22
	My class(es) stay busy and we don't waste time	3.77	3.69
Clarify	My teacher(s) has several good ways to explain each topic that we cover in this class.	4.14	4.10
	My teacher(s) explains difficult things clearly.	4.02	4.04
Challenge	In my class(es), we learn a lot almost every day.	3.96	3.87
	In my classes, we learn to correct our mistakes.	4.21	4.18
Captivate	My teacher(s) makes lessons interesting.	4.09	4.07
	I like the ways we learn in class.	4.15	4.11
Confer	Students speak up and share their ideas about class work.	4.00	4.07
	My teacher(s) respects my ideas and suggestions.	3.90	3.94
Consolidate	My teacher(s) checks to make sure we understand what they are teaching us.	4.13	4.12
	The comments that I get on my work in class help me understand how to improve.	4.27	4.25

Across both the intervention and control groups, on average students disagreed most with the item "My classes stay busy and we don't waste a lot of time" (Control Item 2), "In my classes, we learn a lot every day" (Challenge Item 1) and "My teachers respect my ideas and suggestions" (Confer Item 2). This suggests that teachers may face some challenges with classroom management, challenging learners, and conferring.

Mean scores were calculated for each dimension. Results for these between intervention and control schools at the primary level are shown in Figure 10. Both the intervention and control groups are comparable on measures of student perceived teaching quality. In primary schools, teachers in the control group had slightly higher levels of perceived ability to consolidate knowledge, to care for students, to clarify and explain things, to confer with

[167] https://docs.gatesfoundation.org/documents/preliminary-finding-policy-brief.pdf

[168] http://tripoded.com/wp-content/uploads/2017/01/Guide-to-Tripods-7Cs-Framework-of-Effective-Teaching.pdf

students, and to captivate them. In primary schools, teachers in the intervention group had slightly higher levels of perceived ability to manage classes and challenge students.

Figure 10. Perceived Teaching Quality Dimensions: Primary Schools

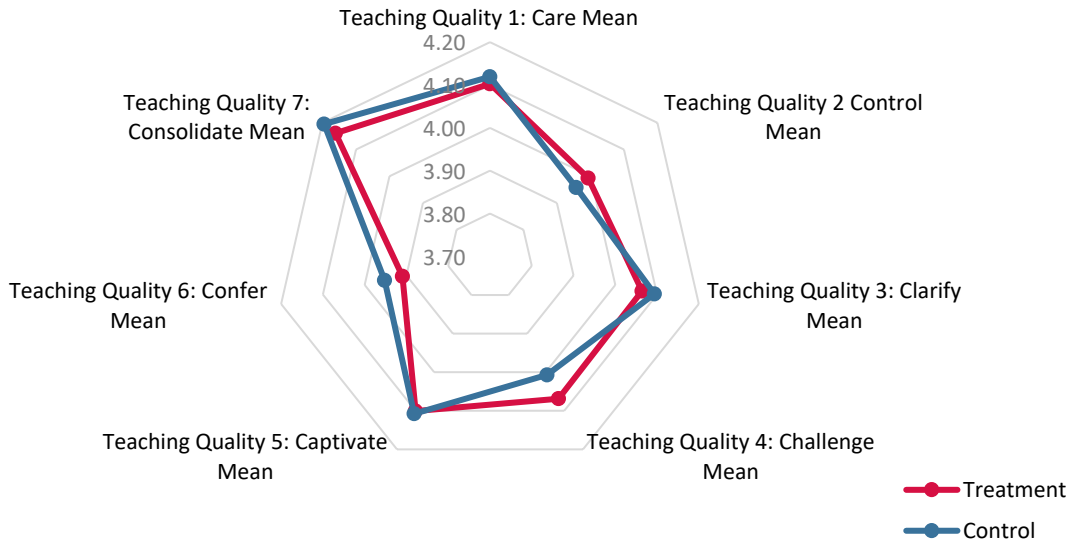
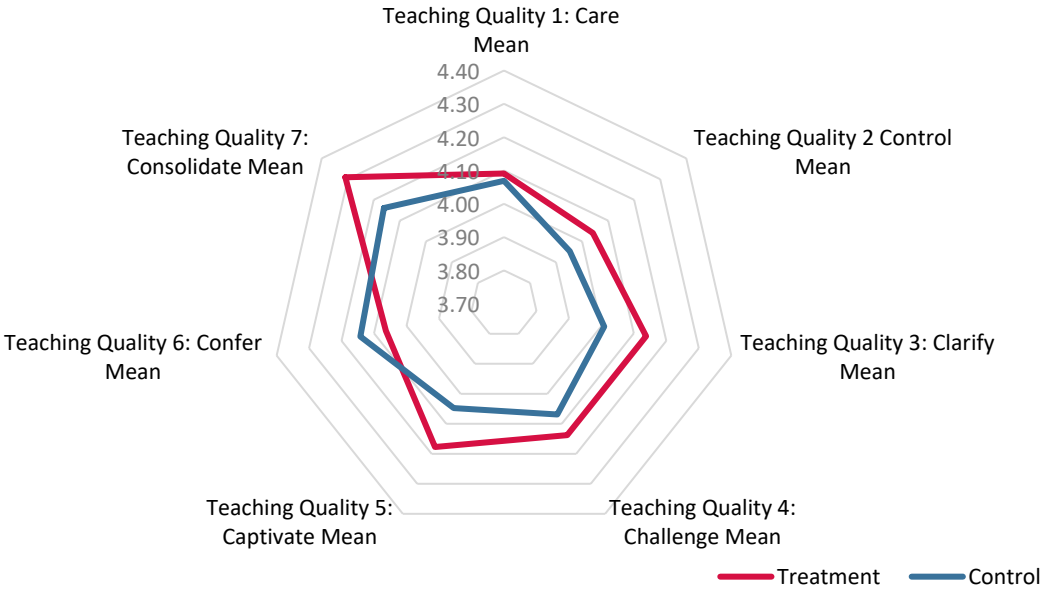


Figure 11 displays mean results in secondary schools. Perceived teaching quality in secondary schools is less comparable between intervention and control groups. The intervention group outperformed the control group on all dimensions, on average.

Figure 11. Perceived Teaching Quality Dimensions: Secondary Schools



Interpretation and Reflection

To understand the relationship between perceived teaching quality and learning outcomes, the study conducted a series of linear regressions using each dimension as a predictor of numeracy, English literacy, and Kinyarwanda literacy. Results of these analyses are summarized in the table below, for each level of schooling.

Table 62. Primary School: Teaching Quality Dimensions as Predictors of Learning Outcomes

Predictor	English Literacy r^2 (Beta)	Kinyarwanda Literacy r^2 (Beta)	Numeracy r^2 (Beta)
Primary School			
Care	0.021 (4.48) **	*NS*	*NS*
Control	0.010 (3.24) *	*NS*	*NS*
Clarify	0.038 (6.062)**	*NS*	0.009 (2.287)*
Challenge	0.023 (4.807)**	*NS*	*NS*
Captivate	0.05 (6.844)**	*NS*	0.007 (1.91)*
Confer	0.026 (4.76)**	*NS*	*NS*
Consolidate	0.05 (7.19)**	*NS*	0.013 (2.64)*
Overall	0.043 (7.757)**	*NS*	0.009 (2.656)*
Secondary School			
Care	0.023 (4.62)**	NS	NS
Control	NS	NS	NS
Clarify	NS	NS	NS
Challenge	NS	NS	NS
Captivate	NS	NS	NS
Confer	NS	NS	NS
Consolidate	0.035 (5.72)**	NS	NS
Overall	0.017 (4.68)*	NS	NS

Significance of regression: *p<0.05, **p<0.005; NS = Not Significant

At the primary level, all teaching quality dimensions, as well as overall perceived teaching quality were statistically significant predictors of English literacy and explained some degree of variance in the data ($p<0.05$). The extent to which teachers captivate students explained 5% in variance in English literacy outcomes, with an increase by one on the scale resulting in an increase of 6.8% on English literacy score. These results indicate that teaching quality can predict outcome achievements in English literacy.

At the secondary level, fewer dimensions were statistically significant predictors of English literacy scores. However, overall perceived teaching quality was a statistically significant predictor, suggesting it plays a similar role in secondary.

The same, however, was not found for Kinyarwanda literacy. This may be because literacy levels in Kinyarwanda or less dependent on the individual teacher's instructional practices, as it is the main spoken language in the region.

At the primary level, overall perceived teaching quality, was able to predict achievements in numeracy at statistically significant levels ($p<0.05$). Each point improvement in the score resulted in an increase of 2.65% on aggregate numeracy score. However, at the secondary level, no dimensions successfully predicted numeracy scores at statistically significant levels.

Collectively, these findings indicate that teaching quality can influence learning outcomes, validating a central assumption of the project's theory of change.

To understand these dimensions further, the study conducted several focus group discussions with learners on teaching quality. These aimed to understand how girls perceive their teachers and teaching practices with regards to each dimension.

Summary results of these sessions are shown in the Table following. Girls reported teachers in intervention schools as having exhibited 5 of the 7 dimensions: care, confer, captivate, clarify and consolidate.

Table 63 Qualitative Evidence

Dimension	Description	Qualitative Evidence

Dimension	Description	Qualitative Evidence
Care	Care can be understood as the extent to which teachers are concerned with learner's academic and emotional wellbeing. It aims to describe how teachers develop nurturing relationships with their students.	"I found them caring about us. Because when I have some disturbing students, I communicated them and took care of the problems."[169]
Confer	Confer refers to the ability of teachers to encourage and value student input, ideas, and views. This is considered a healthy part of the learning process.	"It happens as we can have the meeting together with them, we give our advices or suggestions and sometimes [the teacher] agrees."[170] "Some teachers don't accept our ideas. For example, when we give our suggestions, they refuse them immediately …We want to let our leaders know some problems we have related to lessons."[171]
Captivate	Captivate refers to the extent to which teachers can stimulate and motivate students and encourage their interest in learning. This can involve making lessons relevant to student's day to day lives, for example.	"I like mathematics when we do real math… math from the market or other types of mathematics. It makes sense to me"
Clarify	Clarify refers to the ability of teachers to help students understand content and clarify questions they may on the content of the lesson. In practice this involves explaining ideas in different ways, through various learning approaches.	"We learn more when teacher helps students to understand the lessons equally."[172] "I liked my teacher because he explained that seemed difficult"[173] "Mathematics is simple to learn from the teacher for the teacher allows us much chance to ask and ask until I get the right answer."[174] "The teacher must explain lessons and we as students revise our notes frequently."[175]
Consolidate	Consolidate is the ability of teachers to synthesize key ideas and build on understanding over time. There are several tools through which teachers can do this. A teacher can utilize continuous assessment practices to track current levels of understanding and go over areas were repetition could be beneficial	"The teachers must teach and then after do an evaluation to assess our level of understanding"[176] "It happens that the teachers finish the lessons and let the students prepare for quizzes like for the whole month, in case, she/he evaluates and finds the students fail, they regret of not

[169]FGD with Girls on Extended Learning Opportunities & Teaching Quality

[170]ibid

[171]ibid

[172]FGD with Girls on Extended Learning Opportunities & Teaching Quality 2

[173]ibid

[174]Op. cit teaching quality 1

[175]ibid

[176]FGD with Girls on Teaching Quality 3

Dimension	Description	Qualitative Evidence
		evaluating the lessons immediately after sessions successfully completed."[177]

Qualitative sessions additionally aimed to understand differences in how girls perceive teachers to treat girls and boys. Summary for this inquiry are shown in the table following. Girls' answers to the question varied greatly with some girls saying there were treated equally as boys or even treated better, and others mentioning they were treated worse. In cases where girls reported that they were treated worse than boys, this involved either punishment or access to after-school activities. Girls also reported some cases where they felt that boys or girls could be more at risk to abuse.

