Project Evaluation Report

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Evaluator:	NFER
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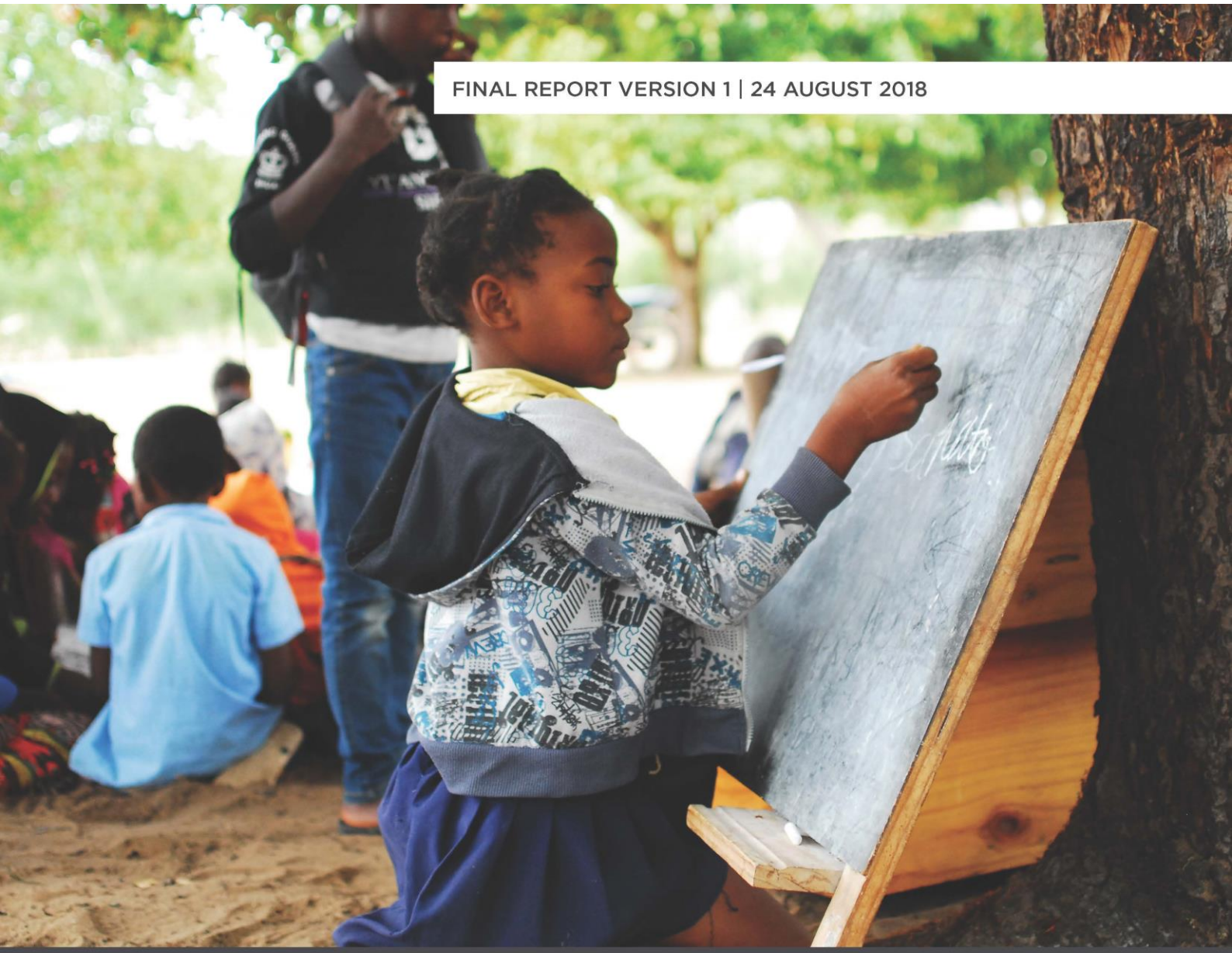
Notes:

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



FINAL REPORT VERSION 1 | 24 AUGUST 2018

Evaluation of the Successful Transition and Advancement of Rights for Girls (STAR-G) project in Mozambique

Baseline report for Save the Children International

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with contributions from Maria Galvis, Dr Joana Andrade, Dr Simone Doctors and Ben Durbin

NFER International
Girls' Education Challenge
UKaid from the British people
Save the Children

GEC-T Baseline Report

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Executive Summary

Purpose

The purpose of this document is to present the results of the baseline evaluation of the Successful Transition and Advancement of Rights for Girls (STAR-G) project in Mozambique. This baseline evaluation is part of a longitudinal study that intends to examine the performance of the STAR-G programme over its lifecycle, interrogating in particular its impact, effectiveness, process, Value for Money, and sustainability.

The baseline evaluation was conducted between February and May 2018 with the goals of:

- setting a baseline for the measurement of the project's outcomes of Learning, Transition and Sustainability, and the project's Intermediate Outcomes (IO) of Attendance, Teaching Quality, Girls' Self Esteem, and Community Attitudes
- providing a nuanced, evidence-based picture of the context in which the project operates and the barriers to education that girls face
- reflecting on and assessing the validity and relevance of the project's Theory of Change, and in particular considering the project's approach to gender equality

Project background

The STAR-G project in Mozambique commenced operations in April 2017 with the objective of improving the life chances of over 15,000 girls. Project beneficiaries were previously supported through a different Save the Children International (SCI) project entitled Programme for the Advancement of Girls' Education in Mozambique (PAGE-M), which ran in the first phase of the Girls' Education Challenge (GEC) from 2013 to 2017. STAR-G will run for four years, with a significant project redesign anticipated by the end of 2018. The Theory of Change and all related analysis presented in this baseline document are based on the original intervention design, which was still applicable at the time of our analysis.

STAR-G currently employs a multi-faceted approach to support girls in the primary school grades of 4 through to 7 in the three provinces of Gaza, Manica, and Tete. To improve learning, the project provides Literacy and Numeracy Boosts to support Portuguese and arithmetic skills of students, and implements a Teacher Professional Development programme for primary school teachers that includes training on gender-responsive pedagogy. To improve transition, the project supports Girls' Clubs, which provide sexual and reproductive health training and information on gender equality, and engages and sensitises community members to girls' rights through mobilising matron/patron groups.

Evaluation approach

Our research design intends to employ a longitudinal, mixed methods approach to examine the performance of the STAR-G programme. Our core evaluation methodology is quasi-experimental – we plan to use a Difference-in-Differences (Dif-in-dif) strategy, in which changes in the outcomes of Learning and Transition in an intervention group will be

compared to changes in outcomes in a plausible comparison group. This quantitative Dif-in-dif will be supplemented using a qualitative results chain analysis strategy to explore changes in the outcome of Sustainability, and improvements in four IOs that include Attendance, Teaching Quality, Self Esteem, and Community Attitudes.

In order to interrogate the project's performance, we will follow a joint learning and transition cohort of 2,377 girls in Gaza, Manica, and Tete from baseline in 2018 to midline in 2019 and finally to endline in 2020. At each evaluation point, we will assess girls in literacy and numeracy, and gather quantitative data from their households. In addition, for our qualitative chain analysis, we will also rely on six in-depth community case studies which will provide rich, nuanced data on how learning and transition barriers, girls' self-esteem, and community attitudes evolve at each evaluation point. To gather data for the community case studies, we use a mix of Focus Group Discussions (FGD) and Key Informant Interviews (KII) with a variety of stakeholders including girls, boys, parents, teachers, and community members.

Baseline findings

- **Project beneficiaries are marginalised based on a variety of dimensions and face several barriers to learning and transition**

We found that STAR-G beneficiaries are based entirely in rural areas, are largely from poor households, and comprise mostly of girls who do not speak the Language of Instruction (LoI) at home. Like other girls in Mozambique, we find that the project beneficiary girls face a variety of barriers that may hinder their ability to learn and transition successfully. **Economic barriers** appear to be prevalent, with over 74 per cent of households in the intervention group reporting that they find it difficult to afford to send girls to school. In addition, **access barriers** are also high with many respondents reporting that primary and secondary schools are a long distance from their homes. Girls also reported that there are several **barriers related to teaching and learning**. Approximately 67 per cent of girls believe teachers treat boys and girls differently for example, while 33 per cent of girls indicate that teachers are absent often from classrooms. Finally, we found some evidence of **barriers related to traditional gender and social norms** as well. For instance, for 25 per cent of girls, chore burdens were reported to be high enough to affect time spent learning.

- **Learning levels at baseline are low, and girls are performing below curricular expectations**

We found that learning levels are low at baseline for both the intervention and comparison groups. Differences between the two groups were not statistically significant. Intervention girls scored 14.95 out of 100 in literacy, and 3.31 out of 100 in numeracy on assessments designed in line with the primary school curriculum in Mozambique. In addition, we found that most girls had not yet mastered foundational skills. Approximately 16 per cent and 32 per cent of the girls we tested in grades 4 and 5 could not recognise letters and familiar words, respectively. Similarly, just over 19 per cent and 40 per cent of the girls we tested in grades 4 and 5 could not do basic addition and subtraction, respectively. Most of the girls we tested in grades 6 and 7 could not read and comprehend a passage, or do number operations targeted at the grade 5 level. Average Word Per Minute (WPM) read by girls in the intervention group stood at 26.1, against 24.2 in the comparison group.

- **Transition rates for benchmark girls and cohort girls are surprisingly high, and contrast with our qualitative findings around barriers to transition**

We found that successful transition rates to the next level of schooling were relatively high. In our benchmark sample, which comprised of 330 girls aged 11 to 18 who we randomly selected from households in intervention communities, successful transition rates stood at 75 per cent. In our main cohort sample of 2377 girls, successful transition rates were higher at 86 per cent for the intervention group, and 85 per cent for the comparison group. High rates in the latter sample are understandable as the main cohort comprises of girls who are currently in school. However, our high transition figures do appear to contrast with our qualitative findings. While we found that parental support for girls' education was high, our case studies led us to expect that it will likely decline as girls progress through school. This is because the social pressure for girls to marry will likely increase and the reality of ongoing financial support for education will become more apparent. Secondary school will also necessitate larger financial investment and ongoing practical support for boarding because of the distance to school.

- **Sustainability is hard to conclusively assess at baseline due to a lack of data. Going forward, sustainability may be adversely affected by project redesign**

At baseline, we were unable to draw firm conclusions on sustainability of the project. Due to an imminent redesign, STAR-G did not prepare a comprehensive sustainability scorecard. As our strategy for evaluating several sustainability indicators relied heavily on project sourced data, we were only able to provide a limited amount of evidence on sustainability. Our evidence indicated that programme effects may be sustainable in some ways, with a handful of positive evidence seen at the school, and community levels. However, a key risk to sustainability of programme impact will be the programme redesign itself. The programme has run for a year already, and is expected to change dramatically in its second and third years of implementation. It is unlikely that we will therefore see any noticeable changes in sustainability indicators between baseline and midline. In addition, readers should be aware that sustainability challenges may continue into endline given the short time the project will have to cement the changes they would like to affect.

- **STAR-G's design is gender-sensitive, but programming that is likely to be gender-transformative is not yet effective. In addition, programming for and penetration into marginalised subgroups such as girls who are married or young mothers, disabled, or engaged in child labour is limited**

STAR-G interventions that are likely to be gender transformative include girls' clubs with curricula and activities that enable girls to openly discuss gender norms and feel empowered enough to challenge the status quo, work with matron and patron groups to engage parents and communities in discussions around alternatives to early marriage and early pregnancy, and training for teachers on gender responsive pedagogy and more inclusive approaches to education to support embedding of these approaches in schools. To date, our evidence indicates that these aspects of the project have not yet been fully adopted and effective. In addition, we not only found a limited number of girls who are married or young mothers,

disabled, or engaged in child labour in the beneficiary pool, but we also found STAR-G programming for these subgroups to be fairly limited.

Our methodology, sample, and learning results are summarised in the following infographics.

METHODOLOGY

A mixed methods quasi experimental design to interrogate...

Quantitative
2377

Learning assessment	2377
Girls' survey	2377
Household survey	2377
Classroom observations	62
Attendance spot check	108

Triangulation

Qualitative
52

Gathered through 6 in depth community case studies using...

Focus group discussion: Girls	6
Focus group discussion: Boys	6
Focus group discussion: Mothers	6
Focus group discussion: Fathers	6
Focus group discussion: Teachers	6
Key informant interview: Girls' Club champions	3
Key informant interview: Matron/patrons	4
Key informant interview: Government officials	5
Key informant interview: Programme staff	5
Key informant interview: School council members	5

BASELINE SAMPLE

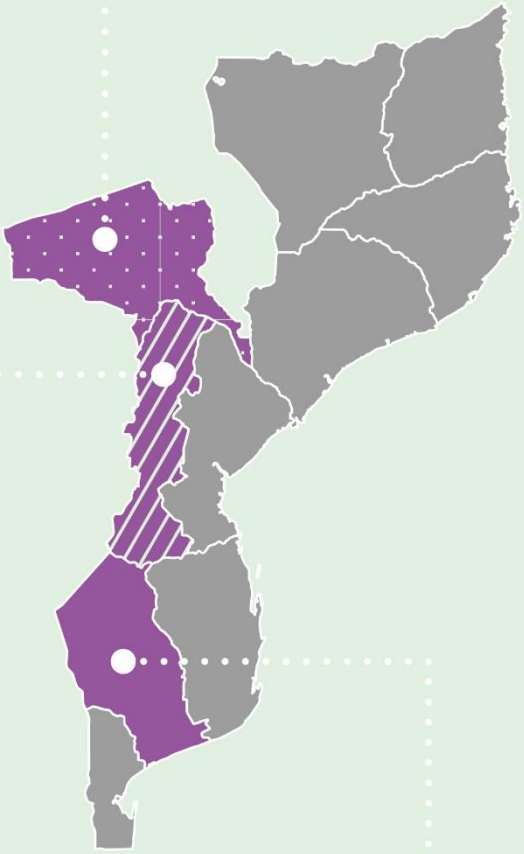
TOTAL
2377
GIRLS
108 SCHOOLS

INTERVENTION
1184
GIRLS
54 SCHOOLS

COMPARISON
1193
GIRLS
54 SCHOOLS

Tete (18% of sample)

Intervention	Comparison
9 schools	10 schools
220 girls	220 girls
70 from Grade 4	70 from Grade 4
70 from Grade 5	70 from Grade 5
40 from Grade 6	40 from Grade 6
40 from Grade 7	40 from Grade 7



Manica (28% of sample)

Intervention	Comparison
15 schools	15 schools
330 girls	330 girls
105 from Grade 4	105 from Grade 4
105 from Grade 5	105 from Grade 5
60 from Grade 6	60 from Grade 6
60 from Grade 7	60 from Grade 7

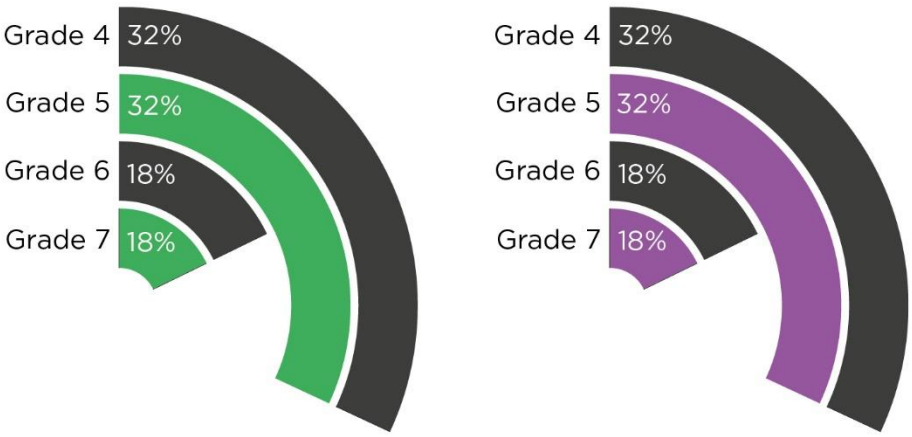
Gaza (54% of sample)

Intervention	Comparison
30 schools	29 schools
634 girls	643 girls
204 from Grade 4	203 from Grade 4
196 from Grade 5	212 from Grade 5
117 from Grade 6	114 from Grade 6
117 from Grade 7	114 from Grade 7

WHO IS IN THE GIRLS' SAMPLE?