Table 64. Qualitative findings: Do teachers treat boys and girls the same?

Do teachers treat boys and girls differently?	
Girls are punished more	*"They are treated unequally when boys are shouting with girls, only girls are punished"* *"They are not treating equally as some boys disturb the girls in class."*
Teachers treat boys and girls the same / treat girls better	*"They are treated equally but for girls during their period are cared more than boys, so this helps girls from being ashamed during menstrual cycle."* *"There is no discrimination against sex."* *"There is no discrimination because the instructions are given on all, like studying some options which seem to be for girls, right, both girls and boys can perform in every chosen option regardless their agenda."*
Teachers treat boys worse	*"It happens the teachers dislike the boys because they disturb the classroom"*
Boys have better access to after-school clubs	*"They are treated differently for example during club creation, most club members are boys"*
Girls or boys can face sexual abuse	*"[Treating girls differently] brings the consequences because the teacher wants to have sex with students which can be roots of sexual transmission diseases such AIDS, unwanted pregnancy, drop out and sometimes deaths"* *"No female teachers particularly girls choose the boys who are good looking and treat them unequally."* *"Male teachers choose beautiful girls and give them extra courses."*

Future evaluation points will seek to explore these dimensions in more detail, particularly through classroom observations and interviews and focus groups with teachers.

[177] Op. cit. Teaching Quality 1

5.3 Economic Empowerment

Selection of IO indicators, methodology for measuring them, and relevant project activities

In principle, schooling in Rwanda is free and is compulsory up to lower secondary. However, schooling incurs several indirect costs including exam fees, and costs for learning materials and uniforms. Several intervention activities aim to support families to off-set or cover these costs and improve girls' access to school.

In REAP1, MDCs were supported by the project to establish and run IGAs to support the most marginalized girls to attend and enrol in school. REAP2 will continue to provide mentorship support to both MDCs and school businesses to ensure enterprises run at a profit and that profit is used to support girls to access school or finance the maintenance of girl-friendly facilities. To further reduce the burden of economic hardship on school enrolment, FFG will establish alumni networks in project schools. Alumni networks will aim to fundraise 5 scholarships by the end of the project.

Table 65. Measuring Economic Opportunities

Quantitative Measures	Qualitative Measures
• **% marginalised girls with school costs reduced / covered by other sources (ex. SB, MDC, scholarships) by at least 20%** • **Changes in enrolment rates in REAP2 schools** • **Proportion of school spending focused on girls' education/girl friendly improvements**	• Feedback from school stakeholders including teachers, parents, and girls on improved access (KIIs, FGDs) • Feedback from MDC members on improved girls access through support provided (KIIs, FGDs) • Feedback from PTA members on improved access (KIIs, FGDs)

Findings

According to ANOVA tests, girls who experience moderate and extreme hardship perform significantly worse than those that do not experience hardship in English ($p<.05$) and Kinyarwanda literacy ($p<.05$). According to independent sample t-tests, English literacy is also different in households with more than 3 children per adult. This confirms the project's assumption that, unless families experiencing hardship are financially supported with the schooling of their children, it is likely their learning outcomes will decay over time.

Table 66 Learning Scores by Economic Groups

Characteristic		Mean English Literacy %	Mean Kinyarwanda Literacy %	Mean Numeracy %
3+ Children Per Adult	*< 3 c/a*	36.52	69.44	53.44
	>= 3 c/a	29.44	67.85	56.57
Hardship Group	*No Hardship*	39.04	71.14	56.19
	Moderate Hardship	34.67	69.01	52.08
	Extreme Hardship	33.48	66.64	53.77

While education is free in Rwanda, the associated costs of schooling makes it difficult for certain families to send their girls to school. Table 65shows the proportion of respondents who mentioned paying for different types of school costs. See table below:

Table 67Proportion of Person Reporting Paying for different School Costs

Cost Type	Control		Treatment	
	n	%	n	%
Paid for Tuition Fees	44	9.5%	18	4.1%
Paid for School books & other materials	416	89.8%	393	88.5%
Paid for School uniform & clothing	357	77.6%	354	79.0%
Paid for Contribution for school building or maintenance	165	35.8%	137	30.9%
Paid for Transportation to school	2	0.4%	1	0.2%
Paid for School lunches	195	42.1%	154	34.5%

Other costs mentioned included the printing or photocopying of exams, sportswear, body lotion, sanitary pads, parish support, and medical insurance or treatment.

Participants were then asked to show how much they paid for these costs over the course of the last 12 months. On average, schooling has an associated cost of 28,360 RWF per year per family. Results are shown below:

Table 68 Mean Costs associated with Education (RWF)

Number of Children in the Household	Mean Yearly Costs (RWF)							
	Tuition	School Books and Materials	Uniform or Clothing	School Building or Maintenance Contributions	Transportation to School	School lunches	Other Costs	Total Costs
1	5721	5466	7799.2	1276	2000	8916	6442	37620.2
2	8571	5578	8934.2	898	.	6673	6388	37042.2
3	3475	4878	7066.2	749	.	5797	6072	28037.2
4	5742	4556	7264	1157	11500	4074	3062	37355
5	5200	4141	7425	811	.	7507	4675	29759
6	.	3269	6405.4	2554	.	3929	4400	20557.4
7	3000	3726	7392.9	700	.	7233	100	22151.9
8	.	4386	4416.7	200	.	5200	150	14352.7
10	.	3000	4000	500	.	.	.	7500
19	.	10000	8000	.	.	1000	.	19000
Total	5569	4825	7608	1092	8333	6490	5217	39134

As of now, 6.2% of treatment households and 11.2% of control households mentioned that the girls' school has covered some of her expenses to attend school. Of these girls, 12% of treatment and 15% of control are in the extreme hardship category of respondents.

When those households were asked what type of costs the school most frequently cover, the most frequently mentioned was tuition fees, followed by meals and food, and school books and materials.

According to chi-square tests, a significantly higher proportion of girls in treatment schools have part of their tuition fees and school uniform costs covered by the school. This is to be expected given the efforts of REAP 1 to generate investments towards girls' education.

Table 69 Types of Costs Covered by the School

Cost Covered Type	Frequency Mentioned (%)	
	Control	Treatment
Tuition Fees	58.0%	29.6%
Meals / Food	36.0%	40.7%

Cost Covered Type	Frequency Mentioned (%)	
	Control	Treatment
School Books and Other Materials	24.0%	44.4%
Family Contributions	8.0%	7.4%
School Uniform or Clothing	4.0%	22.2%
Transportation	2.0%	0.0%

The project aims to create economic empowerment opportunities for the most marginalized or at-risk groups. Table 5 shows baseline values relating to the burden of school costs by different hardship groups for intervention areas.

52% of respondents mentioned that it has become increasingly more expensive to send a girl to school and 28% mentioned that it has remained the same since last year. In this regard, responses vary little among hardship groups, suggesting that price increases are equally perceived among groups.

Of those respondents that mentioned that it has become cheaper to send a girl to school 57% mentioned that there was at least a 30% reduction in costs, an effect that was experienced to the greatest extent by the moderate and extreme hardship groups, supporting REAP's targeting method and the view that these groups were the ones that benefited most from REAP 1.

Of the ability of participants to finance school costs, an average of 71% of respondents mentioned that their ability to finance these costs have worsened since last year, a trend that has affected all hardship groups equally. Currently, 78% of respondent thought that it was at least somewhat difficult to afford the school of their girls. For the extreme hardship group, this barrier is even more prevalent with 71% agreeing it was very difficult.

Table 70 Burden of School Costs by Hardship Group

Question		No Hardship		Moderate Hardship		Extreme Hardship		Total	
		n	%	n	%	n	%	n	%
Q64. In the past year, has it become cheaper to send [GIRL] to school?	*Yes, it is much cheaper*	8	6.2%	29	16.5%	3	5.9%	40	11.2%
	Yes, it is a little cheaper	16	12.3%	14	8.0%	3	5.9%	33	9.2%
	It is the same or about the same	27	20.8%	56	31.8%	18	35.3%	101	28.3%
	No, it is a little more expensive this year	36	27.7%	37	21.0%	12	23.5%	85	23.8%
	No, it is much more expensive this year	43	33.1%	40	22.7%	15	29.4%	98	27.5%
Q65. Could you estimate how much was the reduction of school costs since last year? *	*A great deal (+40%)*	8	33.3%	24	53.3%	5	62.5%	37	48.1%
	Much (30-40%)	2	8.3%	4	8.9%	1	12.5%	7	9.1%
	Somewhat (20-30%)	3	12.5%	7	15.6%	0	0.0%	10	13.0%
	Little (10-19%)	7	29.2%	5	11.1%	0	0.0%	12	15.6%
	Not Much (<10%)	4	16.7%	5	11.1%	2	25.0%	11	14.3%
Q66. In the past year, has your ability to finance these costs improved, decreased or is about the same?	*Improved / Easier*	12	8.6%	5	2.5%	1	1.7%	18	4.5%
	Remained the same	32	22.9%	54	27.1%	10	16.9%	96	24.1%
	Decreased / Harder	96	68.6%	140	70.4%	48	81.4%	284	71.4%
Q68. In the past year, how difficult has it been for you to afford for [GIRL] to go to school?	*Very Difficult*	64	43.0%	101	49.0%	46	71.9%	211	50.4%
	Somewhat Difficult	41	27.5%	69	33.5%	8	12.5%	118	28.2%
	Not Very Difficult	24	16.1%	19	9.2%	7	10.9%	50	11.9%
	Not Difficult at All	20	13.4%	17	8.3%	3	4.7%	40	9.5%

* Only those respondents who mentioned that a reduction in costs was witnessed or did not know were included.