Intervention Comparison

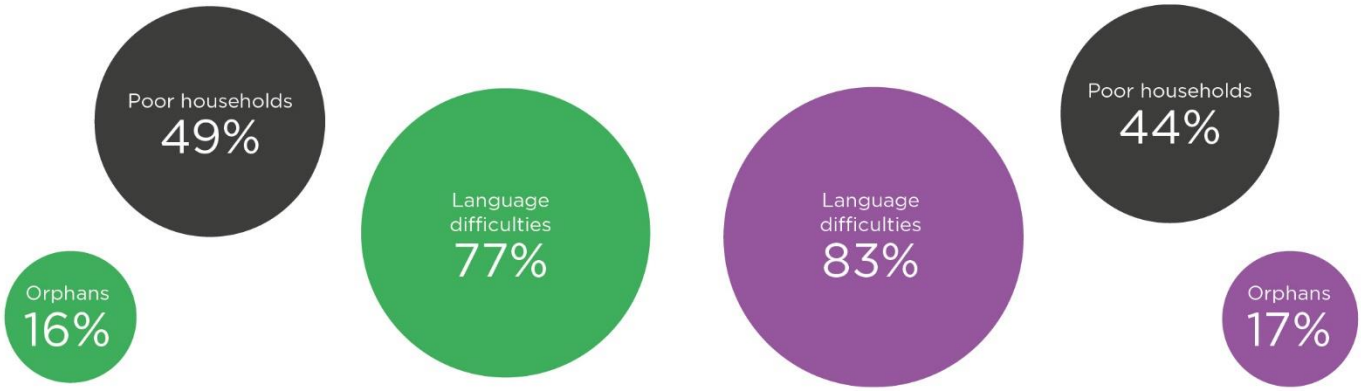
Grade



Age

Disability

Further characteristics

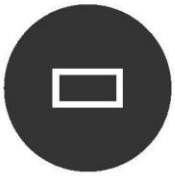


Literacy

GIRLS IN GRADES 4 AND 5 WHO...		
 Cannot read letters – EGRA 1	16%	17%
 Cannot recognise familiar words – EGRA 2	32%	40%
 Cannot recognise invented words – EGRA 3	34%	44%
 Cannot read a Grade 3 level paragraph – EGRA 4	40%	42%
 Cannot answer a Grade 3 level question – EGRA 5	61%	61%
GIRLS IN GRADES 4 THROUGH 7 WHO...		
 Cannot read and answer questions at Grade 5 level – SEGRA 1	83%	80%

Note: Includes girls who scored zero in relevant subtask

Numeracy

GIRLS IN GRADES 4 AND 5 WHO...		
 Cannot identify numbers – EGMA 1	1%	3%
 Cannot discriminate quantities – EGMA 2	4%	6%
 Cannot fill in missing numbers – EGMA 3	11%	15%
 Cannot add – EGMA 4	19%	16%
 Cannot subtract – EGMA 5	40%	38%
 Cannot do number operations at Grade 3 level – EGMA 6	43%	41%
GIRLS IN GRADES 4 THROUGH 7 WHO...		
 Cannot do number operations at Grade 5 level – SEGMA 1	80%	81%

Note: Includes girls who scored zero in relevant subtask

Chapter 1

Background to Project

1 Background to Project

1.1 Project context

Mozambique's education metrics have seen significant improvements over the past 15 years. Yet, challenges around access to schooling and the quality of teaching persist, particularly for girls. In this section, we introduce the Mozambican context to set the stage for the rest of our analysis. Based on extensive desk research, we outline the key political, economic, and social factors that have had an impact on education, and highlight key barriers that continue to exist especially for girls. Wherever possible, we draw attention to differences between the three provinces of Gaza, Manica, and Tete in which the Successful Transition and Advancement of Rights for Girls (STAR-G) project operates.

1.1.1 Introduction

Following Mozambique's independence from 500 years of Portuguese colonial rule, a civil war raged from 1977 to 1992. This left much of the county's population displaced across Mozambique's 11 provinces. This lower income country now has 28.8 million inhabitants, over 45 per cent of whom are under the age of 15 (CIA, 2017a). STAR-G is implemented across three provinces: Gaza, Manica, and Tete where a total of 23 per cent of the population currently reside (Instituto Nacional de Estatística, 2016).

Mozambique is a lower income country, with an ethnically and linguistically diverse population. Over 45% of the population is under the age of 15

Mozambique has a diverse population, representing multiple languages, ethnicities and religions. Mozambique's official language is Portuguese, but the proportion of the population that speaks Portuguese fluently is just over 50 per cent (Gonçalves, 2012). Mozambique boasts 43 living languages (Simons et al., 2017). Shangana and Chopi are most commonly spoken in Gaza; Chitewe, Chimanyika, and Sena are most common in Manica; while Nyungwe, Chichewa, and Sena are common in Tete. African ethnic groups make up 99.7 per cent of the population, including Tsonga, Lomwe, Sena and Makhuwa ethnicities. The remaining ethnic groups are mostly comprised of Europeans (0.06 per cent), Euro-Africans (0.2 per cent), and Indians (0.08 per cent) (CIA, 2017a). In terms of the religious landscape of Mozambique, the Christian faith dominates with approximately 60 per cent adherents (CIA, 2017a).

The country has seen recent economic growth. Mozambique's GDP grew significantly from $4 billion in 1993 to $35 billion in 2016 (CIA, 2017b). This is largely thanks to macroeconomic reforms, donor assistance, and greater political stability since multi-party elections in 1994. Further growth and diversification of the economy have also been expected going forward. It has been hoped that sales of liquefied natural gas from deposits off the coast of Mozambique could generate several billion dollars of revenue (CIA, 2017b). Mozambique also reduced its substantial foreign debt through forgiveness and postponement under the International Monetary Fund's (IMFs) Heavily Indebted Poor Countries (HIPC) initiative. However, direct support was withdrawn in 2016 when it came to

the attention of the IMF and international donors that the Mozambican government was responsible for over $2 billion in government-backed loans by state-owned defence and security companies between 2012 and 2014. These loans were originally secured without parliamentary approval and were not included in the national budget (CIA, 2017b). The secret debt has caused a financial crisis. In 2015 and 2016, the metical was sharply devalued, following revelations about the debt and ensuing aid cuts. Real terms minimum wages have progressively decreased and are now significantly below 2014 levels in dollar terms and purchasing power, although the minimum wage in meticais increases each year (Hanlon, 2018).

Three challenges contribute further to economic concerns. First, Mozambique has a history of hyperinflation. Between 2009 and 2017, inflation rates averaged 8.63 per cent, and reached 26.35 per cent at their highest levels (Trading Economics, 2017). Such hyperinflation has led to devaluation of the currency.

Mozambique's economy has witnessed strong recent growth, but the debt crisis, hyperinflation, natural disasters, poverty and income equality pose major concerns

Second, natural disasters are recurrent in Mozambique. The recent drought in the east of the country, and localised flooding in 2015, have contributed to low agricultural and economic productivity. More than 75 per cent of the population live in rural areas, and depend on subsistence agriculture to survive (UNICEF 2016a). Natural disasters lead to loss of income and increased food insecurity for families. UNICEF reported that, at April 2016, 1.5 million people faced food insecurity in seven provinces (Maputo, Gaza, Inhambane, Tete, Manica, Sofala and Zambezia). Of the three provinces of interest for STAR-G, the situation was reported to be worst in Tete, where the Global Acute Malnutrition rate was recorded as 15.5 per cent. Of those affected by drought, 228,000 were estimated to be school children, and 191,656 children were expected to be acutely malnourished over the following 12 months (UNICEF, 2016a). These problems are of particular concern for the provinces of Gaza, Tete and Manica, which are mostly rural, and depend largely on agriculture to support their economies (CIA, 2017b).

Third, according to 2014 estimates, 46 per cent of the country's population live below the poverty line (The World Bank Group, 2017a). Income inequality is also rife, and Mozambique is ranked 178 out of 187 countries based on the Gini coefficient (Gini coefficient: 45.7, where a value of 100 represents absolute inequality) (United Nations Development Programme, 2016b). Unsurprisingly, Mozambique ranks 181 out of 188 countries on the Human Development Index (United Nations Development Programme, 2016a).

The issues discussed here interact in complex ways, and are further complicated by political fragility and instability. Mozambique's National Resistance party (RENAMO), now the official opposition, were in a 15 year long war with the Front for the Liberation of Mozambique (FRELIMO), now the ruling party, which ended 25 years ago. Despite political progress, and five consecutive multiparty elections, political violence and corruption still persists (CIA, 2017c). During 2016, rising tension between the Mozambican government and RENAMO forces led to armed clashes. Amidst executions and sexual violence, several thousands of people were forced to flee the country (Human Rights Watch, 2017). These tensions have had notable impact in the STAR-G provinces. In June 2015, RENAMO conducted three

attacks in the Tete province, and in September 2015 violence spread to Manica (Freedom House, 2017). Such tensions bring challenges for education; increased sexual violence fuels norms which have negative impacts for girls, and military check points lead to restricted school access.

1.1.2 Education system and reform

Mozambique's formal education structure comprises compulsory schooling lasting from the ages of 6 to 12. This compulsory primary school phase lasts for seven grades and is divided into lower and upper levels: EP1, grades 1–5 ; and EP2, grades 6–7. The secondary phase also comprises two bands: lower secondary, grades 8–10; and upper secondary, grades 11–12 (EDPC, 2014). The academic year runs from late January to October, lasts 35–36 weeks, and is divided into two semesters.

Table 1: Education system – Key facts

% GDP spent on Education (2013)	6.5%
% Total government expenditure on education (2013)	19.0%
Compulsory schooling	Ages 6–12, grades 1–7 (primary phase)
Academic Year	January – October, 35–36 weeks, divided into two semesters
Population 14 years and younger (2016)	12,675,000 - 45% of the total population
Gender parity index, School enrolment (gross), primary and secondary (2015)	0.92

Sources: UNESCO, n.d; The World Bank Group, 2017a

Students sit national examinations at the end of grades 5, 7, and 10, which are prepared and administered by the National Council for Examinations, Certification and Assessment (Conselho Nacional de Exames, Certificação e Equivalência). The Ministry of Education and Human Development (MINED) is responsible for planning, monitoring and managing the national education system in Mozambique, whilst the National Institute for Educational Development (Instituto Nacional de Desenvolvimiento da Educação) is responsible for developing school curricula (UNESCO and IBE, 2010).

Significant education reforms have been introduced in recent decades. In 2004, the Mozambican government removed primary school fees and increased provision of direct support and resources to schools. In addition, since 2004, new curricula have been defined and progressively introduced. School teacher reforms were also implemented in 2007. These had significant effects on training routes into teaching, allowing students who successfully complete secondary grade 10 to enter a one-year teacher training programme to become a "basic" level teacher. The emphasis on education from the Mozambican government

continues, and is reflected in both the 2011–2014 Poverty Reduction Strategy Paper (IMF, 2014), and the 2012–2016 Ministry of Education Strategic Plan for Mozambique, now extended until 2019 (Ministry of Education, Mozambique, 2014).

Outcomes of these policy changes have been positive, and the country saw a surge in enrolments to school from 3.6 million in 2003 to around 6.7 million by 2014 (UNICEF, n.d.).The net enrolment rate for females at primary school also increased from 63.5 per cent in 2004, to 86.8 per cent in 2015 (The World Bank Group, 2017a). Approximately 1450 classrooms have been constructed annually, and 8000 new teachers were recruited by the government in 2013 (UNICEF, n.d.). Furthermore, the number of lower primary schools increased from 7072 in 2000 to 10,444 in 2010 (Fox et al., 2012). This removed some of the supply-side constraints to school attendance, and there was a dramatic improvement in the pupil-teacher ratio, which decreased by 17 per cent in upper primary between 2004 and 2010 (Fox et al., 2012). Statistics from UNESCO indicate that 19 per cent of total government expenditure, and 6.5 per cent of GDP, is now spent on education annually (UNESCO, n.d.). This highlights a trend of increased government investment into education in recent years. With a rapidly growing youth population, the focus on education will certainly be important for the country's human and economic development in coming years.

Removal of primary school fees, curriculum redesign, teacher reforms, and improvements in infrastructure and school resources have resulted in significant improvements in enrolments since 2003

1.1.3 Progress and challenges

Despite improvements, there are still many challenges for Mozambique in terms of delivering a quality education. Despite high levels of enrolment in the early grades, primary completion rates are relatively low, the quality of teaching and learning requires improvement, and socially ingrained tendencies towards gender discrimination continue to build barriers for girls in education.

Access barriers

UNESCO statistics indicate that the number of out-of-school children is decreasing, but it is still high. A higher number of girls are out-of-school (366,227) than boys (239,982), and a greater challenge remains for those in rural areas, where more than 75 per cent of Mozambicans live (UNICEF, 2016b). With regard to the provinces of interest for STAR-G, Manica and Tete both have more male students than female students in grades 1-12; however, the reverse is true for Gaza, which has a higher proportion of female students (202,263) than male students (192,665) (Instituto Nacional de Estatística, 2016) (Table 3).

The net enrolment rate at primary school is under 100 (86.8 per cent for girls and 91.4 per cent for boys) (UNESCO Institute for Statistics, n.d.). A high proportion of Mozambicans enrol to primary school late and many repeat classes. As a consequence, multi-age classrooms are common. Only 32.2 per cent of girls and 34.3 per cent of boys actually complete the primary stage of education (UNESCO Institute for Statistics, n.d.).

A limited number of secondary schools, and political volatility in some areas create barriers for accessing schooling

Unsurprisingly, net enrolment figures in secondary education reflect this and stand at just 18.8 per cent for girls. Students drop out due to a variety of barriers, which include a limited number of secondary schools and places. In addition, the volatile political environment in recent years has also restricted access to schooling in some cases. Military checkpoints, and other security constraints can have negative impacts for school attendance.

Key education figures for Mozambique are included in Table 2, while those related to the provinces of interest for STAR-G (Tete, Manica, and Gaza) are included in Table 3.

Table 2: School enrolment and attendance – Key figures

	Girls	Boys
Primary education net enrolment rate (2015)	86.8%	91.4%
Primary education gross enrolment rate (2015)	101.2%	105.8%
Secondary education net enrolment rate (2015)	18.8%	18.5%
Secondary education gross enrolment rate (2015)	31.1%	33.8%
Primary completion rate (2014)	32.2%	34.3%
Percentage of pupils repeating the primary phase (2015)	6.5%	5.8%
Transition rate (primary to secondary) (2014)	66.8%	60.7%
School life expectancy (years) (2015)	9.1	10.1

Source: UNESCO Institute for Statistics, n.d.

Table 3: Key figures for STAR-G provinces of interest

	Gaza	Manica	Tete
Population size (2016)	Male: 659,001 Female: 783,093	Male: 966,694 Female: 1,035,202	Male: 1,282,270 Female:1,336,643
Number of primary schools (2016)	732	791	878
Number of secondary schools (2016)	48	49	49
Number of students – Grade 1 to 12 (2016)	Total: 394,938 Male: 192,665 Female: 202,263	Total: 505,881 Male: 266,229 Female: 239,652	Total: 565,680 Male: 291,889 Female: 273,791
Number of teachers – Grade 1 to 12 (2016)	Total: 8954 Male: 4,506 Female: 4,448	Total: 11,498 Male: 7,478 Female: 4,020	Total: 11,350 Male: 6,675 Female: 4,675

Source: Instituto Nacional de Estatística, 2016

Economic barriers

In 2006, the Mozambique Ministry of Education and Culture asked the World Bank to investigate barriers which might be limiting enrolment to primary and secondary education, in light of the 2004 reforms. Using data from national surveys from 1996 to 2008, the report indicated that although primary school fees had been removed, significant economic barriers still remain for low income families. Findings indicated that fees remain, even after being abolished by the government. Figures from Fox et al. 2012 show that the obligatory fees for pupils from the most affluent backgrounds were just under 70 Mt in 2003, falling to just under 50 Mt in 2008. For pupils from the poorest backgrounds, the fees fell from 27 Mt in 2003 to approximately 4 Mt in 2008.

Despite the removal of primary school fees in 2004, economic barriers persist

Focus groups carried out by World Bank in 2007 found that school materials, and school uniforms were the most significant costs for households (Fox et al., 2012). Other associated costs, such as matriculation and transport also continue to apply. Under the new policy, parent-teacher organisations are still able to charge fees. 52 per cent of households reported having to financially contribute to their child's lower primary school in 2007 (Fox et al., 2012). This suggests that, whilst government support had increased, the provision of resource was still insufficient for many schools. It is likely that these factors have contributed both to the continued low enrolment and low completion rates in primary schools.

Also problematic for education in Gaza, Manica, and Tete is the ongoing drought. School dropout rates have increased, particularly in Gaza, as families endeavour to seek out better living conditions through relocation. As families exhaust their resources, there is also an increased likelihood that children will be withdrawn from school to contribute to domestic work and the family's income (UNICEF, 2016b).

Teaching and learning barriers

Assuring that all young people are enrolled in education does not guarantee high standards in terms of educational outcomes, and many school-level factors have an impact on the effectiveness of learning inside the classroom. Low levels of learning whilst enrolled in education are of great concern in Mozambique, and despite recent changes, high teacher-to-student ratios persist, although there is some variation in the exact ratios reported, with one teacher to every 63 pupils at primary level reported by UNICEF (UNICEF, n.d.). Statistics from the national institute of statistics also indicate a high average class size of 53 children to a classroom (Instituto Nacional de Estatística, 2015). Effective teaching to such large groups is challenging, particularly given the prevalence of mixed-ability and multi-age classes.

Outcomes for literacy and numeracy are low, and fewer than one in ten children achieve the basic standard in reading by grade 3 (UNICEF, n.d.). As of 2015, just 58.8 per cent of the total population aged 15 and over could read and write (73.3 per cent male and 45.4 per cent female) (CIA, 2017a). Furthermore, whilst Portuguese is the official language for teaching in Mozambique, it is not the home language for the vast majority of students. This creates extra learning barriers for many pupils, particularly for those who have had little or no exposure to the language prior to starting school.

Initiatives have been implemented to improve low reading levels of children in early grades.

Using Portuguese as the language of instruction creates issues for both students and teachers, many of whom are not fluent in the language

In 2012, USAID funded a research-based reading intervention for children in grades 1–3 (Burchfield et al., 2017). World Education worked with the Ministry of Education to develop the programme, which supported goals in the 2012–2016 Strategic Plan for Education and Culture. The intervention, titled Aprender a Ler, was tested in two provinces (Zambézia and Nampula) which had particularly low primary and secondary school completion rates. Enhancing learning quality, reducing absenteeism and increasing instructional time were the primary objectives. The programme included training and support for teachers, and 12 weeks of focussed Portuguese vocabulary tuition for grade 1 students. This supported the development of oral fluency and comprehension of the language. From July 2013 to September 2014, over 45,569 students received support in reading instruction in 122 schools, and 849 grade 2 and 3 teachers received training (World Education, 2015). Findings from the impact evaluation indicated that pupils in intervention groups performed significantly better in an Early Grade Reading Assessment (EGRA) than those in the control group.

World Education also noted several factors key to widespread improvement in reading outcomes. Firstly, the availability of resources is of paramount importance. Recent research to examine the Ministry of Education's textbook production and distribution system found that, although textbooks are repleni

shed and distributed annually, there are still insufficient books in schools (de Jongh-Abebe *et al.,* 2016). In 2012, there were an average of two students per mathematics and reading textbook across all school grades (UNESCO Institute for Statistics, n.d.). Secondly, using Portuguese as the language of instruction (LoI) is a challenge for many students and teachers alike. MINED acknowledge this, and they stated in 2015 that all primary school children would be able to study in one of 16 local languages by 2017 (UNESCO Institute for Lifelong Learning, 2015). These developments are still in their early stages, and it is not yet clear how they are being implemented in practice. A USAID funded project, Vamos a Ler, will work with the Government of Mozambique to support bilingual education with the objective of improving early grade literacy outcomes.

The quality of teacher training also contributes to the effectiveness of teaching and learning in schools. A World Bank study found that only one per cent of grade 4 teachers had mastered 80 per cent of the grade 4 curriculum they were teaching and that their basic pedagogical knowledge is low (The World Bank, 2015). This analysis finds large significant positive effects of teacher knowledge (both content-based and pedagogical) on student achievement, and identifies an urgent need for education service delivery to be improved in Sub-Saharan Africa. Whilst training routes for primary and secondary school teachers do exist, there is a significant group who are untrained and are recruited to fill gaps in the system: for many years this was the case in Mozambique (UNESCO and IBE, 2010). With regard to teacher absenteeism, the World Bank Group (2015) use data from the Service Delivery Indicators on Education (SDI) survey (International Bank for Reconstruction/The World Bank Group, 2015) to demonstrate that 45 per cent of teachers were out of school during announced visits, and 11 per cent who were in school were not in a classroom teaching. The situation has been improving, and The Global Education for Partnership have produced data showing that 93 per cent of primary school teachers in 2015 had received training, compared to 63 per cent in 2007 (Global Partnership for Education, 2017). Changes to the teacher training models were specified by 2007 reforms. The old model for primary teacher training included two years of post-education training at a primary teacher training centre (Centros de Formação de Professores Primários) or teacher training institute (Institutos do Magistéro Primários). Secondary teacher training required two years of training in two specific disciplines at the faculty of education. In the new model, primary teachers must be secondary grade 10 graduates and train, in most cases, for one year, at teacher training institutes (Institutos de Formação de Professores). Secondary teachers are required to train for three years following grade 12 graduation (UNESCO and IBE, 2010). Thus, the influx of primary teachers has been made possible by reducing the years of required teacher training. This is a further concern for the quality of teaching in the future.

Challenges related to teacher competency and absenteeism continue to limit the ability of students to learn even when they do attend school

Barriers related to gender and social norms

Societal norms in Mozambique tend to negatively discriminate against girls and women, proliferating the economic and environmental sources of disadvantage which already exist

(Sida, 2014), and resulting in a series of challenges for school-aged girls, in particular those from marginalised groups. For example, orphans have been cited as one of the most vulnerable groups of children in Mozambique (Case et al., 2004), and are expected to make up 12–16 per cent of the child population, according to UNICEF (Fox et al., 2012). Furthermore, a 2013 UNICEF report approximated that 14 per cent of school aged children have a disability (Sida, 2014).

The recent Global Education Monitoring Gender Review report (GEM, 2018) indicates that gender discrimination is a global issue, and gender parity has only been achieved in primary education in 66 per cent of countries, and lower secondary education in 45 per cent of countries. The report highlights the need to remove gender barriers both inside and outside the education system, and go beyond simply measuring inequity in education. Legal and policy frameworks, alongside a rigorous monitoring and reporting process, are necessary to address issues, change gender-biased attitudes and hold people to account for gender inequality in education.

Though Mozambique has committed to goals to reduce gender discrimination and violence against women (Freedom House, 2017), socio-cultural factors continue to pose a significant challenge for realising gender equality in education, and many statistics point specifically towards this issue. The Global Partnership for Education (2017) note that the gender parity index for primary school completion in 2014 was 0.88, and that primary phase completion rate is 5.8 per cent lower for girls than boys. Furthermore, UNICEF statistics show that of all primary-school-aged children who were out of school in 2013, 60 per cent were girls (UNICEF).

Societal norms, early marriage and pregnancy and gender-based violence undermine girls' access to education in Mozambique.

Expectations around roles, aspirations and educational attainment of girls and boys also tend to be gendered, and as they approach adolescence, the pressure they face to conform to these expectations becomes more pronounced. As such, early marriage and pregnancy is discussed in the literature as a reason for the limited enrolment and completion of compulsory schooling by girls. Other factors include paid and unpaid work contributions that girls are expected to make to their families. It is likely that family decision-making around educational investments is heavily influenced by socio-cultural norms and, together with high costs of education, contributes to school dropout rates. A report jointly produced by World Bank and the International Centre for Research on Women (ICRW) in 2017 summarised results of international surveys which indicated that, according to parents, marriage is a key factor reducing the likelihood of girls attending school (Wodon et al., 2017). Of further note here are the number of female teachers in Mozambique. As indicated in table 3, there are higher numbers of male teachers than female teachers across all three STAR-G provinces, a fact which (Instituto Nacional de Estatística, 2016) is likely to have an impact on girls' learning, and their aspirations.Governments are increasingly aware of the issue of early marriage as a significant violation of girls' rights. In Mozambique, initiation rites are traditionally considered an important rite of passage for all children (boys and girls) moving into adolescence. Following these initiation ceremonies, many girls do not return to school as they feel ready to get married (Velthausz and Donco,

2017). Early marriage leaves girls vulnerable to sexual and gender based violence and isolation, and early pregnancy puts the health, and lives, of girls at risk. The ICRW (2017) reports that 51.5 per cent of girls in Mozambique were married as a child. Thirty per cent also had their first child before the age of 18 (Wodon et al., (2017). Child marriage also plays a part in increasing population growth, and Mozambique has one of the highest birth rates in the world, with an estimated 5.3 births per woman in 2016 (World Bank 2017b). Ending child marriage is now part of the Sustainable Development Goals (Goal 5.3) (United Nations General Assembly, 2015). Improving girls' access to education can support this goal; with every year of secondary education, the risk of child marriage is reduced by an average of six percentage points (Wodon and Yedan (2017c).

While gender-based violence can pose a challenge for both girls and boys in and around school, girls are at greater risk of sexual violence, harassment and abuse. Sexual violence in schools, including violence perpetrated by teachers, is a serious problem. Violence in and around schools tends to reflect underlying social norms and power imbalances which not only place girls at significant risk in the first place, but mean they are likely to feel less able to report violence and abuse if it occurs. According to the Ministry of Gender Children and Social Action (MGCAS) at least 54 per cent of women in Mozambique are likely to suffer sexual or physical violence in their lifetime (Freedom House, 2017). Furthermore, the World Bank estimates that 12.3 per cent of the population aged 15–49 are infected by HIV/AIDS (World Bank, 2017b). The UN affirms that when learning environments are not child-centred, gender sensitive, inclusive, protective and free from discrimination, children's ability to learn is diminished (UNICEF, 2000). Initiatives are necessary to strengthen *both* prevention and response mechanisms for school-related gender based violence. All education stakeholders should be expected to engage with the issues of tackling school related gender based violence – from the classroom to policy levels. Social and behavioural changes are necessary if improvements are to be made and for there to be progress towards achieving gender equity in education in Mozambique.

Gender based violence within schools and security concerns around the journey to school are key barriers

1.2 Project Theory of Change and assumptions

As discussed in the previous section, the nature of the marginalisation of girls in Mozambique is complex. Barriers related to economics, access, teaching and learning, and gender and social norms limit the ability of girls to access and gain a quality education. In this section, we outline the STAR-G project's Theory of Change (ToC), and summarise the key activities that the project plans to conduct. This section is sourced primarily from Save the Children International's (SCI) project documents and programme staff interviews.

1.2.1 Project introduction

The STAR-G intervention began implementation in April 2017. It continues to support the learning of girls from SCI's Programme for the Advancement of Girls Education in Mozambique (PAGE-M) project, which ran in the first phase of the Girls' Education Challenge (GEC) from 2013 to 2017. The main objective of the project is to continue working towards and supporting the learning of the existing cohort of girls from PAGE-M to progress in literacy

and numeracy skills, and successfully navigate to their next key transition point at school. The project is planned to run for four years and has a budget of over GBP 8 million pounds.

STAR-G targets over 15,000 marginalized girls in Grades 4 through to 7 from Gaza, Manica, and Tete, aiming to improve their life chances

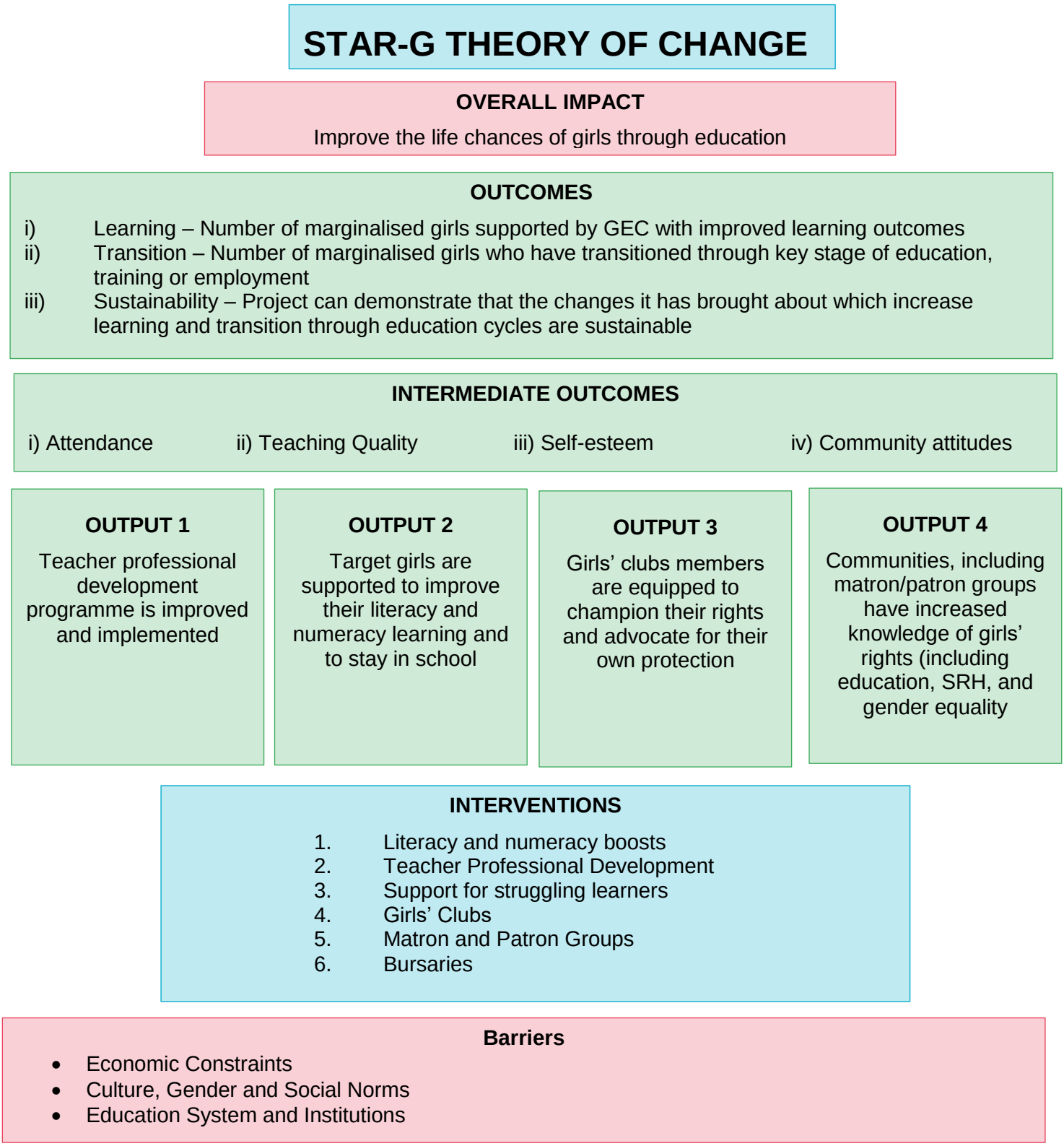
The project works in three provinces, and in a total of ten districts: Gaza (Guija, Chicualacuala, Mabanane, Chongoene and Manjacaza), Manica (Macata, Guro and Gondola), and Tete (Angonia and Macanga). In these three provinces, STAR-G is involved with 140 schools and 140 communities (Gaza-68, Manica-40 and Tete-32). Beneficiaries number close to 15,000 marginalised girls and are currently in grade 4 through to grade 7.