In terms of treatment and control differences, 21% of treatment respondents mentioned that it is cheaper to send their girls to school compared than last year compared to only 5.8% of control respondents. Of these respondents 48% thought that there was a 'great deal' in the reduction of school costs, compared to 11% of control respondents who thought the same. This highlights the impact of REAP 1 on the communities where it worked and sets a higher bar for REAP 2 in terms of economic empowerment.

Table 71 Burden of School Costs by Treatment Type

Question		Control		Treatment		Total	
		n	%	n	%	n	%
Q64. In the past year, has it become cheaper to send [GIRL] to school?	*Yes, it is much cheaper*	8	2.1%	40	11.2%	48	6.6%
	Yes, it is a little cheaper	14	3.7%	33	9.2%	47	6.4%
	It is the same or about the same	120	32.1%	101	28.3%	221	30.2%
	No, it is a little more expensive this year	103	27.5%	85	23.8%	188	25.7%
	No, it is much more expensive this year	129	34.5%	98	27.5%	227	31.1%
Q65. Could you estimate how much was the reduction of school costs since last year? *	*A great deal (+40%)*	3	10.7%	37	48.1%	40	38.1%
	Much (30-40%)	5	17.9%	7	9.1%	12	11.4%
	Somewhat (20-30%)	5	17.9%	10	13.0%	15	14.3%
	Little (10-19%)	6	21.4%	12	15.6%	18	17.1%
	Not Much (<10%)	9	32.1%	11	14.3%	20	19.0%
Q66. In the past year, has your ability to finance these costs improved, decreased or is about the same?	*Improved / Easier*	3	10.7%	37	48.1%	40	38.1%
	Remained the same	5	17.9%	7	9.1%	12	11.4%
	Decreased / Harder	5	17.9%	10	13.0%	15	14.3%
Q68. In the past year, how difficult has it been for you to afford for [GIRL] to go to school?	*Very Difficult*	201	47.9%	211	50.4%	412	49.1%
	Somewhat Difficult	136	32.4%	118	28.2%	254	30.3%
	Not Very Difficult	53	12.6%	50	11.9%	103	12.3%
	Not Difficult at All	30	7.1%	40	9.5%	70	8.3%

Interpretation and Reflection

The project has rightly chosen to diminish the effect of the burden imposed by the costs of education as these are related to school performance. This effect is proven to be stronger for the poorest economic groups, which have also reported the greatest reduction in school costs since REAP 1.

5.4 Life skills

Selection of IO indicators, methodology for measuring them, and relevant project activities

Life skills are the skills necessary for full and active participation in everyday life; they encompass cognitive skills for analysing and using information and for problem-solving, personal skills for developing personal agency and managing oneself, and inter-personal skills for communicating and interacting effectively with others.

The GEC considers the promotion and acquisition of life skills are an important element of equipping and preparing adolescent girls for their transition into adulthood, particularly in contexts where access to appropriate information, guidance and role models is limited. REAP recognizes this and considers the intersections between cognitive and non-cognitive development as both involving the acquisition of knowledge and skills, and the application of these through specific perspectives and demonstrable behaviours e.g. the acquisition of knowledge of financial management, and the behaviour of regularly saving.

Through this project, HPA delivers Work Readiness (WR) training to youth and ensures clear transition pathways are identified for all students participating in the programme by accessing jobs or internships, forming cooperatives and initiating income-generating projects. In addition to these activities, REAP2 will also engage the most vulnerable in saving groups to increase their economic resilience.

The following dimensions are explored when researching life skills in the context of the REAP evaluation:

Table 72. Measuring Life Skills

Quantitative Measures	Qualitative Measures
• **# of target girls completing school to work transition (STWT), work readiness (WR) training, and TVET courses – target 190** • **# of target girls who are part of savings groups - target 2502 (data obtained from REAP partners)** • **% of targeted marginalized girls reporting self-employed and ownership of small businesses IGA's.**	• The ways in which acquired financial literacy can help them achieve their goals as identified by girls, teachers, parents and employers. • Increase in educational and career aspirations • Improved ability to link aspirations to planning • Girls perceive an increase in parental and community support for their aspirations • Girls perceive an increase in parental support to access higher levels of education or progression to paid employment.

To measure life skills, we created three scales. The first scale is the inter-personal skill scale composed of 12 items, the second was the Planning Skills scale composed of 5-itmes and third one is the personal skills scale composed of the 10-item Rosenberg self-esteem scale. The appropriateness of these scales was tested using factor analysis (PCA) with an Oblimin with Keiser normalization and Cronbach alpha reliability analysis.

Table 73 Measurement Scale for Life Skills

Q#	Inter-Personal Skills	Planning Skills	Personal Skills
1	RQ92. "If someone does not understand me I try to find a different way of saying what is on my mind"	RQ88. "I can make a long-term plan to reach my goals"	Q103. "On the whole, I am satisfied with myself."
2	RQ93. "When others talk I pay attention to their body language, gestures and facial expressions"	RQ90. "I recognise when choices I make today about my studies can affect my life in the future."	Q104. "At times I think I am no good at all."
3	RQ91. "I can describe my thoughts to others when I speak"	RQ89. "When I make a plan to achieve my goals, I always follow this plan"	Q105. "I feel I have a number of good qualities."
4	RQ94 "I can work well in a group with other people".	RQ87. "I can stay focused on a goal despite things getting in the way"	Q106. "I am able to do things as well as most other people."
5	RQ102. "When I succeed at a task it is because I worked hard"	RQ95. "When I have the opportunity, I can organize my peers or friends to do an activity."	Q107. "I feel I do not have much to be proud of."
6	RQ101. "I ask an adult if I don't understand something" (PROMPT, e.g. the healthcare volunteer, a community leader, parents)		Q108. "I certainly feel useless at times."
7	RQ100. "I would like to continue learning by going back to school, learning a vocation or trade"		Q109. "I feel that I am a person of worth, at least on an equal plane with others."
8	RQ96. "I want to use the skills I've learned during my education"		Q110."I wish I could have more respect for myself."
9	RQ99. "I feel confident answering questions when I'm in a group of people"		Q111."All in all, I am inclined to feel that I am a failure."
10	RQ84. "I am able to do things as well as my friends"		Q112. "I take a positive attitude toward myself."
11	Q98. "I get nervous when I have to speak in front of a group of people my age "		
12	Q97. "I get nervous when I have to speak in front of an adult"		

To classify the sample according to the level of skill, we coded those with a score of 3 or less as not having skills and those with a score or more than 3 as having skills, corresponding to more than the scale's medium.

Findings

Girls with planning skills, inter-personal skills, personal skills and life skills performed better in English literacy than those that do not. This is probably because English is usually taught in schools and learning requires a mix of life skills to succeed. The fact that these differences exist also highlights the influencing roles of life skills on learning outcomes. In Kinyarwanda this effect was not present. In terms of numeracy, only girls with inter-personal skills and overall life-skills performed better than those that did not have these skills.

Table 74 Life Skill Groups and Learning Outcomes

Life Skills Category		Mean English Literacy %	Mean Kinyarwanda Literacy %	Mean Numeracy %
Girl has Planning Skills	*No*	27.21	70.66	53.56
	Yes	37.78	68.97	53.76
Girl has Inter-Personal Skills	*No*	14.96	65.21	43.16
	Yes	36.78	69.46	54.17
Girl has Personal Skills	*No*	28.47	68.16	50.48
	Yes	37.02	69.45	54.19
Girl has Life Skills	*No*	15.55	66.26	45.43
	Yes	36.68	69.40	54.06

At baseline, no group differences exist between treatment and control in terms of life skills. These can be appreciated in the table below:

Table 75 Life Skills Group by Treatment and Control

Life Skills Category		Control		Treatment	
		n	%	n	%
Girl has Planning Skills	*No*	90	19.6%	76	17.1%
	Yes	370	80.4%	368	82.9%
Girl has Inter-Personal Skills	*No*	23	5.0%	14	3.2%
	Yes	437	95.0%	430	96.8%
Girl has Personal Skills	*No*	62	13.5%	53	11.9%
	Yes	398	86.5%	391	88.1%
Girl has Life Skills	*No*	22	4.8%	14	3.2%
	Yes	438	95.2%	430	96.8%

Table 76 Life Skills GEC-T Disaggregations

	Skill		Treatment Status				Girls Under 12				Enrolment Status			
			Control		Treatment		Over 12 years old		Under 12 years old		Out-of-School		In-School	
			%	n	%	n	%	n	%	n	%	n	%	n
Learning to Learn	*RQ84. "I am able to do things as well as my friends"*	Agree	53.1%	211	46.9%	186	87.4%	347	12.6%	50	4.5%	18	95.5%	379
		Strongly Agree	49.6%	140	50.4%	142	86.2%	243	13.8%	39	4.3%	12	95.7%	270
		Total	51.7%	351	48.3%	328	86.9%	590	13.1%	89	4.4%	30	95.6%	649
	Q74. "I want to do well in school"	Strongly Agree	50.1%	225	49.9%	224	87.8%	394	12.2%	55	0.4%	2	99.6%	447
		Agree	52.1%	170	47.9%	156	85.9%	280	14.1%	46	1.2%	4	98.8%	322
		Total	51.0%	395	49.0%	380	87.0%	674	13.0%	101	0.8%	6	99.2%	769
	Q85. "I get nervous when I have to read in front of others"	Strongly Agree	45.7%	16	54.3%	19	100.0%	35	0.0%	0	17.1%	6	82.9%	29
		Agree	49.3%	68	50.7%	70	93.5%	129	6.5%	9	6.5%	9	93.5%	129
		Total	48.6%	84	51.4%	89	94.8%	164	5.2%	9	8.7%	15	91.3%	158
	Q86. "I get nervous when I have to do maths in front of others"	Strongly Agree	59.3%	16	40.7%	11	96.3%	26	3.7%	1	18.5%	5	81.5%	22
		Agree	52.9%	74	47.1%	66	92.1%	129	7.9%	11	7.1%	10	92.9%	130
		Total	53.9%	90	46.1%	77	92.8%	155	7.2%	12	9.0%	15	91.0%	152
	Q75. "I feel confident answering questions in class"	Strongly Agree	48.5%	149	51.5%	158	87.0%	267	13.0%	40	0.0%	0	100.0%	307
		Agree	52.6%	202	47.4%	182	87.2%	335	12.8%	49	0.5%	2	99.5%	382
		Total	50.8%	351	49.2%	340	87.1%	602	12.9%	89	0.3%	2	99.7%	689
	Q87. "I can stay focused on a goal despite things getting in the way"	Strongly Agree	48.0%	98	52.0%	106	87.3%	178	12.7%	26	4.9%	10	95.1%	194
		Agree	52.0%	184	48.0%	170	89.3%	316	10.7%	38	5.9%	21	94.1%	333
		Total	50.5%	282	49.5%	276	88.5%	494	11.5%	64	5.6%	31	94.4%	527
Learning for Life (Transition)	*Q76 "I would like to continue studying/ attending school after this year"*	Strongly Agree	52.0%	293	48.0%	270	86.7%	488	13.3%	75	1.2%	7	98.8%	556
		Agree	49.8%	118	50.2%	119	86.9%	206	13.1%	31	0.4%	1	99.6%	236
		Total	51.4%	411	48.6%	389	86.8%	694	13.3%	106	1.0%	8	99.0%	792
	Q89. "When I make a plan to achieve my goals, I always follow this plan"	Strongly Agree	51.4%	112	48.6%	106	85.3%	186	14.7%	32	3.7%	8	96.3%	210
		Agree	47.0%	175	53.0%	197	88.4%	329	11.6%	43	4.6%	17	95.4%	355
		Total	48.6%	287	51.4%	303	87.3%	515	12.7%	75	4.2%	25	95.8%	565
	Q90. "I recognize when choices I make today about my studies can affect my life in the future."	Strongly Agree	49.5%	97	50.5%	99	89.3%	175	10.7%	21	5.6%	11	94.4%	185
		Agree	48.4%	202	51.6%	215	87.8%	366	12.2%	51	4.3%	18	95.7%	399
		Total	48.8%	299	51.2%	314	88.3%	541	11.7%	72	4.7%	29	95.3%	584