STAR-G defines marginalised girls as those living in remote or rural locations, those married under the age of 18, those who are extremely poor, those who are engaged in child labour, those who are disabled or are caregivers, those who are young mothers under the age of 18, and those who do not speak the language of instruction when entering school.

1.2.2 Project Theory of Change

As a whole, STAR-G's belief is that if societal perceptions and attitudes towards girls' education improve, and girls' self-esteem and self-confidence improve, along with the ability to communicate their practical and strategic needs, then girls will be more likely to attend school. Combined with improved teaching quality and gender-sensitivity in the classroom, this should improve learning outcomes for girls, and make it more likely that girls remain in education and transition into the secondary phase. Ultimately, improving the school enrolment and attendance of girls, transition through key education levels, and improving learning outcomes, should better the life chances of girls through education. STAR-G aims to achieve these goals through a multi-faceted approach which is summarised in the Theory of Change Model diagram below.

Figure 1: STAR-G Theory of Change



According to project documentation, the programme aims to address three main constraints:

- Economic Constraints: Poverty and lack of access to teaching and learning materials; Household chores and income generating activities (child labour) preventing girls from attending school
- Culture, Gender and Social Norms: Early marriages and early pregnancies; Communities' perceptions of adolescent girls as women; Sexual harassment and abuse of adolescent girls; Lack of community support for girls' education; Lack of girls' self-esteem and leadership
- Education System and Institutions: Low capacities of teachers and poor teaching quality; Poor motivation of teachers; Absenteeism and turn-over of teachers; Lack of conducive learning environment especially for adolescent girls; Early grades children do not speak the language of instruction (Portuguese); Limited capacity, human and financial resources for supervision and teachers' support; Poor school management and accountability.

STAR-G's Theory of Change aims to address key barriers by training teachers, supporting literacy and numeracy of girls, enhancing girls' self-esteem, and improving community attitudes towards girls' education

To improve learning, STAR-G is focusing on supporting the professional development of teachers, and approaches to provide additional learning support for students through Literacy and Numeracy Boosts, remedial classes, and reading camps. To support girls' self-esteem and improve community attitudes towards girls' education, STAR-G will work with girls' clubs, involving girls and boys in sexual and reproductive health (SRH) education and matron and patron groups to help sensitize community members to prevalent gender and social norms and concepts of gender equality. Programme activities are provided in Table 4.

A substantial redesign of the STAR-G intervention is underway. The baseline interrogates the original design only, which is presented in this section. Changes in the evaluation methodology may be required at midline and endline to incorporate programming changes

The project's Theory of Change is based on a number of assumptions. At the economic and political levels, the project assumes that the security situation of the country will remain stable, and migration due to drought will be limited. At a systems level, it assumes that the Ministry will continue to support girls' education, and that district officials and teacher training colleges will continue to collaborate with SCI. At the local level, it assumes that schools and communities will be interested in the project, and that beneficiaries will attend remedial activities and girls clubs. If any of these assumptions do not hold, programming will be affected, and may require adaptation.

In order to provide the girls with the best chances to transition on to the next education levels, SCI is in the process of redesigning their programme. According to project staff informants, the redesign is likely to tackle transition challenges more directly by including support to distance learning programmes, and implementing community based education models. The baseline was designed to interrogate STAR-G's original programming, and

evaluation methods may be altered at midline and endline, depending on the form the project redesign takes.

Table 4: Project design and intervention

STAR-G SAYS: **Programme interventions**			
Intervention types	What is the intervention?	What Intermediate Outcome will the intervention contribute to and how?	How will the intervention contribute to achieving the learning, transition and sustainability outcomes?
Learning support	Literacy boost: improve reading and writing of Portuguese by girls inside and outside the classroom. Specific activities include: assess children's reading levels and evaluate their literacy learning needs based on those assessments; students with low performance in the continuous assessments are targeted with literacy boosts, teachers are trained to incorporate skill-building into their regularly scheduled curricula; guide parents and communities to support children as they learn to read and foster their love of reading.	Teaching quality Literacy boost provides training to teachers to build their skills in assessing the girls' needs in literacy and adapt their curriculum accordingly. Community attitudes Parents and members of the communities get trained to support their children in reading and foster their affection in that activity. Therefore, getting the buy-in from these actors on encouraging a culture of reading and books.	This intervention is directly related to the 'learning' outcome, as its core activity is to improve girls' literacy skills.
Learning support	Numeracy boost: improve student's numeracy ability to solve arithmetic at grade level inside and outside the classroom. Based on the Literacy Boost model, with interventions that include: student assessment, teacher training,	Teaching quality Numeracy boost strengthens teachers' skills through a series of trainings focusing on three core domains in mathematics:	This intervention is directly related to the 'learning' outcome, as its core activity is to improve girls' numeracy skills.

STAR-G SAYS: **Programme interventions**			
Intervention types	What is the intervention?	What Intermediate Outcome will the intervention contribute to and how?	How will the intervention contribute to achieving the learning, transition and sustainability outcomes?
	students with low performance in the continuous assessments are targeted with numeracy boosts, and community action.	Number and Operations, Geometry, and Measurement. Community attitudes The intervention involves the entire community in math-based activities that expose all people in the life of the child to the importance and use of math.	
Capacity building	Teacher professional development: this intervention introduces proven approaches like teacher training on gender sensitive pedagogy, peer learning circles and lesson observations. TPD uses blended learning approaches – face-to-face, self-study and, where appropriate, online. Teachers develop a range of teaching competencies, usually linked to national frameworks, over the course of a year or more.	Teaching quality TPD is all about strengthening teachers' skills and competences through a series of trainings focusing on domains most useful and helpful for the teachers, based on an initial assessment, and then continuous assessments. Attendance By improving the teaching quality environment, mostly at the school level, girls will be more inclined to attend classes regularly as they will learn more effectively.	This intervention will help girls achieve better learning outcomes as the teaching environment and methodology will be improved. As girls' learning improves, they will be more likely to score better in exams and transition through grades.

STAR-G SAYS: **Programme interventions**			
Intervention types	What is the intervention?	What Intermediate Outcome will the intervention contribute to and how?	How will the intervention contribute to achieving the learning, transition and sustainability outcomes?
Female voice and safe space	Girls' clubs: provide training of girls' club's members on various useful topics, such as sexual & reproductive health, gender equity, quality learning environments etc.; develop strategies with members to prevent and mitigate risks and violations of their rights; support them to conduct school safety audits and work with school councils on School Development Plans; distribution of hygiene kits and training on menstrual hygiene management etc.	Girls' self-esteem Members of girls' clubs have a safe space for peer support and peer learning, as well as a space and time to take part in activities that will support them in building up their confidence, self-agency, and ultimately their self-esteem. Attendance Girls who have a safe space and a close peer community in the school will increase their sense of belonging. The improved sense of belonging will in turn increase their regular attendance in classes and school (*cf. endline of PAGE-M for statistical evidence*).	This intervention will help improve girls' self-esteem and girls' attendance in school, which the project believes will in turn increase learning for girls.
Community initiative	Community activities with matron & patron groups: sensitise the groups on pre- and post-initiation on girls' rights and sexual reproductive health	Community attitudes Matron and patron groups are key stakeholders in the community and have a big influence on girls' sexual and reproductive rights. By working with them and sensitising them on key issues around girls' rights, the project	This intervention is related to the learning outcomes of girls, although indirectly, and also to the sustainability outcome, mainly at the community level.

STAR-G SAYS: **Programme interventions**			
Intervention types	What is the intervention?	What Intermediate Outcome will the intervention contribute to and how?	How will the intervention contribute to achieving the learning, transition and sustainability outcomes?
		aims to positively change attitudes and perceptions of these key community members, and promote girls' education.	If the key community members support girls to continue their learning in schools and acknowledge education as a priority for girls, these latter will feel more supported to attend school and learn and transition over the years.
Financial support	Bursaries: as PAGE-M provided bursaries to 170 girls to help them get access to secondary schools (school fees), STAR-G decided to continue providing those bursaries to the same group of girls (although the exact number has decreased) to stay in secondary schools.	Attendance This intervention solely aims at getting a small group of girls to secondary school and keeping them there.	This is related to learning outcomes of girls, as the project believes that girls who attend regularly schools will be given a higher chance to improve their literacy and numeracy skills.

1.3 Target beneficiary groups and beneficiary numbers

STAR-G SAYS

Project's target groups

As a continuation of PAGE-M (GEC 1 in Mozambique), the project's primary target groups are the same beneficiaries (girls) from the previous project who had already been identified as marginalised due to the poverty level and rural setting of the locations. As girls have grown over the years of PAGE-M, the youngest of eligible STAR-G beneficiaries were in Grade 4 in 2017 when the project started, and the oldest were in Grade 7. STAR-G has listed some criteria for marginalization among its beneficiaries and has estimated the composition of these criteria in the overall beneficiary group, which are as follows:

- Remote or rural locations: 85%
- Girls married and/or are young mothers (under 18): 37%
- Extremely poor, defined as inability to resource school materials: 20%
- Engaged in child labour: 27.4%
- Disabled: 12.5%
- Who don't speak the language of instruction at entry to school: 95%

STAR-G is planning to work with a total of six cohorts of beneficiaries over the years, all of whom were also PAGE-M beneficiaries. However, due to the focus of STAR-G from Grade 4, two cohorts (5 and 6 of table below) will only be covered by the main interventions from 2018 and 2019 respectively. The table below shows STAR-G cohorts of beneficiaries and their natural progression through grades over the years:

STAR-G girls	2017	2018	2019	2020
Cohort 1	Grade 7	Grade 8	Grade 9	Grade 10
Cohort 2	Grade 6	Grade 7	Grade 8	Grade 9
Cohort 3	Grade 5	Grade 6	Grade 7	Grade 8
Cohort 4	Grade 4	Grade 5	Grade 6	Grade 7
Cohort 5		Grade 4	Grade 5	Grade 6
Cohort 6			Grade 4	Grade 5

Direct learning and transition beneficiaries

In addition, the table below shows the number of beneficiaries per grade in each province in 2018. It is important to note that the ages given are only estimates. Moreover, the age of girls in each grade isn't homogenous as it is common for girls to repeat a grade, or for an older girl to join a lower grade because of her skills level. Therefore, the project prefers to give an age range of the girls within each grade.

STAR-G girls	Grade 4	Grade 5	Grade 6	Grade 7
	9–11 years	**10–12 years**	**11–13 years**	**12–15 years**
Gaza	2229	2235	1950	1790
Manica	1269	1163	839	736
Tete	1045	955	775	568
Total	4543	4353	3564	3094

The target number of girls' beneficiaries (direct learning and transition beneficiaries) can be found in the table below:

Targeted girls	2018	2019	2020
Learning beneficiaries	15,574	17,924	15,396
Transition beneficiaries	2552	2557	3430
Sources to support this data:	The data is collected from the MINEDH national database and verified by a headcount of girls conducted by the project in each grade in the 140 intervention schools. The project headcount of students in grade 4, 5, 6 and 7 were done in November 2017 and in March 2018. The numbers for 2019 are computed using a number of assumptions and models as explained in the next section below.		
Method used for calculations and assumptions:	• The counting of girls in 140 schools is based on the MINEDH data that is verified by a headcount conducted by the project in all intervention schools. The headcounts were done in November 2017 and March 2018 • 2017 STAR-G numbers in grades 5–7 and 2018 grades 4–7 are the head count numbers. • The target numbers for transition are the number of girls in grade 7 in the previous year and are all targeted to transition into grade 8 in the following year. • The numbers of girls in primary in 2019 and 2020 are projections based on the headcount of 2018 and the application of MINEDH primary school dropout rate of 13%. • The secondary numbers in grade 8 in 2019 and 2020 are projections using the 43% transition based on the head count of girls who transition from grade 7 in 2017 into grade 8 in 2018. These numbers include girls who transitioned into distance learning and are projected to join the community-based education pathway that has been included in the redesign of the project.		

Differences in beneficiary numbers with respect to GEC1, with GEC-T and/or the MEL Framework

	GEC1	GEC-T	Reasons for differences
Number of primary schools worked with	195	140	Resource constraints
Number of girls in primary school	37,037	15,531	Decrease in number of target primary schools and focus of interventions starting from Grade 4 only.
Number of boys in primary school	37,663	15,465	Decrease in number of target primary schools and focus of interventions starting from Grade 4 only.
Number of secondary schools worked with	8	35	The project switched its focus to transition to secondary school.
Number of girls in secondary school who received bursaries	170	140	Girls dropped out
Number of out-of-school girls enrolled into primary school	400	200	Decrease in number of target primary schools

Interrogating the beneficiary figures and methodology

We reviewed the beneficiary calculation methodology presented by STAR-G, and outline our analysis of this methodology below.

- **Using school enrolment figures for basis of beneficiary figures is reasonable, but the quality of underlying data may be inadequate**

  Using school enrolment figures as the starting point of beneficiary calculations seems reasonable. The project's activities around training teachers are likely reach the greatest number of students, as compared to their programming around remedial learning, and girls' club support which reach fewer students in the 140 intervention schools. As STAR-G trains teachers for grades 4 through to 7, beneficiaries likely include all the students in the classroom in teaching. Boys in the same classes are just as likely to benefit from at least the improvements in teaching and therefore are also direct beneficiaries.

  While the process of estimation seems reasonable, the quality of data from the Ministry may be inadequate. Schools in Mozambique, like in other developing countries, have incentives to over-report figures for funding purposes. Moreover, challenges around record-keeping in many schools further complicate the ability to accurately assess enrolment numbers. On the one hand, the project has already taken this into account by verifying headcounts in November 2017 and March 2018 themselves. This is a positive step towards properly identifying the number of potential beneficiaries. On the other hand, project estimates fell drastically from 23,000 beneficiaries in November 2017 to 15,000 by early 2018. Based on interviews with project staff, figures were revised due to inconsistencies in Ministry statistics, and challenges around adequate M&E capacity in the provinces. While revised figures are likely to be more accurate than earlier figures, it is important to keep in mind that they are likely to continue to be imprecise.

- **Assumptions around dropout and transition rates appear to be grounded in evidence, although transition statistics from our sample differ substantially**

  STAR-G has rightly grounded their transition statistics on the basis of research conducted on transition to secondary schools. The findings from our benchmarking and main evaluation samples, however, differ substantially from the conservative 43 per cent rate used to estimate girls who will transition from grade 7 to grade 8 and stand in the range of 70 to 80 per cent. More details on our transition statistics can be found in Chapter 4.

- **Using a school-based estimation approach may have implications for the reliability of STAR-G's estimates of the extent of marginalization by characteristics**

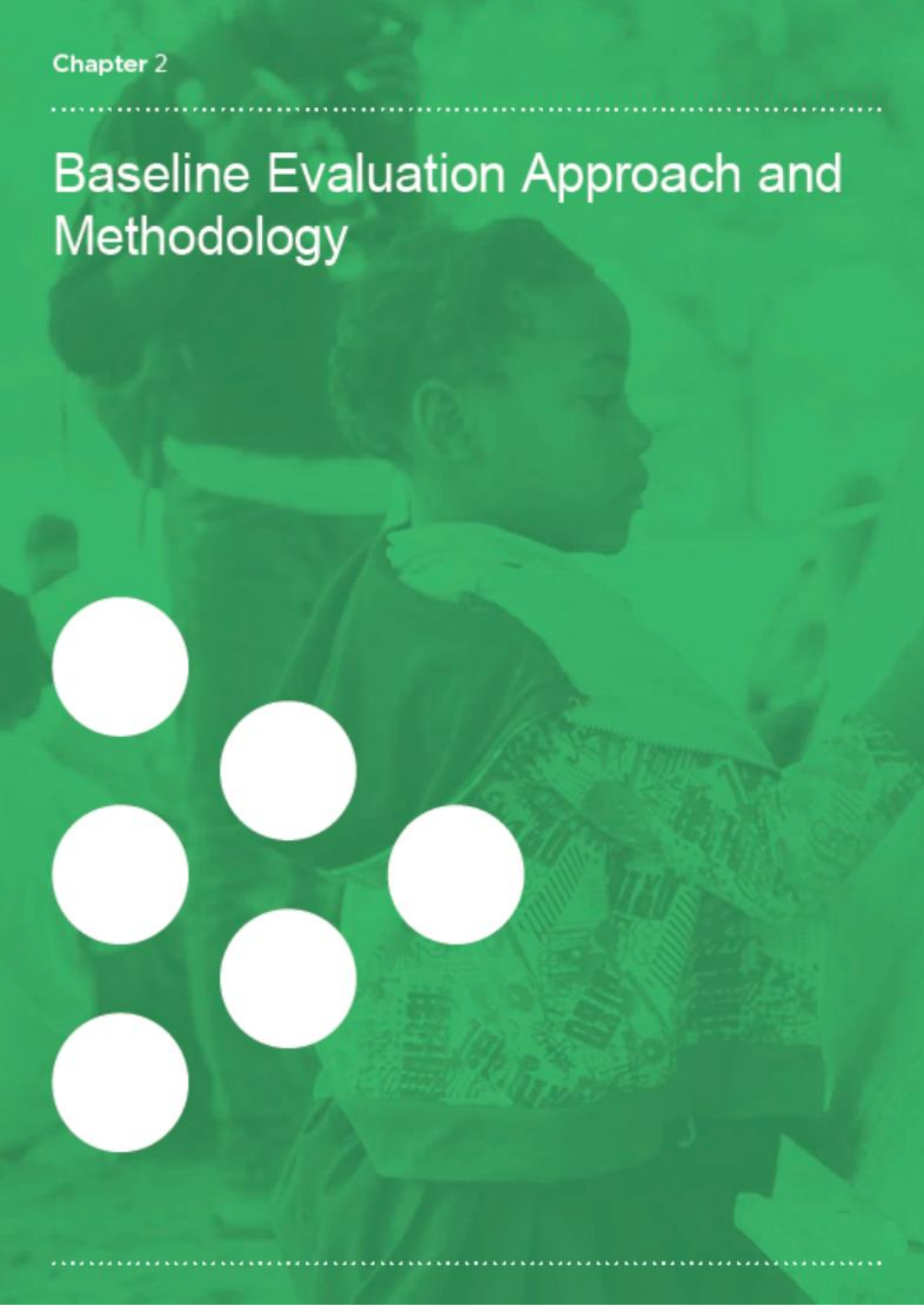
  Of the 15,000 beneficiaries, STAR-G has estimated percentages of girls who meet different characteristics of marginalisation based on prevalence in the general population. For instance, according to STAR-G, 27.4 per cent of beneficiaries are involved in child labour, and 37 per cent are married or young mothers under the age of 18, while 12.5 per cent are disabled.

However, prevailing gender and social norms, community attitudes, and unstated/stated school policies often exclude girls who are married, pregnant, or young mothers from accessing schooling. Disabled girls are often excluded due to norms, attitudes, and challenges around access, while the need to work likely prevents girls involved in child labour from being present in schools. It is likely that these three groups not only have lower attendance than their counterparts in the same grade, but also that they are not even registered in the school to begin with. In such an instance, percentages at least for these three categories are overstated in the beneficiary calculation.

In addition, STAR-G's programming likely also does not reach these groups, as interventions being implemented outside of schools are limited to community sensitization through matron/patron groups. This implies that STAR-G should reconsider their estimations of the extent of marginalization within the beneficiary pool, as well as re-examine their programming support for girls who are involved in child labour, are married or young mothers under the age of 18, or are disabled . See also further analysis in Chapter 3.

Chapter 2

Baseline Evaluation Approach and Methodology



2 Baseline Evaluation Approach and Methodology

2.1 Key evaluation questions & role of the baseline

Our research design employs a longitudinal, mixed methods approach to examine the performance of the STAR-G programme. The five questions the evaluation is set to respond to are:

1. **Impact:** What impact did STAR-G have on the learning and transition of marginalised girls in Mozambique?
2. **Effectiveness:** What worked (and did not work) to increase the learning and transition of marginalised girls?
3. **Process:** Was STAR-G soundly designed and implemented?
4. **Value for Money (VFM):** Did STAR-G demonstrate a good VFM approach?
5. **Sustainability:** How sustainable are STAR-G's activities and was the project successful in leveraging additional interest and investment?

This report presents results from the baseline, fieldwork for which was carried out between February 2018 and May 2018. The key objectives of the baseline report are:

- to set a baseline for the measurement of the project's outcomes and Intermediate Outcomes (IO)
- to provide a nuanced, evidence-based picture of the context in which the project operates
- to identify and assess the barriers to education that girls face, especially with regards to their learning, and transition across stages of education
- to describe the profile of the project's girl beneficiaries
- to review the project's calculation of beneficiary numbers
- to reflect on and assess the validity and relevance of the project's Theory of Change, including testing its assumptions and how interventions are designed to overcome barriers and lead to outcomes
- to understand the project's approach to gender equality and how this has been integrated into the project design
- to suggest targets for Outcomes and Intermediate Outcomes for the Midline and Endline evaluations, and for Outputs at annual frequency
- to investigate the linkages between Outputs, Intermediate Outcomes and Outcomes
- to provide the GEC Fund Manager, DFID, and external stakeholders quality analysis and data for aggregation and re-analysis at portfolio level

2.2 Evaluation methodology

Our core research design employs a Difference-in-Differences (Dif-in-dif) strategy, in which changes in the outcomes of Learning and Transition in an intervention group will be compared to changes in outcomes in a plausible comparison group. This quantitative Dif-in-dif will be supplemented using a qualitative results chain analysis strategy to explore changes in the outcome of Sustainability, and improvements in four intermediate outcomes that include Attendance, Teaching Quality, Self Esteem, and Community Attitudes.

Our evaluation combines a Dif-in-dif strategy with qualitative results chain analysis to interrogate the project's impact, effectiveness, process, value for money, and sustainability

Our research design is necessarily longitudinal in nature, and will follow a joint learning and transition cohort of 2,377 girls in Gaza, Manica, and Tete from baseline in 2018 to midline in 2019 and finally to endline in 2020. At each evaluation point, we will assess girls, and gather quantitative data from their households. In addition, for our qualitative chain analysis, we will also rely on six in-depth community case studies which will provide rich, nuanced data on how barriers, girls' self-esteem, and community attitudes evolve at each evaluation point. To gather data for the community case studies, we use a mix of Focus Group Discussions (FGD) and Key Informant Interviews (KII) with key stakeholders including girls, boys, parents, teachers, and community members.

Table 5 summarises our design, highlighting the purpose the quantitative and qualitative methodologies serve in the evaluation. Broadly speaking, the quantitative approach interrogates the presence of statistical relationships, while the qualitative approach attempts to understand the how and why behind these relationships. These aims are in line with the literature that contends that quantitative methodologies are useful to explore questions related to "What" and "How much", while qualitative methodologies are suited to exploring questions around "Why" and "How" (Goertz and Mahoney, 2012). While each approach primarily speaks to certain outcomes, our design relies on triangulation within and across methodologies to present a more robust analysis of the project.

Table 5: A mixed methods design

	Quantitative	Qualitative
Main strategy	Difference-in-Differences (Dif-in-dif) comparing intervention and comparison group at three evaluation points	Results chain analysis
Purpose	Determine the statistical impact of project on learning and transition	Explore the relationship between IOs and outcomes. Support understanding of how and why quantitative relationships exist. Explore elusive constructs such as attitudes and perceptions. Triangulate quantitative findings

	Quantitative	Qualitative
Outcomes of concern	Learning and Transition	Sustainability IO: Attendance, Teaching Quality, Self Esteem, and Community Attitudes
Secondary strategies for triangulation	Descriptive data analysis Qualitative data analysis	Descriptive data analysis
Rationale for choice	A quasi-experimental design allows us to make plausible causal claims about the impact of the programme. It is often used in instances where it is not practical or ethical to randomise study participants. The quantitative nature of analysis is best suited to answering questions around whether relationships exist and the extent and nature of relationships. In this case, it will allow us to provide statistically valid statements around programme impact. Limitation: The approach does not help explain how and why outcomes have or have not changed. In addition, unless different groups receive different elements of programming, it is not possible to determine the efficacy of individual components of the intervention. Does not account for unobserved, systematic differences between treatment and comparison groups, leading to some risk of bias in estimates of impact.	A results chain analysis allows us to qualitatively trace how and why intermediate outcomes may or may not be changing, and whether they are contributing to changes in Outcomes. It is often used in instances where it is not possible to quantitatively determine the efficacy of individual components of programming. The qualitative nature of analysis is best suited to answering questions around how and why relationships exist. In this case, it will allow us to understand how and why IOs may or may not be having an impact on girls' life chances. Qualitative work is also particularly useful at exploring elusive constructs such as attitudes and perceptions. Limitation: Relationships are only suggestive, not causal. In addition, qualitative analysis is likely to be illustrative, but not necessarily representative of the entire sample.
Sampling strategy and beneficiary coverage	Stratified random sampling 108 schools selected, stratifying by province Joint learning and transition cohort of 2377 girls / direct beneficiaries selected, stratifying by grade within 108 schools.	Purposive sampling to select 6 communities for illustrative case studies Mix of snowball, convenience, and purposive techniques to select 175 respondents including direct beneficiaries, AND indirect beneficiaries such as teachers and boys

	Quantitative	Qualitative
Tools at baseline	Learning assessment: 2377 Girls' survey: 2377 Household survey: 2377 Classroom observations: 62 Attendance spot check: 108	52 groups and interviews, covering over 175 respondents Focus Group Discussions (FGD) FGD Girls: 6 FGD Boys: 6 FGD Mothers: 6 FGD Fathers: 6 FGD Teachers: 6 Key Informant Interviews (KII) KII Girls' Club champions: 3 KII Matrons/Patrons: 4 KII Government officials: 5 KII Programme staff: 5 KII School council members: 5

Our evaluation aims to be gender-sensitive and disability-friendly by employing a variety of strategies. First, all quantitative and qualitative tools we have designed centre on the gender-specific barriers affecting girls' ability to learn and to transition to the next level of education in the context of Mozambique. Second, in line with the GEC's standards, wherever possible, we plan to collect and analyse data disaggregated by gender, age and disability at each evaluation point. Finally, we plan to train evaluation field staff (enumerators) at all evaluation points on how to best tease out the nuances associated with attitudes and expectations of social and gender norms. Care is taken at every stage in the evaluation process to avoid causing harm, stress or distress to child informants. Details of our child protection policies are available in Annex 6.

Benchmarking for learning and transition

Learning

To build learning targets at baseline, we use two approaches. Because STAR-G beneficiaries are currently in grades 4 to 7, the baseline for grades 5 to 7 will serve as the benchmark for these grades at future evaluation points. For the midline in 2019, the eldest STAR-G girls will be in grade 8, and for the endline in 2020, they will be in grade 9. Because discussions with STAR-G suggested that there is a possibility the endline may be conducted in 2021, there is a chance that the oldest girls will instead be grade 10 at the time of the endline instead. Therefore, for grades 8 through to 10, we collected data for an additional benchmarking learning sample whose results will serve as benchmarks at future evaluation points.

To identify girls for the additional benchmarking learning sample, we first selected secondary schools using a stratified random sampling approach from a frame of 35 potential intervention schools provided by SCI. These are given in Annex 10. We selected two schools from each province, with one school being smaller than the average school in the province and the other being larger. Overall, we planned and realised a sample of 6 schools from the frame. In each school, our data collectors made a list of girls enrolled in grades 8 through to 10 based on school registers. From this list, they randomly selected 12 girls from each grade to form the learning benchmark sample**. At baseline, we planned and realised a sample of 216 secondary school girls.**

The following table presents what grades current cohort girls are in, and which grades they will be in at future evaluation points.

Baseline	Midline (2019)	Endline (2020)
Project grades		
Grade 4	**Grade 5**	**Grade 6**
Grade 5	**Grade 6**	**Grade 7**
Grade 6	**Grade 7**	**Grade 8**
Grade 7	**Grade 8**	**Grade 9**

The following table summarises how we will calculate learning benchmarks for different grades.

Benchmark grades	
Grade 4	Not required
Grade 5	Baseline cohort
Grade 6	Baseline cohort
Grade 7	Baseline cohort
Grade 8	Benchmarked sample of 72 girls
Grade 9	Benchmarked sample of 72 girls
Grade 10	Benchmarked sample of 72 girls

Transition

At baseline, we also collected data for an additional benchmarking transition sample of girls. We selected girls to form part of this sample by randomly selecting a total of 15 intervention communities, 5 from each province, to conduct transition benchmarking. The communities selected are given in Annex 10. In each of these communities, we used a random walk method to identify a total of 22 households in which to conduct a survey. Households were eligible if they had girls aged 11 to 18 in the household. **At baseline, we planned and realised a sample of 330 transition households the results of which will be used for transition benchmarking.**

2.3 Outcomes and Intermediate Outcomes

In the following table, we summarise the project's outcomes and IOs. More details on how we will measure the outcomes, the level of measurement, the tool and mode of data collection, and the rationale for selecting the mode can be found in the next section, as well as in Annex 3a.