Skill		Treatment Status				Girls Under 12				Enrolment Status			
		Control		Treatment		Over 12 years old		Under 12 years old		Out-of-School		In-School	
		%	n	%	n	%	n	%	n	%	n	%	n
Q91. "I can describe my thoughts to others when I speak"	Strongly Agree	51.4%	146	48.6%	138	88.4%	251	11.6%	33	5.3%	15	94.7%	269
	Agree	50.7%	206	49.3%	200	86.9%	353	13.1%	53	3.9%	16	96.1%	390
	Total	51.0%	352	49.0%	338	87.5%	604	12.5%	86	4.5%	31	95.5%	659
Q92. "If someone does not understand me I try to find a different way of saying what is on my mind"	Strongly Agree	49.8%	121	50.2%	122	88.5%	215	11.5%	28	4.9%	12	95.1%	231
	Agree	51.0%	223	49.0%	214	86.7%	379	13.3%	58	4.1%	18	95.9%	419
	Total	50.6%	344	49.4%	336	87.4%	594	12.6%	86	4.4%	30	95.6%	650
Q93. "When others talk I pay attention to their body language, gestures and facial expressions"	Strongly Agree	52.6%	131	47.4%	118	88.4%	220	11.6%	29	4.4%	11	95.6%	238
	Agree	52.5%	240	47.5%	217	87.3%	399	12.7%	58	4.8%	22	95.2%	435
	Total	52.5%	371	47.5%	335	87.7%	619	12.3%	87	4.7%	33	95.3%	673

Likewise, most parents in both treatment and control areas considered the skills children learning in school are relevant and useful. See table below:

Table 77. Parental Perceptions on Skills Acquisition in School

		Control	Treatment
Q133. "The skills that pupils are learning now in the school (including through school businesses) are relevant and useful"	*Strongly Agree*	43.7%	39.6%
	Agree	38.0%	39.0%
	Medium	9.8%	10.6%
	Disagree	6.1%	5.9%
	Strongly Disagree	2.4%	5.0%
	Total	100%	100%

As 70% of parents seem to appreciate the skills learnt in school, it is important to explore whether this relates to decision-making in the household. The table next shows the percentage of girls who reported being able to make decisions regarding her life on their own or together with their family.

Given the high percentage of inactive girls, the project has put in place strategies to teach financial literacy skills to girls in the hope they may one day begin working towards income generating strategies. In terms of financial literacy, 50% of girls in control and 48.4% of girls in treatment schools mentioned they can save little or very little. Only 4.2% of girls in control schools and 9.7% of girls in treatment school mentioned that they can save much or a great deal each month. Currently no girls are part of saving groups at either treatment or control schools.

Table 78 Savings Activity

Savings Group		Control		Treatment		Total	
		n	%	n	%	n	%
Q30. Are you part of a savings group?	*Yes*	0	0%	0	0%	0	0%
	No	399	96.8%	372	99.2%	771	98.0%
	Don't know	13	3.2%	3	0.8%	16	2.0%
Q31. On average, how much income do	*A great deal*	1	2.1%	2	2.6%	3	2.4%

Savings Group		Control		Treatment		Total	
		n	%	n	%	n	%
you manage to save each month?	*Much*	1	2.1%	8	10.5%	9	7.3%
	Somewhat	22	45.8%	30	39.5%	52	41.9%
	Little	13	27.1%	18	23.7%	31	25.0%
	Not Much/ Very Little	11	22.9%	18	23.7%	29	23.4%

In terms of the power to make decisions, about 50% of girls in treatment and control areas can make their own decisions. However, whether a girl decides or not to go or continue going to school or vocational training depends on their family and age to a large extent. For decisions about the future, such as marriage or the type of work she will have, the girl decides in most of cases unless she is under 12 years old. See table below:

Table 79 Life Decisions in the Household

Decision Type		Treatment Status				Girls Under 12				Enrolment Status			
		Control		Treatment		Over 12 years old		Under 12 years old		Out-of-School		In-School	
		%	n	%	n	%	n	%	n	%	n	%	n
Who Decides: Whether you will go to school	Girl herself	79	47.9%	86	52.1%	156	94.5%	9	5.5%	18	10.9%	147	89.1%
	Girl and Family	270	54.7%	224	45.3%	432	87.4%	62	12.6%	21	4.3%	473	95.7%
	Total	**349**	**53.0%**	**310**	**47.0%**	**588**	**89.2%**	**71**	**10.8%**	**39**	**5.9%**	**620**	**94.1%**
Who Decides: Whether you will continue in school past this year	Girl herself	64	45.7%	76	54.3%	131	93.6%	9	6.4%	14	10.0%	126	90.0%
	Girl and Family	270	56.0%	212	44.0%	423	87.8%	59	12.2%	24	5.0%	458	95.0%
	Total	**334**	**53.7%**	**288**	**46.3%**	**554**	**89.1%**	**68**	**10.9%**	**38**	**6.1%**	**584**	**93.9%**
Who Decides: Whether you can go back to school or vocational training	Girl herself	78	49.4%	80	50.6%	148	93.7%	10	6.3%	14	8.9%	144	91.1%
	Girl and Family	261	56.6%	200	43.4%	409	88.7%	52	11.3%	22	4.8%	439	95.2%
	Total	**339**	**54.8%**	**280**	**45.2%**	**557**	**90.0%**	**62**	**10.0%**	**36**	**5.8%**	**583**	**94.2%**
Who Decides: When/ at what age you will get married	Girl herself	230	49.9%	231	50.1%	422	91.5%	39	8.5%	28	6.1%	433	93.9%
	Girl and Family	160	56.3%	124	43.7%	239	84.2%	45	15.8%	11	3.9%	273	96.1%
	Total	**390**	**52.3%**	**355**	**47.7%**	**661**	**88.7%**	**84**	**11.3%**	**39**	**5.2%**	**706**	**94.8%**
Who Decides: If you will work after you finish your studies	Girl herself	259	50.0%	259	50.0%	471	90.9%	47	9.1%	29	5.6%	489	94.4%
	Girl and Family	143	53.4%	125	46.6%	226	84.3%	42	15.7%	14	5.2%	254	94.8%
	Total	**402**	**51.1%**	**384**	**48.9%**	**697**	**88.7%**	**89**	**11.3%**	**43**	**5.5%**	**743**	**94.5%**
Who Decides: What type of work you will do	Girl herself	270	50.1%	269	49.9%	492	91.3%	47	8.7%	33	6.1%	506	93.9%
	Girl and Family	137	53.7%	118	46.3%	214	83.9%	41	16.1%	11	4.3%	244	95.7%
	Total	**407**	**51.3%**	**387**	**48.7%**	**706**	**88.9%**	**88**	**11.1%**	**44**	**5.5%**	**750**	**94.5%**
Who Decides: How do you spend your free time	Girl herself	297	50.4%	292	49.6%	523	88.8%	66	11.2%	36	6.1%	553	93.9%
	Girl and Family	114	56.4%	88	43.6%	177	87.6%	25	12.4%	7	3.5%	195	96.5%
	Total	**411**	**52.0%**	**380**	**48.0%**	**700**	**88.5%**	**91**	**11.5%**	**43**	**5.4%**	**748**	**94.6%**
Who Decides: How often you spend time with your friends	Girl herself	268	49.7%	271	50.3%	483	89.6%	56	10.4%	31	5.8%	508	94.2%
	Girl and Family	154	57.0%	116	43.0%	232	85.9%	38	14.1%	10	3.7%	260	96.3%
	Total	**422**	**52.2%**	**387**	**47.8%**	**715**	**88.4%**	**94**	**11.6%**	**41**	**5.1%**	**768**	**94.9%**

Interpretation and Reflection

By improving life skills, the project enhances the chances that girls must learn English literacy and numeracy. While most girls have good inter-personal and personal skills, there is room for improvement in planning and financial literacy skills. These will become increasingly important as a girl progress in her life, as she attains more power to make decisions that will affect her future.

6. Conclusion & Recommendations

6.1 Conclusions

Through a multi-partner approach, REAP2 aims to improve the access, learning and transition rates of marginalized girls across 28 schools in Nyaruguru. The intervention is in line with national objectives and supports the achievement of four outcomes targeted by the Education Sector Strategic Plan (2013):

1. Increased equitable access to 9 years of basic education for all children and expanding access to 12 years of basic education.
2. Improved quality and learning outcomes across primary and secondary education.
3. Qualified, suitably skilled and motivated teachers and trainers to meet demands of expanding education access.
4. Increased equitable access to relevant, high quality, demand driven TVET programmes.

Based on the review conducted at Baseline the project is appropriately targeted to support girls to overcome barriers associated with educational marginalization and is likely to achieve desired results in project outcomes.

With regards to targeting, the project is inclusive of girls experiencing characteristics and barriers inhibiting their educational achievements.

Most girls (64.9%) face severe or moderate degrees of economic hardship. Due to costs associated with schooling, this contributes to an increased propensity of girls to fail to access and learn in school and drop-out. Study findings indicate that degree of hardship has a negative effect on Kinyarwanda test scores, and successful transition. This is supported by qualitative findings with project stakeholders listing poverty as a main reason by for lack of attendance and poor educational achievements.

A large proportion of girls do not speak the language of instruction (24.8%). While Kinyarwanda is used as the LOI in early primary grade levels, in upper primary and throughout secondary English is used. This prevents girls from accessing the curriculum and benefiting from being in school. Findings indicate that girls who speak the LOI perform better in both English and Kinyarwanda literacy and that girls who do not speak the language of instruction find it more difficult to successfully transition.