Table 6: Outcomes and IOs for measurement

Outcome	Level for measurement	Tool and mode of data collection
OUTCOMES		
Learning 1.1: Literacy – Number of marginalised girls supported by GEC with improved learning outcomes in literacy	School	EGRA and SeGRA
Learning 1.2: Numeracy – Number of marginalised girls supported by GEC with improved learning outcomes in numeracy	School	EGMA and SeGMA
Transition – 2.1 Number of marginalised girls who have transitioned through key stages of education, training or employment (primary to lower secondary)	Household	Household survey
INTERMEDIATE OUTCOME 1: ATTENDANCE		
1.1 Percentage improvement in marginalised girls' attendance rate in intervention schools	School	Attendance spot check Triangulation using household survey, FGDs with stakeholders
1.2 Average attendance rate of marginalised girls in girls' clubs	School / girls' club	Project provided data on attendance Triangulation using KIIs with girls club champions
1.3 Beneficiaries' views on the main barriers that may prevent their ability to attend school regularly	School/ household	Focus group discussions with key stakeholders Triangulation using household survey

Outcome	Level for measurement	Tool and mode of data collection
INTERMEDIATE OUTCOME 2: TEACHING QUALITY		
2.1 Proportion of teachers trained who demonstrate improvement against four or more competencies within the national teacher competency framework.	School	Project source Classroom observations Triangulation through FGDs with teachers and other stakeholders
2.2 Girls' perception towards their teacher's teaching methods and ability	School	FGDs with girls Triangulation using girls' survey
INTERMEDIATE OUTCOME 3: GIRLS' SELF ESTEEM		
3.1 Proportion of girls reporting increased self-confidence and ability to communicate their practical and strategic needs and concerns	School/ household	Girls' surveys, FGDs with girls
3.2 Change in girls' perception of their influence in the home, school and/or community	School/ household	FGDs with girls, Girls' surveys
INTERMEDIATE OUTCOME 4: COMMUNITY ATTITUDES		
4.1 Percentage of boys championing girls' right to education by taking concrete actions to support them (e.g. taking on household chores, walking with them to school etc.)	School	Project source Boys' FGD
4.2 Change in parents' attitudes towards girls continuing to attend school and learn beyond the project intervention	Household	FGDs with parents Triangulated with household survey, and KIIs and FGDs with other stakeholders including boys and girls
4.3 Proportion of girls who feel they are given appropriate support to meet their needs, stay in school and to perform well	School/ household	Girls' surveys, FGDs with girls
4.4 Change in support by Matron/patron groups to girls to postpone early marriage	School	KIIs with matrons and patrons and girls' club champions, and FGDs with beneficiaries

In light of the imminent redesign of STAR-G, the project does not have a complete sustainability plan and scorecard in place. As a consequence, the baseline evaluation also does not explore sustainability in a comprehensive fashion and only indicative analysis is presented. In the table that follows, we outline some proposed methods to examine the

Sustainability Outcome, with comprehensive data collection planned at midline and endline. The proposed methods are explored in more detail in Chapter 4.

Table 7: **Sustainability outcome for measurement**

Outcome	Level for measurement	Tool and mode of data collection
SCHOOL		
School councils' perception of the importance of girls' club input in school development plans	Household/ School	KIIs with school council members
Percentage of school councils that include strategies in their school development plans to secure contextually appropriate learning materials	School	Project source Triangulated with school council KIIs
Percentage of schools where developing and maintaining functional girls' clubs is part of the school's long-term strategy	School/Girls' club	Project source Triangulated with school council FGDs and KIIs with girls club leaders
COMMUNITY		
Percentage of matron/patron groups who acknowledge Sexual and Reproductive Health (SRH) as one of the girls' fundamental rights (disaggregated by gender)	Community	Project source Triangulated with FGDs with stakeholders
Change in parents' perception and attitudes related to girls' early marriage as opposed to getting education (disaggregated by gender)	Household	FGDs with parents, household survey Triangulated with KIIs and FGDs with other stakeholders
Percentage of parents/guardians who feel that it is equally valuable to invest in a daughter's education as a son's even when funds are limited (disaggregated by gender)	Household	Household survey Triangulated with KIIs and FGDs with other stakeholders
SYSTEM		
Girls clubs model is adopted by district school supervisors as part of the inspection checklist for schools	District	Project source Triangulated with KII with government official
Percentage of provincial IFPs that adopt the National Teacher Professional Development model	Province	Project source Triangulated with KII with government official
Teacher Training Colleges (IFPs) develop plans to diversify income self-sustainability	National	Project source Triangulated with KII with government official

2.4 Baseline data collection process

This section summarises our baseline data collection process. We begin by describing pre data collection activities. We summarise the 13 tools we used at baseline, and outline the processes we used for recruiting and training field staff. Next, we move on to providing

details on the fieldwork itself, reporting how sampling was done in practice, and what sample sizes were achieved. We conclude this section by outlining how we analysed our quantitative and qualitative datasets.

We were supported during the baseline data collection process by our data collection partner, Forcier Mozambique, which is the local arm of Forcier International. Forcier International is a research organization that was established in 2012 and has conducted over 450 research projects in 26 countries. Under NFER's oversight and guidance, Forcier Mozambique took responsibility for recruitment of local staff, translation of instruments, and data collection and cleaning processes. NFER worked closely with Forcier throughout the fieldwork phase, and led on training of field staff, quality assurance of translated instruments, management and quality assurance of fieldwork, and troubleshooting fieldwork challenges, particularly those related to sampling.

2.4.1 Pre data collection activities

2.4.1.1 Research instruments

We used a total of 13 tools at baseline, and plan to use a comparable set of tools at midline and endline for the sake of consistency. The quantitative tools included (1) Learning assessments (2) Girls' survey (3) Household survey (4) Attendance checklist and (5) Classroom observation tool. The qualitative tools included (6) teacher FGD guide (7) parents FGD guide (8) girls FGD guide (9) boys FGD guide (10) community KII guide (including school council members, matrons/patrons, and head teachers) (11) government officials KII guide (12) programme staff guide and (13) girls' club champion guide.

We used the GEC provided girls' survey and household survey templates as the basis of developing our survey tools. We relied on GEC guidance on learning assessments to design a mix of Early Grade Reading Assessments (EGRA), Early Grade Mathematics Assessments (EGMA), Secondary Grade Reading Assessments (SeGRA), and Secondary Grade Mathematics Assessments (SeGMA) for the evaluation. We developed the remaining tools using best practices in instrument design with input from experts on teaching and learning, and gender and social inclusion. All tools were peer reviewed by SCI and GEC. More details on baseline tools are available in Annex 7.

Mozambique has multiple regional languages and dialects, but in consultation with STAR-G we decided to translate tools to Portuguese only. We made this decision for two reasons: first, the LoI is Portuguese, and second, it seemed that translating the tools into multiple languages would prove to be challenging from both a cost and a practical implementation perspective. To ensure that we would still gain meaningful information, we ensured that field staff were proficient in the relevant local languages and thus were able to provide spontaneous translations for respondents if needed. Because the use of spontaneous translations reduces standardisation and thus may result in different respondents interpreting the questions differently, we provided additional training to field staff so that they would be conscious of this challenge and could make attempts to minimise it.

Household surveys and girls surveys were programmed using the Open Data Kit (ODK) software and were entirely implemented in the field using smartphones. We collected all other data using pen and paper methods, or a mix of pen and paper and smartphones.

2.4.1.2 Piloting

We used three different models of piloting for the learning assessments, quantitative tools, and qualitative tools.

- **Learning assessments**

We delivered an informal assessment trial to 12 students and three teachers, selecting students and teachers using convenience-sampling techniques from two purposively selected government primary schools in Maputo. Following this informal trialling, we adjusted EGRA/EGMA and SeGRA/SeGMA to improve their functioning. We then delivered a formal trial or pilot of the assessments to 94 students from grades 4 through to 7 from two different primary schools. We selected one semi-urban and one rural school purposively from Matola, a suburb of Maputo, where SCI was not active but community characteristics were comparable to those of intervention schools.

Formal pilot results were analysed and further adjustments to the tools were made prior to implementation. Overall, our substantive adjustments included changes to instructions to make them easier to understand, changes to some SeGMA questions to make them less challenging, and changes to the first subtask of the EGRA to allow sounding and reading of letters as correct answers. Through discussions with the GEC and SCI, we also altered the nature of subtasks that were to be delivered to students in different grades. The formal pilot also allowed us to test our assessment delivery protocols, and minor changes to the way we timed subtasks and tested girls were made following a qualitative debrief with field staff.

In consultation with SCI, we made two decisions at the time of formal piloting that will have an impact on calibration of learning assessments at midline. First, due to time and cost constraints, we piloted only the baseline version of the assessments. Second, due to cost constraints of going to new sites to test girls in secondary school, we only piloted the baseline version of the assessments on primary school students. Because of this, calibration of midline and endline versions of the assessments will have to be conducted at midline. This calibration will be done in line with GEC guidance and best practices in calibrating cloned assessments to a similar level of difficulty. While we tested girls in grades 8 to 10 in the baseline for the benchmark sample, we may further decide to include this group in the midline calibration to ensure that future assessments are also appropriate for this group.

More details on the learning assessments pilot can be found in Annex 9.

- **Quantitative tools**

We ran a formal pilot of the household and girls survey tools on 25 of the 94 girls who were included in the learning assessment pilot. The quantitative tools pilot results were analysed in two different ways. First, as these tools were delivered using a smart phone, we checked that the programming and routing of questions was correct. Second, we reviewed trends in data and checked for outliers and discrepancies to see if any questions were misunderstood. This review was accompanied by a qualitative debriefing session with field staff who highlighted questions and answer options they did not understand. For such questions, we conducted additional training.

- **Qualitative tools**

All qualitative tools underwent cognitive pre-testing on one to two respondents in Maputo and Matola. This pre-testing involved participants reading through (or being read) the full questionnaire, and "thinking out loud" about the questions posed. Respondents were purposively selected to represent the type of respondent the tool would be used with. Some questions were reordered and/or altered as a result of this cognitive pretesting, although changes were negligible.

2.4.1.3 Fieldwork planning

- **Recruitment**

Our data collection partner led on recruiting field staff, while NFER provided oversight for the process. We agreed to a field structure that consisted of eight teams, of which four were for Gaza, two were for Manica, and two were for Tete. This split was in line with the size of the sample in the three provinces. In the final field model, each team had an experienced team supervisor, who managed three field researchers.

At the recruitment stage, our partner recruited eight team supervisors and 30 field staff, although only 24 field staff were needed. This was to allow for potential dropout before and during training. The field team was recruited using a variety of methods, including tapping our partner's existing database of freelance researchers and identifying additional researchers through this network. We used three criteria for recruiting the researchers: that they had at least a Bachelor's degree, that they spoke the relevant regional languages and dialects, and that they were enthusiastic and personable and demonstrated appropriate behaviours and attitudes to working with children.

All team supervisors that formed part of the final team were experienced researchers that our partner in Mozambique had worked with previously. There is a dearth of freelance female researchers in Mozambique, but we ensured that each of the eight teams had at least two female team members.

- **Training**

Pre-implementation training in February 2018 was done in three phases. In the first phase, NFER, our data collection partner, and SCI Mozambique trained all eight team supervisors and the full set of Gaza field staff in Maputo. Training in Maputo lasted two weeks, including one week in a classroom setting, and one week in a mixed classroom and field setting. In the second and third phases, we used a cascading model to conduct training in Manica and Tete for local field staff. Regional SCI Mozambique staff attended parts of the training in Manica and Tete as well. A refresher training for team supervisors was conducted in early April 2018, two months into the fieldwork.

The field staff training included information on the project, sampling, quantitative tools, and fieldwork ethics. SCI Mozambique led on communicating the project objectives, and on child protection. NFER led on delivering training on fieldwork ethics, the learning assessments, and interviewing techniques, which included gender sensitivity training. Our data collection partner covered the specifics of all other tools, the sampling procedure, and respondent selection, among other topics. In all three training phases, we used a mix of lecture style training, and mock practice and role playing in order to ensure that field staff felt confident

with the various tools. Our data collection partner also conducted tests of understanding with the field staff, and some weak performing field staff were dropped during the training phase.

All of our data collection partner's team supervisors had previously been trained and certified by the US National Institutes of Health in Ethical Practices with Human Research Subjects. During the Maputo training, the team supervisors received refresher training on these standards, and additional training on quality assurance mechanisms in the field, team management techniques, device troubleshooting, logistical plans, and security procedures. The team supervisors along with one female field researcher were responsible for qualitative data collection in the six case study communities. NFER trained the team supervisors on the purpose of the qualitative work, the tools, and general interviewing techniques.

2.4.2 During data collection

2.4.2.1 Timing and sequencing

We piloted our instruments in early February 2018 when school terms commenced, and collected data for the baseline between mid-February 2018 and early May 2018. This implies that girls in the sample had just entered the relevant grade, and could not reasonably be expected to have mastered the relevant grade's curriculum.

We staggered training and the start of fieldwork by province in order to make it more manageable. We started fieldwork in Gaza first as the province contains over 50% of the sample, before starting fieldwork in Manica and Tete sequentially. This sequential approach allowed us to address teething issues in fieldwork management proactively. Because sample sizes were smaller in Manica and Tete, all fieldwork finished at approximately the same time. We collected quantitative data and qualitative data simultaneously, as the project timelines did not permit sequencing of methods.

2.4.2.2 Sampling in practice

We used a variety of sampling methodologies in the evaluation. In general, the quantitative sample employed random stratified sampling techniques, while the qualitative sample used a mix of convenience, snowball, and purposive methodologies. In the quantitative sample, we matched the beneficiary proportions by province and grade to ensure representativeness. We summarise how sampling occurred in practice for each strata below. Annex 10 contains the relevant sampling frames. Details on how we will ensure adequate cohort tracking at future evaluation points is covered in section 4.5 and Annex 6.

- **Primary schools**

We calculated the size of the quantitative sample required using statistical techniques, as summarised in Annex 6. Our sampling calculations and design implied that we needed to sample a total of approximately 2400 girls enrolled in grades 4 through to 7 in a total of 110 schools, with even splits between intervention and comparison groups.

To select the quantitative sample we relied on a frame of 140 intervention schools and 100 comparison schools and communities provided by STAR-G. The frame of 140 intervention schools included the complete list of schools in which STAR-G is implemented. The comparison schools list was compiled by SCI on the basis of a mapping exercise carried out before we were appointed to conduct the evaluation, and includes schools from communities

in which SCI is active in nutrition and livelihood programming. The six communities for the qualitative case studies were selected from the same frames.

We used STATA to randomly select schools from the frame provided to us, using province as the stratification variable. At baseline, *we realised a sample of 108 schools against a plan of 110 schools,* with the final sample comprising of 54 intervention and 54 comparison schools. These schools are split across provinces based on the split of STAR-G's beneficiaries. We achieved two fewer schools than planned due to minor delays in fieldwork.

- **Cohort girls and households**

We selected girls from schools to form part of a joint cohort sample using stratified random sampling. *Overall we realised a sample of 2377 girls, with 1184 in the intervention group and 1193 in the comparison group against a planned sample of 2410 girls.*

In each school, our field staff made a list of girls in grades 4 through to 7 based on school registers. From this list, they randomly selected girls from each grade based on the planned number of girls per grade that were to be achieved from each school. If girls who were randomly selected from the list were not in school that day, they were replaced by a girl who was in school. The planned number of girls per grade field staff attempted to achieve was based on the proportion of beneficiary girls in each grade.

As we used a joint cohort approach, the same girls who were selected in the school were interviewed in the household**.** *We achieved a household sample of 2377 households.*

- **Classroom observations**

We *planned for 50 classroom observations, and achieved 62 classroom observations,* with 32 in intervention schools and 30 in comparison schools. We selected the schools from the overall school sample using a stratified random sampling approach, with province-wise and grade-wise splits proportionate to the overall beneficiary mix. Within each school, our field staff was meant to observe Portuguese classes only. This was because STAR-G's programming has focussed on literacy training thus far. In the first two weeks of fieldwork, field staff conducted classroom observations in several extra schools and for other subjects due to confusion over the requirement. We dropped the observations of different subjects but retained the additional observations for Portuguese for analysis.