Quantitative and qualitative evidence validates all key project assumptions assessed at Baseline, suggesting that the intervention is likely to impact desired results.

Improved teaching quality will lead to improved learning outcomes. The study found that perceived teaching quality successfully predicts English literacy at the primary and secondary level, and numeracy outcomes at the primary level. The review of this intermediate outcome found that teachers may face challenges with classroom management, providing learning opportunities to students at the right level of challenge, and conferring with learners. Project stakeholders widely agree that improved teaching quality, will lead to improved educational achievements.

However, both qualitative and quantitative findings raised the issue of punishment for getting something wrong in a lesson as a significant concern for girls, and this may confound the effects of any improvements in teaching quality on learning. Girls reported that this was common practice in schools and this likely discourages student participation and engagement in the classroom.

Extended learning opportunities will support girls to improve their learning outcomes. Qualitative evidence supports the role that extended learning opportunities such as Child Study Groups and remedial lessons

can play in improving literacy and numeracy acquisition. Girls report that practicing core reading skills in groups, reading out loud or listening to someone read out loud, and imitating someone reading, were useful strategies which supported them to improve their reading skills. Girls also reported that practicing exercises and being provided with real world examples supports learning in mathematics. These approaches can be employed in project activities to promote learning improvements.

Better access to teaching and learning materials will lead to improvements learning. Girls reported that having access to visual learning aids as well as reading materials including books and magazines can support their learning outcomes in literacy and numeracy. This suggests that the project is appropriately targeting this area to promote improvements in learning.

Out of school girls lack basic literacy and numeracy skills inhibiting their ability to successfully re-engage with school or participate in TVET, IGAs, or work-readiness training. According to qualitative sessions with caregivers, parents who experience economic hardship often must decide who among many they send to school and often choose to send only those children who perform well in school or those with more likely job prospects. While these decisions are not gendered in nature, doing house chores is associated with both being a girl and poor school performance. These barriers negatively affect a girls' ability to successfully transition in school.

Girls need better access to internship opportunities to be able to successfully enter the workforce. Matched with the right skills, internship opportunities offer the opportunity to home in work skills and access the workforce. Given that employment opportunities are few in Nyaruguru, these experiences might be an important way for girls to build relationships and successfully reach paid employment.

Poor sexual and reproductive health is a barrier affecting the access and learning of girls in schools. Poor sexual and reproductive health was the fourth most prevalent barrier mentioned by project stakeholders. Stakeholders reported that girls often struggled to attend school or learn in school when they were menstruating. Despite changing rooms being built as part of REAP1 to support girls to attend school during menstruation, some girls still feel ashamed to ask to use these facilities. Although stakeholders reported improvements since REAP1, this remains a barrier to girls' attendance. Girls and parents also reported cases were girls had dropped out of school due to teenage pregnancy. Through SRH corners the project aims to improve menstrual management and provide girls with access to SRH knowledge and advice.

Marginalized girls need financial support to be able to afford school costs. Economic hardship was shown to be a key barrier to educational access and achievement. Out of school girls highlighted the role of poverty in causing them to drop out due to lack of school materials. Parents and girls also reported stigma associated with poverty. This included teachers treating poor students differently, with girls reporting that books and other materials were usually provided to wealthy girls, and parents reporting discrimination from peers of children who could not afford school uniforms or soap. Through MDCs, IGAs, school business, and active budgeting to support girls to enrol in school, the project aims to address this barrier.

With regards to sustainability, **advocacy engagements and sharing learning with key stakeholders at the community, district, and national level is likely to lead to replication of best practices**. The project has had past success through advocacy engagements with various stakeholders. This has resulted in district officials committing to actively participating in the design and monitoring of school improvement plans. Overall, the baseline assessed sustainability at the community, school and system level to be emerging.

With regards to gender and social inclusion, the project is GESI accommodating and acknowledges the role of gender and disability in the design of project activities and in relation to the achievement of educational outcomes. Several project activities focus on addressing gender inequities, including teacher training on gender-responsive pedagogy, and the provision of sexual and reproductive health corners tailored to the needs of girls. However, the project needs to take active steps to ensure activities are inclusive of girls who experience disability. 5% of girls at Baseline experienced some form of disability: cognitive, mobility, hearing, visual, communication, or self-care. The study found, that girls experiencing some form of disability had a significantly higher chore burden than their peers. This is likely to influence the time girls who experience disability can spend on school work outside of class, including participation in Child Study Groups and remedial lessons.

6.2 Recommendations

Based on this study, the external evaluation team would put forward the following recommendations:

Project Level

1. **Address corporal punishment in the learning environment**: Many students reported this as a significant concern. Physically punishing students for getting things wrong in lessons is likely to lead to reduced willingness of students to participate and, subsequently, lower educational achievements. This was the most common item mentioned by girls that they would change about school if they had the power to do so. Integrating components on positive punishment or positive reinforcement into teaching capacity building activities, would likely reduce the prevalence of this practice.
2. **Improve visibility of linkages between TVET and economic opportunities with girls**: Transition rates to TVET are low in project areas. This is likely because despite girls wanting to gain successfully employment, they are unaware of TVET offerings and the benefits of participating in TVET programmes. The project should consider actively improving the visibility of TVET as well as its likely results to make this more tangible to girls in project areas. At the same time, it will be important to ensure that employers linked to the girls through the project are able to provide safe and paid working conditions. At the moment, it is unclear whether these opportunities will be paid.
3. **Target high-chore burden as key indicator:** A large proportion of girls face a high-chore burden each day. This distracts away from participation in school and school-related activities. Several intervention components aim to offer extended learning opportunities to girls, which require girls to stay after school. Project activities should consider actively targeting this indicator, in activities involving parents, to reduce the burden placed on girls to complete household chores. The project should consider addressing this barrier with parents through additional outreach activities.
4. **Ensure CSGs and remedial lessons are accessible to non-readers, particularly in English:** A large proportion of girls in primary schools are non-readers. The project should review the CSG manual and remedial lesson modalities to ensure they offer tasks of appropriate challenge to non-readers and support them to improve their English literacy acquisition. Training of CSG tutors should include components on early reading skills.
5. **Ensure inclusive education strategies are incorporated in teacher training activities:** Although a small proportion of girls' experience impairments, this may change as girls get older. Girls who experience impairments have higher perceived safety concerns, are at higher risk of discrimination, and have a higher chore burden. By incorporating an inclusive education component in teacher training, the project can enable teachers to create accessible learning environments for this vulnerable minority.
6. **Improve visibility of Child Protection Protocols**. Several girls reported cases where teachers may try and take sexual advantage of girls in schools. While there were no cases of abuse having occurred, this was a significant concern for project beneficiaries, indicating the need for improved visibility of child protection protocols at the school level. The project can consider ensuring all schools have posters of the CPP policy in accessible areas, and further integrate child protection awareness training in teacher training workshops.
7. **Adopt teaching and learning approaches suggested to work well by girls.** Teacher training activities, CSGs, and remedial lessons could adopt several approaches reported by girls to improve their learning in literacy and numeracy. These included working in small groups, reading out-loud, imitating someone reading, accessing visual learning aids, and being provided with real life examples where learning can be applied.

Monitoring

1. **Monitor teaching quality dimensions through classroom observations:** the evaluation has adopted seven dimensions to understand teaching quality. Classroom observations should incorporate these dimensions to ensure best practices can be properly identified and shared at key evaluation points.
2. **Identify and monitor girls facing higher degrees of risk and vulnerability:** This study identified several risk groups, namely: girls aged 17-19 at risk for transition, disabled girls, pregnant girls and girls facing severe forms of hardship. The project should seek to provide CSG tutors and to others with relevant tools to identify girls facing increased vulnerability and tools to monitor these girls throughout the intervention.

Annex 1: Logframe

Project Logframe attached.

Annex 2: Outcome Spreadsheet

Outcome Spreadsheet attached.

Annex 3: Key findings on Output Indicators

Key output indicator findings from the Baseline Study are reported in the table following, against planned targets. The project has provided additional comments where necessary.

Table 80. Output Indicators at Baseline

Indicator	Disagregation	Baseline Achieved	Y1 Target	Y2 Target	Y3 Target	Comments
Output 1.1a: % of girls reporting improved quality of education, based on perceptions of perceived quality and inclusivity of teaching (measured through an annual survey 7 dimensions of teaching quality)	Girls	65.8%	N/A	+20%	+40%	At Baseline the score reports the % of girls reporting positive views on teaching quality (</= 4 on TQ scale)
Output 1.1b: % of teachers self-reporting an increase in their own capacity and quality of teaching due to project training and	Teachers	214 (84%)	0%	65%	80%	The project is analysing teachers data from ADRA and this will be updated in April

mentoriship received						
Output 1.2a:# of girls and boys attending the after school Community Study Groups	Girls	TBD	1500	1800	2250	Data are currently being analysed and will be available in the next baseline report version.
	Boys	TBD	TBD	TBD	TBD	Data are currently being analysed and will be available in the next
Output 1.2b:% of girls reporting satisfaction related to criteria to be determined such as relevance, quality, inclusivity, and safety of the CSGs	Girls	TBD	30%	60%	80%	Data are currently being analysed and will be available in the next
Output 1.3: # of Reading materials to pupil ratio for a) English b) Kinyarwanda n c) math	All	0	0	All books distributed in Y2		The purchase and distribution of books has been moved to Q5
Output 2.1:# of PTA members who are trained on School Improvement Plans and school budget use in support of girls education	Male	59	90	130	140	
	Female	31	90	130	140	This activity has not yet begun
Output 2.2a:# of schools with written SIP in place	Schools	10	0	14	26	

Output 2.2b:% of schools that achieved more than a half of their SIP target	Schools	35.7%	0%	50%	75%	This activity has not yet begun
Output 2.3:# of SIP audits and budget review conducted with supervision by the SEOs	SIP Audits	TBD	10	18	28	This activity will start in Q5
Output 3.1: # of schools with SIP that have mandatory budget line of school cost for most vulnerable students	Schools	10	0	14	28	
Output 3.2: 1) # of girls and boys attending remedial learning and 2) % of these girls and boys who enrolled in remedial learning lessons who regularly attend	Girls / Boys	TBD	1) 280 2) 10%	1) 380 2) 30%	1) 430 2) 40%	The start of this activity has been pushed to Q5, to wait for all the teachers trainings to be completed
Output 3.3: # of target girls and boys placed in an internships during the project	Girls / Boys	0	0	200	250	The project plans that placementsw ill take place in long holidays (October - December)
Output 3.4: 1) # of target girls and boys who are part of the savings groups established by the	Girls	930	1752	2127	2502	
	Boys	119	TBD	TBD	TBD	

project						
Output 4.1:# of girls and boys receiving support covered by 1) School Businesses profit 2) MDC profit at least once during the past 12 months	Girls	1) 93 2) 134	3) 100 4) 50	1) 300 2) 100	1) 400 2) 150	
	Boys	1) 19 2) 0	TBD	TBD	TBD	
Output 4.2: # of visitors to youth friendly sexual and reproductive health corners, dissagregated by gender	Girls	73	60	100	120	
	Boys	0	TBD	TBD	TBD	
Output 4.3: % target girls with improved attitude towards sexual reproductive health	Girls	TBD	60%	70%	80%	Data is being gathered and will be reported at the end of the quarter.
Output 5.1:# of government staff involved in School Improvement Planning / review apart from teachers	Government Staff	11	2	4	5	
Output 5.2: # of meetings organised with District Staff to advocate project best practices for replication	Meetings	1	1	3	5	
Output 5.3: 1) # of newsletter editions	Newsletters, followers, re-tweets	1) 1 newsletter 2) 3,700	1) 1 2) 3,500 3) 5	1) 3 2) 4,000 3) 30	1) 5 2) 4,200 3) 60	

produced and disseminated 2) # of Facebook followers 3) # of re-tweets directly related to the project	Followers 3) 7 re-tweets	

Annex 4: Beneficiary tables

The tables below contain information about direct beneficiaries of the project.