- **Learning benchmark girls**

At baseline, we also collected data for an additional benchmarking learning sample of girls from grades 8 through to 10. To identify girls for the sample, we first selected secondary schools using a stratified random sampling approach from a frame of 35 potential intervention schools provided by STAR-G. We selected two schools from each province, with one school being smaller than the average school in the province and the other being larger. *Overall, we planned and realised a sample of 6 benchmark schools from the frame.*

In each school, our data collectors made a list of girls enrolled in grades 8 through to 10 based on school registers. From this list, they randomly selected 12 girls from each grade to form the learning benchmark sample*. At baseline, we planned and realised a sample of 216 secondary school girls.*

- **Transition benchmark girls**

At baseline, we also collected data for an additional benchmarking transition sample of girls. We selected girls to form part of this sample by randomly selecting a total of 15 intervention communities, five from each province, to conduct transition benchmarking. In each of these communities, we used a random walk method to identify a total of 22 households in which to conduct a survey. Households were eligible if they had girls aged 11–18 in the household. *At baseline, we planned and realised a sample of 330 transition households and girls.*

- **Qualitative sampling techniques**

With the exception of project staff and government official interviews, all of our qualitative work was conducted within six community case studies. We selected the community case study sites purposively from the frame of intervention and comparison sites. We selected two communities for case studies in each province, one from the intervention frame and one from the comparison frame. *We planned and realised a total of six community case studies at baseline.*

We used a mix of snowball, convenience, and purposive sampling techniques for selecting respondents for the qualitative FGDs and KIIs. As planned, project staff and government officials were chosen purposively. In the former case, purposive sampling ensured coverage of relevant STAR-G team members, while in the latter, we achieved a mix of central and regional government respondents. FGDs with parents, girls, boys, and teachers used convenience and snowball sampling and were conducted in both intervention and comparison communities. KIIs with school council members, matrons/patrons, and girls' club champions used purposive and snowball sampling and were conducted only in intervention communities. All FGDs and KIIs with female participants were conducted by female field staff.

At baseline, we had planned for a total of 30 FGDs and 25 KIIs and achieved a total of 30 FGDs and 22 KIIs. Both KIIs with girls club champions in Manica were conducted in a single interview, and there was no second girls club leader in Gaza. Furthermore, only a KII with matrons could be carried out in Gaza, as there were no patrons in this province. Thus, the achieved number of KIIs is three fewer than planned.

Our field staff worked with head teachers in these communities to select respondents. While FGDs were meant to have seven respondents each, in one case in Tete, we were unable to find enough teachers in the school and used four respondents instead. In two cases, recordings for qualitative interviews failed, and the interviews were re-conducted with different respondents over the phone.

Table 8: Sample planned versus achieved

	Planned			Achieved		
	Total	Intervention	Comparison	Total	Intervention	Comparison
Schools	110	55	55	108	54	54
Girls / households	2420	1210	1210	2377	1184	1193
Classroom observations	50	25	25	62	32	30
Benchmark learning girls	216	216	0	216	216	0
Benchmark transition girls	320	320	0	330	330	0
KII	25	25	0	22	22	0
FGD	30	15	15	30	15	15

2.4.2.3 Quality assurance

We employed two levels of quality checks to ensure high quality of data collection. In the first level, our local partner conducted and shared results of (1) in-field rechecks, and (2) real-time data-based checks with us. In the second level, NFER implemented (1) random checks, (2) tracked weekly progress, and (3) analysed interim data to deal with any challenges proactively. Together these two levels of quality assurance resulted in strong fieldwork implementation.

- **Quality assurance by data collection partner**

All field staff were physically accompanied by team supervisors for 8 per cent of the surveys they conducted. In some cases, these interviews resulted in additional training needs being identified. Additional training was generally done on a case by case basis locally, but in a few instances field staff contacted headquarters to clarify certain questions and response options. NFER was consulted as needed. In addition, team supervisors conducted 247 phone rechecks and 113 physical rechecks. Altogether, supervisor accompaniments, phone rechecks, and physical rechecks were done for 24 per cent of the sample.

Real-time data based checks were critical in ensuring that sampling was on track, and data being collected would be usable. In areas where daily data uploads were possible, fieldwork progress was monitored daily by our data collection partner. In areas where this was not possible, SMS and phone calls were used instead. As soon as data was uploaded, whether daily or at a different interval, survey durations, GPS locations, and outliers in the data were checked and reconciled through phone discussions with field staff. Serious deviations were reported to NFER. Our data collection partner also conducted spot checks of audio recordings of qualitative work to ensure they were transcribed corrected, and reviewed all translations to ensure they were fit for purpose.

- **Quality assurance by NFER**

To supplement the quality assurance undertaken by our data collection partner, NFER also implemented a handful of checks to verify data quality. First, we sent staff members to Gaza and Manica, which together comprise over 80 per cent of the sample, in the first few weeks of training and implementation. This was to provide additional support, and conduct independent checks on protocols and field planning. Feedback based on our verification was passed on to the data collection partner, and solutions were jointly agreed.

Part of our quality assurance procedure was to work with our data collection partner on a weekly basis to understand fieldwork progress. This update meeting served as the forum to discuss dashboard statistics on progress, to describe any issues, highlight any problems, and agree on any mitigation strategies and remedial actions. Discussions usually focussed around adjustments in field plans, often due to weather related delays, unavailability of respondents, human error resulting in under or oversampling in certain sites, and team changes. In addition, we analysed interim data from the project ourselves to check its quality. Through this analysis, we checked for outliers, and for unusual trends in the data.

2.4.3 Post data collection activities

Both quantitative and qualitative data underwent extensive data cleaning processes. For quantitative data, this included checking for missing values, outliers, and unusual trends. For qualitative data, this included reading through transcripts to clarify unclear or missing data. All data was stored on an access restricted portal, and anonymity of respondents was ensured through strict data security protocols.

- **Quantitative data**

Two quantitative researchers processed the quantitative data using STATA statistical software. Analysis was carried out in four stages. In the first stage, the team produced summary statistics for the sample, and for the learning and transition outcomes. These summary statistics were reviewed by the Project Lead for consistency, and STATA syntax was quality assured on a random basis. In the second stage, the team collaborated with the qualitative research team to agree key subgroups to analyse further. In the third stage, our quantitative researchers conducted preliminary regression analysis to explore key relationships in the dataset. In the final stage, the Project Lead analysed the data findings in light of the context, and STAR-G's ToC along with other team members. Findings at each stage were shared with the qualitative research team to ensure adequate triangulation of findings.

- **Qualitative data**

Two qualitative researchers processed the qualitative data using NVIVO software. Analysis was carried out in four stages. In the first stage, the team engaged with transcripts of KIIs and FGDs, and key quotes and themes were summarised against the Intermediate Outcome Indicators. One summary document was created for each transcript, and these were uploaded into NVIVO, where data was coded against intermediate outcome indicators using the auto-code function. In the second stage, the team worked collaboratively with the Project Lead and the quantitative team to discuss common themes and emerging findings from the data in order to generate an initial coding list. In the third stage, a final round of coding was carried out in NVIVO based on additional discussions within the team. In this final round,

additional codes were added to, for instance, disaggregate findings by province, intervention/comparison groups, and respondent type. In the fourth and final phase, the data was analysed using both the descriptive and interpretative styles of analysis. Qualitative and quantitative findings were triangulated through team discussions and cross-examination of data.

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

In this section we outline challenges we faced during baseline data collection. We focus on the issues that may affect reliability of findings, summarising these challenges into those related to sampling, quality of quantitative data, and quality of qualitative data. We conclude this section by highlighting three key limitations of the wider evaluation design.

2.5.1 Sampling schools and girls

Sample selection at the school level proved to be a challenging process. STAR-G purports to support girls in 140 schools in grades 4 through to grade 7. Our original sampling and fieldwork design was therefore based on sampling a total of 22 girls from each of a total of 110 sample schools. From each school, we intended to sample seven girls from grade 4, seven from grade 5, four from grade 6, and four from grade 7. This proportion mix reflects the beneficiary split.

However, in the sampling frames provided to us, there was a mix of three types of schools found in Mozambique, denoted EP1, EP2, and EPC schools. EP1 schools are those schools that have grades 1 to 5, EP2 schools have only grades 6 and 7, while EPC schools have all grades from 1 to grade 7. Historically EPC schools were placed in larger communities, while EP1 schools were placed in smaller communities. As per recent policy reforms in Mozambique, all EP1 schools should now have a linked EP2 school in the same locality, making them EPC schools. However in practice this is not the case yet, making it difficult for us to continue with our original strategy of 22 girls per school.

Upon review, we found that the intervention and comparison frames provided to us for Manica and Tete had a sufficient number of EPC and EP1/2 linked schools for us to continue with the original design of sampling 22 girls from the same school. For Gaza, there were an insufficient number of EPC / EP1/2 linked schools in the comparison frame. In order to prevent biases related to systematic difference between communities which have only EP1 schools and those that have EPC or EP1/EP2 linked schools, we decided to balance the mix of EPC and EP1 schools in Gaza, adjusting the number of students per school to achieve the overall sample size. In EP1 schools in Gaza, we planned to sample 14 girls only, with seven from grade 4, and seven from grade 5. In EPC schools in Gaza, we planned to sample 28 girls, with seven girls from each grade.

When in the field, we had to replace ten of the schools that had originally been randomly selected to form part of the sample. All ten of these schools were from the comparison frame and were replaced because the schools were located in different districts from those in which SCI operates, or because SCI was implementing a different program in that school. One school was replaced as it had converted from being an EPC to a secondary school. In the field, we also found several instances in both intervention and comparison schools where

there were an insufficient number of girls in the relevant grades. In such instances we oversampled girls from the relevant grades in the next school.

The implications of our sampling strategy for external validity are important. In Manica and Tete, the sample will allow us to make claims about the efficacy of STAR-G's programming in EPC schools and communities but may not necessarily extend to efficacy of programming in EP1 schools and communities. In Gaza, the sample will allow us to make claims about programming in both EP1 and EPC schools and communities. Readers are advised to use caution when extrapolating results drawn from our sample to the whole of STAR-G's programming in light of this.

2.5.2 Quality of quantitative data

During fieldwork, we faced a number of challenges that are common in such contexts. For instance, in general, girls and caregivers were uncertain about the age of the girl. Some caregivers were also uncertain about the grade girls were enrolled in. While we were able to reconcile grades from school records for the main cohort, readers should exercise caution in interpreting grades provided by caregivers in the benchmark sample.

Another key challenge was obtaining accurate enrolment figures for our attendance checklist. In many schools, records were poorly maintained, especially if there were multiple classes of the same grade and different shifts during the day and evening. Because of this, our attendance spot check data yields over 100% attendance in many cases, and has not been used in much of the analysis presented.

Scripting errors resulted in two omissions during the fieldwork, only one of which we were able to correct. At the beginning of fieldwork, a scripting error resulted in us failing to administer SeGRA/SeGMA to girls in grades 4 and 5. Once we realised the error, we fixed it and revisited girls to administer the assessment correctly. The learning assessment data presented at baseline is therefore complete and we do not expect any impact on findings. A second scripting error prevented us from asking details about girl characteristics and barriers while conducting the benchmark survey. This error was discovered during analysis for the baseline report and was not corrected. This error limits our ability to provide any further analysis of the benchmark sample than is already provided in this report.

2.5.3 Quality of qualitative data

The ability to find the right respondents, and challenges in recording were the main issues we faced that could hinder the quality of our qualitative data and/or result in bias. For instance, we were unable to find a school council member, or any matrons and patrons in the intervention community in Tete, which may skew results. In addition, the recordings for three interviews were found to be unusable. For two of those interviews, which were of community members, we re-conducted the sessions over the phone and included this data in the analysis. Answers for these respondents were less detailed than they were when the original interview was conducted. For the third interview, which was of a government official, we typed notes and used the notes as raw data into NVIVO.

2.5.4 Limitations of evaluation approach

There are three limitations of our evaluation approach that readers should be aware of as they read this baseline.

1) Approach limitations
   The Dif-in-dif strategy we plan to employ at midline and endline will only allow reasonable causal claims to be made about the overall project, not about individual components of programming. While we plan to use qualitative results chain analysis to support the latter, our qualitative case studies were conducted in six communities only at baseline. Unless these case studies are extended at midline and endline, they will continue to be indicative of the nature of relationships between IOs and outcomes for a very small number of cases

2) Sampling limitations
   Our sampling approach uses a joint cohort strategy, which selected the main cohort from the population of girls who were present in school on the day of the survey. While this is appropriate in light of the beneficiary calculation and definition laid out by STAR-G - i.e. girls in grades 4 to 7 – it does systematically exclude girls who may be enrolled but are frequently absent from school

3) Limitations related to redesign
   STAR-G is undergoing a significant programme redesign in the next year. Depending on the new design, our evaluation approach may need to be adjusted at midline and endline. How and when redesigned elements are implemented will likely also affect our ability to detect any changes in outcomes at future evaluation points

Chapter 3

Key Characteristics of Baseline Samples

3 Key Characteristics of Baseline Samples

3.1 Project beneficiaries

As noted in Chapter 1, STAR-G defines educational marginalization for the Mozambican context on the basis of six characteristics, which are listed below. As many of these characteristics can overlap, STAR-G uses estimates to define what proportion of direct beneficiaries meet these criteria. Due to the lack of sophisticated beneficiary level data, these figures are estimates based on secondary data sources, and the professional judgment of programme staff.

- Remote or rural locations: 85%
- Girls married and/or are young mothers (under 18): 37%
- Extremely poor, defined as inability to resource school materials: 20%
- Engaged in child labour: 27.4%
- Disabled: 12.5%
- Who don't speak the language of instruction at entry to school: 95%

STAR-G defines marginalized girls as those who reside in remote or rural locations, are married or young mothers under the age of 18, are extremely poor, disabled, engaged in child labour, or do not speak Portuguese when they enter school

As a continuation of PAGE-M, STAR-G aims to work with the same beneficiaries from the previous project, who had already been identified as marginalised. Because girls have aged over the three-year PAGE-M project cycle, the youngest of STAR-G beneficiaries are in Grade 4 and the oldest are in Grade 7.

Estimates of beneficiaries are calculated on the basis of the enrolment figures in the relevant grades in intervention schools and communities (see previous chapter). Due to financial constraints, the project now works with 140 schools against 195 in the first phase. According to programme staff, the original schools and provinces were selected using a mix of techniques. Consultations with government officials, professional judgement of programme staff and other local experts, and extent of SCI's pre-existing programming in the relevant provinces all played a role in the original selection of schools.

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

In this section, we describe the sample cohort of 2377 girls by province, grade, age, and disability status. For each split, we show the percentage of the achieved sample in the intervention and comparison groups. Wherever relevant, we display these percentages alongside beneficiary percentages to demonstrate how representative the sample is of the beneficiary group. In some cases two sets of beneficiary splits are provided: the original percentage refers to figures provided in SCI's MEL framework as given in Annex 5, while the revised percentage refers to figures provided by STAR-G in May 2018 based on updated calculations. As noted in the previous chapter, our evaluation employed the joint cohort approach, and our sample is comprised entirely of in-school girl beneficiaries.

Achieved sample is in line with planned splits by region and grade, and is balanced between intervention and comparison groups

Our key findings on the representativeness of the sample are presented below.

- **Achieved sample is regionally representative of the beneficiary group, and is balanced between intervention and comparison groups**

Table 9 illustrates that the province-wise split of the sample is in line with our original design, and is representative of the beneficiary group. A sizeable 54 per cent of the sample is from Gaza, which is where the majority of STAR-G's programming lies. Manica and Tete comprise 28 per cent and 18 per cent of the sample respectively, demonstrating the relative extent of SCI's programming in these two provinces. While the achieved sample maps on to the original beneficiary group exactly, there are minor differences in province-wise composition as compared to the project's revised beneficiary numbers. Using a province-wise split, our evaluation sample is balanced across the intervention and comparison groups.