Table 81: Direct beneficiaries

Beneficiary type	Total project number	Total number of girls targeted for learning outcomes that the project has reached by Endline	Comments
Direct learning beneficiaries (girls) – girls in the intervention group who are specifically expected to achieve learning outcomes in line with targets. If relevant, please disaggregate girls with disabilities in this overall number.	**6,981 girls** in upper primary and secondary school.	**6,434 girls** in Upper Primary and Lower Secondary, who will receive the full learning intervention package by endline. **223 girls** experience a form of physical or intellectual disability. **6,702 girls** attending school and **279 girls** are presently out of school.	Estimates were obtained from REAP's MEL plan.

Table 82: Other beneficiaries

Beneficiary type	Number	Comments
Learning beneficiaries (boys) – as above, but specifically counting boys who will get the same exposure and therefore be expected to also achieve learning gains, if applicable.	14,067	Boys in target schools
Broader student beneficiaries (boys) – boys who will benefit from the interventions in a less direct way, and therefore may benefit from aspects such as attitudinal change, etc. but not necessarily achieve improvements in learning outcomes.	14,067	Boys in target schools
Broader student beneficiaries (girls) – girls who will benefit from the interventions in a less direct way, and therefore may benefit from aspects such as attitudinal change, etc. but not necessarily achieve improvements in learning outcomes.	13,981	Girls in target schools
Teacher beneficiaries – number of teachers who benefit from training or related interventions. If possible /applicable, please disaggregate by gender and type of training, with the comments box used to describe the type of training provided.	253	Teachers trained by the project (103 females and 149 males)
Broader community beneficiaries (adults) – adults who benefit from broader interventions, such as community messaging /dialogues, community advocacy, economic empowerment interventions, etc.	TBC	This is still being established by the project

The tables below provide further define the project's target groups. They each refer to the same total number of girls but use different definitions and categories. These are girls who can be counted and have regular involvement with project activities. Percentage proportions were obtained from the project's MEL plan.

Table 83: Target groups - by school

School Age	Project definition of target group (Tick where appropriate)	Number targeted through project interventions	Sample size of target group at Baseline
Lower primary	×	0	0
Upper primary	✓	5,026	303
Lower secondary	✓	1,407	100
Upper secondary	✓	269	17
Out-of-school	✓	279	17
Total:		**6,981 Girls**	**437 Girls**

Table 84: Target groups - by age

Age Groups	Project definition of target group (Tick where appropriate)	Number targeted through project interventions	Sample size of target group at Baseline
Aged 9-11 (% aged 9-11)	✓	2,094	56
Aged 12-13 (% aged 12-13)	✓	1,396	124
Aged 14-15 (% aged 14-15)	✓	489	119
Aged 16-17 (%aged 16-17)	✓	105	80
Aged 18-19 (%aged 18-19)	✓	104	36
Aged 20+ (% aged 20 and over)	✓	70	28
Total:		**6,981 Girls**	**443 Girls**

Table 85: Target groups - by sub group

Social Groups	Project definition of target group (Tick where appropriate)	Number targeted through project interventions	Sample size of target group at Baseline
Home Characteristics			
3+ Children Per Adult		**615**	39
Moderate Hardship	✓	**3396**	216
Extreme Hardship	✓	**1069**	68
High Chore Burden		**2280**	**145**
Difficulty to Afford School	✓	**5482**	**329**
Child lives without either Biological Parent		**692**	**44**
Single Orphan		**975**	**62**
Double Orphan		**142**	**9**
SRH Groups			
Girls who have been pregnant	✓	**47**	**3**
Girl is Married or Living with a Man as if Married		**0**	**0**
Girls is a Mother		**31**	**2**
Educational Characteristics of HH			
Girl has Parents with Negative Parental Values towards Girls' Education	✓	**204**	**13**
Girls does not speak the language of instruction used at school		**1698**	**108**
HoHwith No Formal Schooling		**2484**	**158**
Disability Status			
Experiences some form of impairment		**220**	**14**
Visually Impaired		**157**	**10**
Hearing Impaired		**31**	**2**
Mobility Impairment		**63**	**4**
Cognitive Impairment		**94**	**6**
Self-care Impairment		**47**	**3**
Communication Impairment		**47**	**3**

Table 86: Target groups - by school status

Educational sub-groups	Project definition of target group (Tick where appropriate)	Number targeted through project interventions	Sample size of target group at Baseline
Out-of-school girls: have never attended school	✖	0	0
Out-of-school girls: have attended school, but dropped out	✓	279	17
Girls in-school	✓	6,702	420
Total:		**6,981 Girls**	**437 Girls**

Annex 5: MEL Framework

Signed off MEL Framework attached.

Annex 6: External Evaluator's Inception Report (where applicable)

Inception Report attached.

Annex 7: Data collection tools used for Baseline

Full Annex 7: Data collection tools attached.

Annex 8: Datasets, codebooks and programs

All datasets and codebooks attached.

Annex 9: Learning test pilot and calibration

Detailed Pilot Report attached.

Annex 10: Sampling Framework

Sampling Framework attached.

Annex 11: Control group approach validation

This annex serves to reflect on the adequacy of the learning and transition cohort samples for the evaluation of outcomes at midline and endline. It describes the sampling strategies used and presents the results of a comparability study performed on the sample at baseline.

Sampling

To produce evaluation findings that can be generalised to all beneficiary populations, we sampled a representative portion of the treatment population using a *multi-stage sampling* technique. In multistage sampling, sampling is carried out in stages using smaller and smaller sampling units at each stage.

The first stage is *cluster sampling*, through which schools were selected according to their treatment status and cluster analysis. The second stage is a *stratified random sampling* method which aims to proportionally recreate the target population group through school-level sampling.

Stage 1: Cluster Sampling

First, the framework presents all schools and catchment areas where project activities will occur. These locations are classified into different "clusters" using hierarchical cluster analysis and a nearest neighbour algorithm. Aggregate school-level data was used for this exercise and obtained from the Nyaruguru district education authority, which contained school-level data for all schools in the district.

Schools were clustered according to:

- Geographical location (sector)
- Student to teacher ratio
- Gender parity in enrolment
- Student to classroom ratio

To select comparison groups, the project paired each treatment school with the most similar control school in the same cluster. Schools offering the same grade levels were matched to the same (e.g. Primary+9YBE schools were matched to other Primary+9YBE schools within the same cluster). The sample aimed for a 1:1 allocation ration between treatment and control samples[178].

However, as specified in the MEL Framework, all schools with primary and secondary grade levels in Nyaruguru were selected to participate in the study (18 schools total in the entire district; 9 treatment and 9 control) with an additional 6 primary schools where P4 students were sampled. These four additional primary schools were taken from the most common clusters to avoid outliers.

Stage 2: Stratified Random Sampling

Once clusters were selected, we aimed to survey a representative sample that is reflective of the breath of REAP's target groups. The project decided to stratify the sample according to the main groups of direct beneficiaries. The baseline sample will therefore be stratified according by (1) in- and out-of-school status, and (2) by grade-level. At the final level of the sampling method, participants are chosen randomly using a lottery system.

[178] The key principles of representative sampling that REAP will follow are described in Table 11 of the MEL Guidance Part 2.

Learning and transition were sampled for a single cohort of girls sampled at baseline. While the intervention operates in 28 schools, 19 of which are primary schools exclusively, the cohort will come predominantly from schools offering secondary grade levels (total of 9 schools plus 3 primary schools were only P4 girls will be sampled at baseline and tracked through). This is because the project does not target all secondary schools in Nyaruguru and many interventions are in schools with no secondary grade levels offered. While in those schools learning can be tracked from baseline-to-endline for a sub-set of girls, the project took caution to select only schools where all transition pathways can be observed (i.e. in schools that offer both primary and secondary school levels) and, when primary schools were selected, only girls in P4 will be sampled at baseline and followed through in the years (P5 at midline and P6 at endline)[179].

1. **In-school and out-of-school split (95% in-school and 5% out-of-school)**

    a. **In-school Girls:** sampling an equal proportion of beneficiary girls by grade level starting in P5 through S5 at baseline. These girls are tracked in the following two years of the evaluation depending on their transition pathway. Girls were randomly sampled from school registries using a lottery system and contact information were gathered from them to follow up with home-based assessments.

    The in-school sample was stratified as follows:

Table 87 Stratification Criteria and Allocation Proportions

Strata	% Representation in Direct Beneficiary Population	% Suggested Representation in Baseline Sample
Out-of-school	4%	5%
In-school	96%	95%
Lower Primary	0%	0%
Upper Primary	72%	75%
Lower Secondary	19%	20%
Upper Secondary	4%	5%

    b. **Out-of-school Girls:** A representative sample of out-of-school girls will be randomly selected from REAP's 1 out-of-school registry, which was compiled by the project during REAP 1 and contains full contact information for all out-of-school girls enrolled in REAP 2. REAP 2 will not target any new girls who are out of school and will rather work with the same girls from the GEC 1. Out-of-school girls will be interviewed at their own place of residence or in a place deemed convenient by the participant.

These individuals are tracked longitudinally at each evaluation point. Personal contact information has been collected from each household to follow up with the exact same person at their household and/or school the following year. Every case has been assigned a unique identification code matched against contact information to link case-outcomes with case contact information in a separate, password-protected file. This file is known as the cohort tracking dataset (CTD).

[179] To avoid losing P5 and P6 participants at endline in primary schools that do not have a secondary school (given that they girls could transfer to secondary schools outside the project area) only girls in P4 will be sampled for learning in these schools to avoid losing participants due to re-allocations outside the project area at endline. The evaluation will therefore predominantly select schools in clusters offering grade levels up to Junior Secondary (Primary +9BYE) and Senior Secondary (Primary+12BYE) to draw participants from. However, it is expected that the most successful girls transition into boarding schools outside the project area, as these are public institutions for the most talented students.

Comparability Study

The following shows a study of comparability between treatment and control schools based on their exposure to similar interventions, barriers, and group characteristics. Chi-square results show that groups are largely comparable. Significant differences are also discussed below. When significant differences are found across characteristics, the project may consider using these variables as covariates in the impact model.

Exposure to similar interventions

Whenever possible, the study considered the contamination effects of other interventions in the decision about cluster pairings. However, given the limited room for selection among schools with secondary grade levels, contamination effects will have to be dealt with at the analytical rather than at the sampling stage.

Table 1 below shows the presence of other interventions in treatment school and control schools and the presence of other projects at the Endline of REAP1. Almost all schools in the treatment group have other interventions operating within. This is because the original REAP project was concerned with the installation of sanitation facilities known as ECOSAN toilets and the intervention selected the schools with the poorest sanitation facilities. The project coordinated with education actors in the district to select treatment schools, including the local government and other sanitation actors, many of which enhanced REAP's GEC 1 intervention with their own interventions (see table below).

Table 88 Other Intervention from other NGOs other than HPA for the REAP1 intervention

Treat	NGOs Names	NGOs Main intervention
Treatment	WFP, Compassion, Winirock International, RAB,YMCA, Ni Nyampinga, Plan International-Rwanda, HDP, World Vision-Rwanda, ADPR, Renaniparatina province, Compation, KGAS (Keeping girls at school) Concern World Wide and WFP	School feeding, school cost cover, uniform supply, supporting students from most marginalised families, trainings about gender balance (boys and girls), rehabilitation and sanitation, milk distribution to students, distribution of chicken and rabbits to the students, newsletter distribution, reproductive health education, providing water tanks to the school, school fees support and uniform provision.
Control	WFP, Plan International, VSO, HPD, Concern World Wide and Transparency International-Rwanda	Education, Girl's Education, school feeding and similar programmes.

Households were also asked a set of questions to relating to exposure to similar education interventions. According to chi-square tests, treatment and control clusters are only different in that more treatment girls received school books over the past 3 years. This is expected given the interventions in REAP 1 and 2 dedicated to providing books in communities. For all other characteristics, treatment and control groups are comparable.

Table 89 Exposure Questions Results

Exposure Effect		Control		Treatment		Sig.
		n	%	n	%	p
Q107. Has [GIRL] received [scholarship/cash transfer/financial support] towards [girls] education in the past 12 months?	*Yes*	21	4.6%	27	6.1%	p>.05
	No	427	92.8%	409	92.1%	
	Don't Know	12	2.6%	8	1.8%	
Q114. Apart from your family, her friends and her school, did anyone else give [GIRL] any school books over the past three years?	*Yes*	23	5.0%	38	8.6%	**p <.05**
	No	432	93.9%	395	89.0%	
	Don't know	5	1.1%	11	2.5%	
Q116. Apart from your family, did [GIRL] receive any special tutoring or help with her schoolwork over the past three years?	*Yes*	18	3.9%	22	5.0%	p>.05
	No	430	93.5%	401	90.3%	
	Don't Know	12	2.6%	21	4.7%	
Q118. Did [GIRL] receive school materials in the past three	*Yes*	59	12.8%	56	12.6%	p>.05

years?	*No*	390	84.8%	371	83.6%	
	Don't know	11	2.4%	17	3.8%	
Q120. Apart from your family, did anyone talk to [GIRL] about enrolling or staying in school over the past three years?	*Yes*	34	7.4%	42	9.5%	p>.05
	No	415	90.2%	381	85.8%	
	Don't know	11	2.4%	21	4.7%	
Q122. Did [GIRL] attend AFTERNOON sessions at school to learn about literacy, numeracy and SRH in Girls' Clubs?	*Yes*	33	7.2%	42	9.5%	p>.05
	No	407	88.5%	383	86.3%	
	Don't know	20	4.3%	19	4.3%	

Characteristics and Barriers

According to chi-square tests, treatment and control schools are similar in terms of socio-economic status and other important characteristics. See Table XX for results; significant differences are signalled and discussed below.

In terms of characteristics, the prevalence of girls who have been pregnant and married girls was higher in control areas but altogether low. More girls in control schools also think that school is further than 1hr walking time, though more than 85% in both areas live within 1hr of walking time.

In terms of school quality, more girls in control schools think that there is a seat available for every student and use the school area to play and socialize and feel welcome by their teachers. This confirms the project's expectation in that they chose to work with schools with some of the lowest teaching quality of the district. On the other hand, there was also a positive association between feeling safe and being in a treatment school, which is expected given REAPs 1 intervention's work towards child protection and safety. See results below:

Table 90 Comparability of Treatment and Control Cases according to Characteristics

Characteristic		Control		Treatment		χ^2 Test
		n	%	n	%	Sig
3+ Children Per Adult	*Less than 3 children per adult*	419	91.1%	404	91.2%	
	3 or More Children Per Adult	41	8.9%	39	8.8%	
Hardship Group	*No Hardship*	137	29.8%	160	36.0%	
	Moderate Hardship	235	51.1%	216	48.6%	
	Extreme Hardship	88	19.1%	68	15.3%	
Chore Burden Dummy (1 = whole day/ half day) - Girls View	*Other*	330	71.7%	299	67.3%	
	High Chore Burden	130	28.3%	145	32.7%	
Difficulty to Afford School	*No*	83	19.8%	90	21.5%	
	Yes	337	80.2%	329	78.5%	
Child lives without either Biological Parent	*Lives with both Parents*	419	91.1%	400	90.1%	
	Live without Either parents	41	8.9%	44	9.9%	
	other	0	0.0%	0	0.0%	
Orphan Type	*Non-Orphan / death not mentioned*	419	91.1%	373	84.0%	
	Single Orphan	39	8.5%	62	14.0%	
	Double Orphan	2	0.4%	9	2.0%	
Girl has been Pregnant	*Never been pregnant*	441	95.9%	440	99.1%	**p<.05**
	Been Pregnant	12	2.6%	3	0.7%	**p<.05**
	Don't Know	7	1.5%	1	0.2%	
	Refused	0	0.0%	0	0.0%	
Girl is Married or Living with a Man as if Married	*Not married or living as if married*	452	98.3%	441	99.3%	**p<.05**
	Married or living as if married	4	0.9%	0	0.0%	**p<.05**
	Don't Know	4	0.9%	3	0.7%	
	Refused	0	0.0%	0	0.0%	
Girls is a Mother	*Not Mother*	427	92.8%	431	97.1%	

Characteristic		Control		Treatment		χ^2 Test
		n	%	n	%	Sig
	Mother	5	1.1%	2	0.5%	
	Don't Know	23	5.0%	8	1.8%	
	Refused	5	1.1%	3	0.7%	
Negative Parental Values Dummy	*Other*	442	96.1%	431	97.1%	
	Negative Parental Values	18	3.9%	13	2.9%	
Does not speak LOI (English used P4 or P6 and up)	*Speaks LOI*	363	78.9%	336	75.7%	
	Doesn't Speak LOI	97	21.1%	108	24.3%	
HoH No Formal Schooling	*Other*	289	62.8%	286	64.4%	
	No formal schooling	171	37.2%	158	35.6%	
Primary and Secondary school at more than 1hr walking time Dummy	*No*	406	88.3%	417	93.9%	**p<.05**
	Yes	54	11.7%	27	6.1%	**p<.05**
Teaching Quality Group (Low <3 on mean of 14 items)	*Other*	416	96.7%	403	97.1%	
	Low Teaching Quality	14	3.3%	12	2.9%	
Girls' View: Insufficient Learning Materials	*No*	449	97.6%	435	98.0%	
	Yes	11	2.4%	9	2.0%	
Girls' View: seats for every student	*No*	402	87.4%	407	91.7%	**p<.05**
	Yes	58	12.6%	37	8.3%	**p<.05**
Girls' View: Does not use drinking water facilities at school	*No*	0	0.0%	0	0.0%	
	Yes	0	0.0%	0	0.0%	
Girls' View: Use of areas to play and socialize	*No*	396	86.1%	404	91.0%	**p<.05**
	Yes	64	13.9%	40	9.0%	**p<.05**
Girls' View: Teachers Punish Students Physically	*Other*	117	25.4%	124	27.9%	
	Physical Punishment from Teacher	343	74.6%	320	72.1%	
Girls' View: Teacher is Absent from Class	*Other*	396	86.1%	395	89.0%	
	Agree or Strongly Agree	64	13.9%	49	11.0%	
Girls' View: Teacher Makes me Feel Welcome	*Other*	435	94.6%	432	97.3%	
	Strongly Disagree or Disagree	25	5.4%	12	2.7%	**p<.05**
Girls' View: Teacher treats girls and boys differently	*Other*	451	98.0%	435	98.0%	
	Unfairly	9	2.0%	9	2.0%	
Girls View: Does not feel Safe Travelling to School	*Other*	435	94.6%	432	97.3%	
	Don't feel safe	25	5.4%	12	2.7%	**p<.05**
Girls View: Feels Safe at School	*Yes/Other*	447	97.2%	441	99.3%	
	No	13	2.8%	3	0.7%	**p<.05**
Impairment Status (Experiences at least one form)	*Does not experience impairment*	441	95.9%	430	96.8%	
	Experiences some form of impairment	19	4.1%	14	3.2%	

Annex 12: External Evaluator declaration

Signed copy attached.

Annex 13: Project Management Response

In general the key evaluation findings have confirmed the existing understanding of the context in which the project operates, identifying in some case new relationships between outputs, intermediate outcomes and outcomes.

Economic hardship

One of the main barriers to learning and transition is economic hardship. Economic factors affect negatively Kinyarwanda test scores and successful transitions and are cited as one of the main reasons for lack of attendance (data reflect that almost 10% of all girls mentioned “no money to pay school levies” as a reason for missing school) and poor educational achievements, thus affecting directly not only transition, as initially showed in the project Theory of Change, but also learning. Most of the girls who drop out from school do so due to lack of school costs, including books, uniforms, shoes, lunches, etc. Many could not transition to TVET or higher levels of education due to inability to pay the fees, and lack of scholarship opportunities. In order to tackle this issue, the project is providing additional monitoring and mentorship to the school businesses (SB) set up during REAP1 during the first two years of the project. SBs raise money for the school budget to fund school related costs for vulnerable girls (and boys in some cases). At the same time, Mother Daughter Clubs (MDC) involve the most vulnerable girls in target communities, including OOS girls, selected by the communities themselves. In these clubs, girls and their mothers participate in income generation activities (IGAs) whose profit is used to cover girls’ school related costs, while also discussing relevant issues like teenage pregnancy and career aspirations. SBs and MDCs profit is used primarily to cover larger school related costs like uniforms, shoes and books, however even smaller/repetitive costs like school lunches remain prohibitive for some girls.

Considering that economic hardships has been identified as one of the main barriers to two project outcomes, the management is now considering the possibility to extend the monitoring and mentorship to both SBs and MDCs, initially limited to the first two years, to the whole duration of the project. This will ensure that both SBs and MDCs will become completely successful and sustainable without any outside support. SBs will be managed by the Parent Teacher Associations (PTAs), while MDCs will be self-managed with the support of the PTAs.

Language of Instruction (LOI)

The recent switch in the language of instruction (LOI) in Rwanda from French to English has deeply affected not only teachers, who complained of having received only a two month training in English teaching and do not feel confident, but also students. Findings have highlighted that 24.8% of girls do not speak the language of instruction, preventing them from accessing the curriculum and from benefitting from being in school. Furthermore 18.2% of the sample at primary schools are non-readers in English, while 42.7% are emergent readers, which means that around 60% of girls have serious problems to follow the lessons. The baseline situation shows that English literacy is a far greater challenge for the targeted girls than Kinyarwanda literacy and numeracy. The project will set up Teacher English Discussion Groups with all the 252 teachers that will take part in the teacher trainings on literacy and numeracy and will encourage each of these teachers to set up English discussion groups with their colleagues at their own schools in order to improve their confidence and knowledge, thus supporting their students’ learning and transition. While Kinyarwanda literacy is stronger than English, written skills (ex. ability to write a short letter or essay) appears to be relatively weak.

The project management particularly HPA and ADRA are now discussing whether upcoming trainings should give a stronger emphasis on English compared to Kinyarwanda and numeracy which require less support. Within Kinyarwanda, the project management are considering to put a bit more emphasis on writing skills, for

example supporting students to keep journals or write short stories to improve their skills. The project management is also discussing how best to help the large number of English non-readers to get up to standard. One option is to strengthen this aspect in the remedial learning (see further detail below) but there may be others as well. There is a need to discuss further with key project stakeholder, headmasters, and teachers.

Transition

Generally, throughout Nyaruguru, at the primary level, girls' net enrolment is around the same as that of boys, but at secondary level, girls are generally admitted to lower quality schools, and each year around 7.5% of girls drop out. The situation in the 28 poorest target schools and Control schools targeted by REAP2 is however worse from the district average. Nyaruguru District data indicates that among 1,099 marginalised girls who completed P6 in the REAP1 target schools, only 49.3% (542 girls) transitioned to secondary school. The percentage identified by the evaluators is higher (67%) but data show that transitions between first to secondary school is much lower if compared to in-school transitions (87.6%). Given the particularly low transition rate at this key point of transition, a graduation ceremony at the end of primary school will recognise girls who have not dropped out and motivate them to continue. Regarding transition of OOS girls to TVET, it has been found that many girls were too embarrassed to return to school as they were far older than their classmates. Many commented that they preferred accelerated learning, TVET, employment, or income generation support. However only few of them have basic numeracy skills, which makes it difficult for them to excel strongly with their IGA, TVET and formal employment. REAP2 will therefore continue supporting MDCs, but also offer remedial learning in after-school clubs for OOS girls, and link them to TVET, employers and income opportunities through internships, TVET (with Private Sector Federation Rwanda funding) and savings groups.

The project is already taking steps to improve transition to TVET since the time of the baseline field work (see details below) and it is expected that these will address the issue

Intermediate Outcomes

Baseline findings have confirmed that the intermediated outcomes identified by the project should lead to outcomes level achievements in learning and transition. Girls who attend school are likely to perform better in learning tests and successfully transition. Attendance will be improved through financially supporting the most marginalised girls to afford school levies and providing greater access to readers and books. Furthermore the girls will stay motivated and interested in school and literacy, receiving more support and encouragement from teachers and community tutors due to improved quality of teaching through teachers' training in inclusive methods and English discussion groups. As highlighted by the baseline findings, perceived teaching quality successfully predicts English literacy and numeracy, thus validating a central assumption's in the projects Theory of Change. However the baseline report has also identified potential issues, such as the frequent use of physical punishment within the learning environment, which might prevent girls to actively engage and participate during lessons. This challenge was not initially considered as serious and prevalent by the project and there are concerns that this might affect the positive effects on learning and attendance of the improved quality of teaching. (Please see below how the project's management is planning to respond to this).

By improving livelihood and jobs related skills through School To Work Transition (STWT) and work readiness (WR) training and TVET courses, the project enhances the chances that girls would learn English literacy and numeracy, as confirmed by the baseline findings, thus affecting not only transition, as initially stated in the project's Theory of Change, but also learning.

Response to recommendations

Corporal punishment within the learning environment

The project recognises that physically punishing students for getting things wrong in lessons has been

reported by students as a greater concern than initially foreseen. This issue might prevent students from actively participating and engaging and will likely challenge the positive effects of the improved quality of teaching and the implementation of pedagogy inclusive methods. Therefore, the project is proposing to include into the teacher trainings by ADRA components on positive punishment or positive reinforcement in order to reduce this practice and further support improved learning and transition. Furthermore, Link Community Development will consider and address the issue more strongly in their SIP and monitoring activities.

Linkages between TVET and economic opportunities

Transition rates to TVET courses appear to be low as at the time the baseline data collection took place, in December 2017, this activity was not in full swing yet. Now the project's management has acquired the lists from the schools of all the girls who have dropped out and has started to contact them to help them to re-enrol in school or into TVET courses. Furthermore, the project is mapping all the students currently enrolled in schools and that have showed interest in enrolling into TVET courses. The project will highlight the benefits of enrolling into TVET courses and the consequent employment opportunities to girls. With the activity now in full swing the project is confident that the number of transition to TVET courses will increase by the next evaluation point.

Target high-chore burden as key indicator

Community Study Groups (CSG) and remedial lesson usually take place over the week-end in order to facilitate the girls' attendance. Although the project recognises that house chores could represent a burden that might prevent girls from attending the extended learning opportunities offered by the project and will advocate with the MDCs and the PTAs to try to reduce it. In addition, the project will work with local leaders as well and try to sensitise them through Umuganda (monthly public works). While it will not be possible for some households (particularly the poorest) to drastically reduce their girls' household workload without having negative implications for the whole family, the project will ask communities and households to think about how household chores could be redistributed so that girls and boys in the household would share responsibilities more evenly. The issue could also be raised with parent teacher associations / committees.

Ensure CSGs and remedial lessons are accessible to non-readers, particularly in English

Baseline findings have highlighted that 18.2% of the sample at primary schools are non-readers in English, while 42.7% are emergent readers, which means that around 60% of girls have serious problems to follow the lessons. CSGs and remedial classes could represent a great opportunity to non/initial readers to keep pace with their schoolmates and be able to fully benefit from being in school. The project will make sure to include non-readers into CSGs and remedial lessons and will train teachers and tutors on early reading skills. As it might be difficult to implement CSGs and remedial lesson with students who have very different levels of reading skills, non-readers will be grouped into a separate reading session and incorporated into the other groups once they have acquired the basic skills to follow the class.

Ensure inclusive education strategies are incorporated in teacher training activities

Inclusive education component is already included in the teachers' training. Teachers are trained on practices against inequality and discrimination against social groups based on collective stereotyping such as sex/gender, diseases such like HIV/AIDS, physical disabilities, ethnic, religious or sexual minorities, social ostracism of orphans or street children etc. They are trained on how to remove physical, sensory and cognitive barriers in the school system and to ensure accessibility, orientation, usability and safety of schools for all children. However the baseline has noted that the main group who are struggling with learning are the hearing impaired. The project management will need to discuss more and perhaps consult organisations that specifically deal with hearing impairment to see if there are any community based low cost solutions to better including hearing impaired pupils.

Improve visibility of Child protection protocols

Since the early stages of the project, the management has strictly collaborated with the school head teachers in order to develop proper child protection policies for schools. Those are available at schools and students usually attend on a weekly basis informal refresher training about their rights and about the necessary steps and procedures to report abuses. Furthermore a CP component is included within the teacher training to

make sure that they are aware of the policy. The project will also discuss with the head teachers the possibility to print copies of the policy and to hang those on school walls or to distribute some flyers summarising the main points of the policy among students and school teachers.

Adopt teaching and learning approaches suggested to work well by girls

The project's management is willing to include suggestions from the students on how to improve the CSGs and the remedial lesson and increase the students' participation. The feasibility of these approaches will be discussed with ADRA and Link and with the tutors and implemented whether possible. Students will be encouraged to report whether these new approaches are working and to suggest new ways of teaching and learning.

Monitoring teaching quality dimensions through classroom observation

The seven dimensions adopted to understand teaching quality will be incorporated into the classrooms observations as follows:

Care: It will be observed how teachers show concern for students' emotional well-being;
Control: It will be observed how teachers manage the classroom;
Clarify: During the classroom observation, we will be checking how the teachers help students to understand content and resolve confusion;
Challenge: The teachers should provide learning opportunities to students at the right level of challenge and confer with learners;
Captivate: We will be checking if the teacher is capable of sparking and maintain student interest in learning;
Confer: The project will check if the teachers encourage and value students' ideas and views;
Consolidate: The teacher should be able to help students to integrate and synthetise key ideas.

The project management (particularly HPA and ADRA) will take a second look at its observation tools to ensure that the issue of positive reward systems instead of physical punishment are well captured in the tools. Observation tools will also be checked to ensure that they track whether students are being encouraged to practice to speak English not just in the lesson but also in the classroom and school environment more widely, to check whether English is being sufficiently prioritised in lessons rather than teachers less comfortable with English deprioritising the topic, and ensure that both English and Kinyarwanda lessons address not only reading and verbal skills but also create fun opportunities for practicing writing skills.

Identify and monitor girls facing higher degrees of risk and vulnerability

The project already has systems and tools in place to identify those girls at risk and monitor them throughout the project. The tools track different information regarding child protection, sexual gender based violence and on education. Furthermore, the questionnaires look to identify disabled girls, and girls who may be exposed at severe risks.

Proposed changes to the logframe

Following the findings of the baseline report and the recommendations received from the External Evaluators, the project is now looking at the possibility, depending on the availability of funds and the capacity to identify potential savings from other budget lines and from discussions with the relevant stakeholders and governmental bodies, to include an additional component to the teachers/tutors training on early reading skills, focusing specifically on English, as this has been identified as a major weakness. Non/early readers participating to CSGs and remedial classes will be tracked as part of this new training component.

Annex 14: Theory of Change

Project Theory of Change (ToC) attached.