Table 9: Evaluation sample breakdown (by region)

	Intervention (Baseline)	Comparison (Baseline)	Project Beneficiaries (Original)	Project Beneficiaries (Revised)
Gaza	54%	54%	54%	53%
Manica	28%	28%	28%	26%
Tete	18%	18%	18%	21%
Total	100%	100%	100%	100%
Girls sample size	1184	1193	23,756	15,554

- **Achieved sample is representative of the original beneficiary grade-wise split, but is statistically different from the revised beneficiary grade-wise split**

Table 10 illustrates the grade-wise split of the sample girls. In line with STAR-G's beneficiary split, girls in grades 4 and 5 constitute a larger proportion of the sample than do girls in grades 6 and 7. The percentages achieved are consistent with our sample design, and are not statistically different from the weighted average grade of the project's original beneficiary figures. Nonetheless, grade-wise representativeness does appear to reduce slightly when the revised beneficiary proportions are considered. Statistically speaking, the mean grade in the sample is statistically different from the weighted average grade of STAR-G revised beneficiary figures. We do not anticipate that this difference will affect how project targets are set and tracked.

Table 10: Evaluation sample breakdown (by grade)

	Intervention (Baseline)	Comparison (Baseline)	Project Beneficiaries (Original)	Project Beneficiaries (Revised)
4	32%	32%	33%	29%
5	32%	32%	30%	28%
6	18%	18%	19%	23%
7	18%	18%	18%	20%
Total	100%	100%	100%	100%
Girls sample size	1184	1193	23,756	15,554

- **Intervention sample girls are marginally older than comparison group girls, but the difference is not statistically significant**

In Table 11, we present the age-wise split of the sample girls. The table shows that girls in our comparison group are slightly older than their counterparts in the intervention group but the difference is not statistically significant. The splits are presented only for the sample as STAR-G does not record beneficiary splits by age for two reasons. First, not all girls/caregivers are able to provide accurate age estimates due to weak record-keeping and lack of numeracy. Second, girls often repeat grades, or drop out and re-enter schooling at different points in time, which means girls within a given grade can be of a variety of ages.

Table 11: Evaluation sample breakdown (by age)

	Intervention (Baseline)	Comparison (Baseline)
Aged 6-8	1%	2%
Aged 9-11	43%	46%
Aged 12_13	36%	33%
Aged 14-15	17%	16%
Aged 16-17	3%	3%
Aged 18-19	0.1%	
Total	100%	100%
Girls sample size	1184	1193

- **Disabled girls in the sample are few, but figures may be misleading**

Against STAR-G's estimate that 12.5 per cent of their beneficiaries are disabled, and figures from UNICEF which suggest that 14 per cent of school aged children have a disability (Sida, 2014), there are less than three per cent girls identified as disabled in our evaluation sample. The comparison group has 39 girls identified as disabled, while the intervention group has 29 girls identified as disabled. As part of the evaluation, both caregivers and girls were asked about impairments. Table 12 below displays the responses from caregivers, which reported higher impairment numbers than those reported by girls themselves.

In our view, however, the low figures may be misleading for several reasons. First, the nature of the questions may have led to underreporting because respondents did not want to endure the potential stigma associated with disability. Second, it is possible that because of the delicate phrasing of the questions, which focused on ability to perform certain functions, without explicitly mentioning the notion of impairment or disability, some respondents did not understand the questions correctly. Third, in many instances, our field staff noted that respondents, especially girls, did not report that they had an impairment, even in cases where this appeared obvious to an observer. Finally, even if the disability figures reported are accurate, they are only likely to be representative of the in-school population. Because disabled girls are likely to have challenges in accessing schooling, figures calculated on the basis of the in-school population are likely to underestimate the prevalence of disability in Mozambique because of our sampling approach. The challenge for disabled individuals in attending schools were recognised by a number of adult interviewees (teachers, parents, ministry officials, school council members). The qualitative data also highlighted that small number of stakeholders did acknowledge the right of disabled children to attend school (see discussion in chapter 5). However, data is limited and we are unable to draw a broader

picture of attitudes towards disability. Since none of the interviewees reported having a disability themselves, neither is it possible to give this perspective.

Table 12: Evaluation sample breakdown (by disability)

Sample breakdown (Girls)	Intervention (Baseline)	Comparison (Baseline)	Project Beneficiaries (Original)
Girls with disability (% overall)	1.89%	2.89%	12.5%
Provide data per impairment			
Vision impairment	0.25%	0.67%	
Hearing impairment	0.51%	0.84%	
Mobility impairment	0.42%	0.42%	
Cognitive impairment	0.68%	0.67%	
Self-care impairment	0.00%	0.25%	
Communication impairment	0.08%	0.42%	

3.3 Educational Marginalisation

In this section, we explore the extent of marginalization found in the cohort of 2377 girls and the nature of barriers to education. Our analysis is informed by our contextual analysis, as well as analysis of quantitative and qualitative data.

We begin by describing the sample using dimensions of marginalization such as household status, poverty profiles, and language difficulties. For each dimension, we display the percentage (%) evident in the sample, and the percentage (%) sample in the intervention and comparison groups. We also include a column that notes statistically significant differences at the 10 per cent level (denoted by a *).

The evaluation sample consists of girls who reside in rural areas. The majority of the sample are from poor households and/or households for whom Portuguese is not the mother tongue

- **Sample girls are marginalised based on a variety of dimensions**

Table 13 illustrates that the sample girls are marginalised based on a variety of dimensions. Almost 46 per cent of the sample resides in a female headed household, as compared to a national statistic of 33 per cent female-headed households in Mozambique (ICPD, 2012). In

terms of poverty, over 77 per cent of the households find it difficult to afford to send girls to school, while approximately 46 per cent are unable to meet basic household needs without resorting to charity. These figures are consistent with the poverty profile of Mozambique, where 46 per cent of the country's population live below the poverty line (The World Bank Group, 2017a). Moreover, approximately 28 per cent of girls live in households where the head of the household has *no* education, and for over 80 per cent of girls, Portuguese is not their mother tongue.

Table 13: Girls' characteristics

	Total	Intervention (Baseline)	Comparison (Baseline)	T-test (p value)
				Girl's household profile
Single Orphans	15%	14%	15%	0.46
Double Orphans	2%	2%	2%	0.62
Living without both parents	**11%**	**11%**	**10%**	**0.715**
Living in female headed household	46%	49%	43%	0.00*
Head of Household has no education	28%	29%	28%	0.73
Primary caregiver has no education	**36%**	**34%**	**37%**	**0.174**
				Girl's marital and early pregnancy profile
Married	2%	2%	2%	0.56
Mothers under 18	2%	2%	1%	0.04*
Mothers under 16	1%	2%	1%	0.05*
				Poverty profile
Difficult to afford for girl to go to school	77%	74%	80%	0.00*
Household unable to meet basic needs without charity	46%	49%	44%	0.00*
Gone to sleep hungry for many days in past year	16%	17%	14%	0.01*
Household doesn't own land for themselves	**6%**	**8%**	**4%**	0.000*
Material of the roof is mud, thatch or tarpaulin	**54%**	**54%**	**53%**	0.661

	Total	Intervention (Baseline)	Comparison (Baseline)	T-test (p value)
				Linguistic profile
Lol different from mother tongue	80%	77%	83%	0.00*
Girl doesn't speak Lol	6%	6%	6%	0.91

- **All of the girls in the sample come from rural or remote areas, but none are actively engaged in child labour**

All of the girls we sampled were from rural or remote areas, which maps well on to STAR-G's definition of marginalization based on geography. On the other hand, we did not find any girls in the sample who were actively engaged in child labour. This sits in contrast to STAR-G's estimation that 27 per cent of their beneficiary group is engaged in child labour. This is likely due to differing definitions of child labour.

- **Extent of marginalisation based on girl's marital profile differs significantly from STAR-G's estimations**

While the sample statistics indicate that the cohort girls are marginalised, proportions for several dimensions of marginalization do differ significantly from STAR-G's intended beneficiary profiles. A notable difference is in the proportion of girls who are married or young mothers under the age of 18. On one hand, the intervention sample has more girls from these groups than the comparison sample, possibly the result of PAGE-M programming and the first year of STAR-G programming which may have encouraged more young mothers to attend school. The difference is statistically significant.

On the other hand, the sample proportions for married girls and young mothers in our randomly selected sample are significantly lower than estimated by STAR-G. STAR-G intended to target 37 per cent married girls and young mothers under the age of 18, against approximately 2 per cent achieved in the intervention group in the evaluation sample. In some ways, this result is not surprising. Social and gender norms in Mozambique combine with stated and unstated school policies to systematically exclude married girls, pregnant girls, and young mothers from attending schools. Because our sampling approach began in the school, it likewise excluded girls who were not present in school on the day of sample selection.

- **Statistically significant differences exist between intervention and comparison groups for poverty and linguistic profile**

The comparison group was selected from a frame provided to us, and matched to the intervention group by region, and grade. The above analysis shows that matching by region and grade was effective. However, where marginalization is concerned, we do note several statistically significant differences between the two groups, particularly where poverty and linguistic profile are concerned.

The differences related to poverty profile should not be alarming. Some of the metrics indicate the comparison group is worse off economically, while the remaining one indicates that the intervention group is. Further analysis demonstrates that all indicators are correlated to each other. As individual proxies of wealth tend to prove challenging in developing country contexts due to measurement error, taken together, the multiple indicators do demonstrate a roughly similar economic profile of the population.

Where linguistic profile is concerned, the comparison group appears to have more girls whose mother tongue is different from the language of instruction. However, the percentage of girls who do not speak Portuguese at all is similar across the two groups.

These differences will nonetheless require further analysis at midline and endline to ensure they do not have an effect on the validity of our Dif-in-dif strategy.

Barriers to education

In Tables 14 and 15, we interrogate the nature of barriers to education encountered in the baseline sample. In line with our contextual analysis and STAR-G's ToC, we categorise barriers as those related to (a) economics, (b) access, (c) teaching and learning, and (d) gender and social norms. For key proxy indicators representing these barriers, we report the % evident in the sample, and the % sample in the intervention and comparison groups. We also show the statistical difference between intervention and comparison groups to highlight the extent of differences between the groups at baseline (denoted by * for 10 per cent level significance). Wherever possible, we include findings from our qualitative case studies to shed further light on the nature of barriers faced by girls. *See also Chapter 5 for further analysis on these barriers.* More details on how the figures are calculated are available in Annex 8.

Many of the proxy indicators presented in this section are repeated from tables presented above and/or are replicated in other sections of the report. This is deliberate, as in this section we aim to present a comprehensive analysis of the relative presence of a variety of barriers that were identified through our analysis of the Mozambican context. Our key findings are summarised below.

Girls in the sample face a multitude of barriers including those related to economics, access, teaching and learning, and social and gender norms

Table 14: Potential barriers to learning

	Overall (Baseline)	Intervention (Baseline)	Comparison (Baseline)	T-test (p-value)
Economics				
Difficult to afford to send girl to school	77%	74%	80%	0.00*
Cannot meet basic needs without charity	46%	49%	44%	0.01*
Access				
Distance to the closest primary school – more than 1 hour walk	16%	16%	16%	0.75
Distance to the closest secondary school – more than 1 hour walk	64%	64%	63%	0.54
Caregiver feels travel to school is unsafe	17%	16%	18%	0.19
Girl feels travelling to school is unsafe	11%	12%	10%	0.03*
Girl does not feel safe at school	8%	9%	7%	0.11
Teaching and Learning				
Agrees teachers treat boys and girls differently in the classroom	62%	67%	57%	0.00*
Agrees teachers often absent from class	32%	33%	32%	0.61
Teachers discipline or punish students who get things wrong in a lesson	77%	78%	77%	0.68

	Overall (Baseline)	Intervention (Baseline)	Comparison (Baseline)	T-test (p-value)
If teachers use discipline, then corporal punishment is mode of discipline	54%	51%	56%	0.01*
Girl doesn't speak language of instruction	6%	6%	6%	0.91
Caregiver feels the school has poor quality	2%	3%	1%	0.00
Caregiver feels the school head teacher has a fair/poor performance	14%	15%	14%	0.45
No seats for all students	35%	26%	45%	0.00*
Disagrees teachers make them feel welcome	2%	3%	2%	0.114
Difficult to move around school	7%	8%	6%	0.054*
Doesn't use drinking water facilities	30%	27%	33%	0.002*
Doesn't use toilet at school	6%	7%	4%	0.009*
Doesn’t use areas where children play/ socialise	0.9%	1.4%	0.5%	0.031*
Social and gender norms				
Girl reports that her family decides for her the age she will get married	48%	48%	48%	0.84
Girl is involved in house chores	99%	100%	99%	0.05*
If girls are involved in house chores, they have a high chore burden	22%	25%	19%	0.00*
Head of household has no education	28%	29%	28%	0.73
To what age should girls stay in school?	21.5 years	21.3 years	21.7 years	0.03*

	Overall (Baseline)	Intervention (Baseline)	Comparison (Baseline)	T-test (p-value)
Caregiver thinks that girl should drop out before completing upper secondary	10%	10%	10%	0.64
Girl gets nervous when she has to read in front of others	45%	42%	47%	0.01*
Girl gets nervous when she has to do maths in front of others	43%	41%	45%	0.04*
Doesn't get support to stay in school and do well	2%	2%	2%	0.575

- **Economic barriers appear to be the most prominent barrier presented in the sample**

According to the baseline sample, over 77 per cent of households contended that it is difficult for them to afford to send girls to school. For at least 46 per cent of the sample, basic household needs could not be met without resorting to charity. In our qualitative work, economic barriers also appeared to be prominent. Parents indicated that, although primary schools are free, uniforms, exercise books, stationery, and transport costs can be prohibitive. Stakeholders also suggested that some students missed school to work on farms.

- **For approximately 63 per cent of the sample, lack of access to secondary schools is a barrier**

Our analysis shows that approximately 16 per cent of the girls in the evaluation sample have to walk for over an hour to access their current primary school. When we asked for the comparable figure on distance to the nearest school, the statistics were striking. According to household heads, for over 64 per cent of the sample, the distance to the nearest secondary school is over an hour's walk. In fact, for 11 per cent of the evaluation sample, the time to walk to the nearest secondary school was more than three hours.

- **In Teaching and Learning, language difficulties, pedagogy, and teacher absenteeism are key barriers**

Overall, few caregivers thought that the quality of the school the girls attended or the quality of the teaching they received was inadequate. One reason for this may be that households simply do not have enough information or other points of comparison to gauge the quality of schooling. According to our qualitative case studies, stakeholder's perceptions on teaching and learning were mixed.

A handful of other barriers related to teaching and learning were nonetheless prominent. First, 6 per cent of the sample girls do not speak Portuguese. Second, 62 per cent of the sample girls noted that teachers treated boys and girls differently, and this challenge was more prominent in the intervention group. Within pedagogy, corporal punishment also appeared to be a challenge. Approximately 77 per cent of sample girls reported that teachers used disciplinary measures in the classroom, of which 50 per cent reported the use of corporal punishment as the mode of discipline used. Girls and boys from our focus group discussions concurred that use of corporal punishment was prevalent. Finally, over 32 per cent of girls highlighted that teachers were often absent from class.

When we examine the differences in facilities in schools, a lack of drinking facilities is also notable. Almost 33 per cent of girls in comparison schools said they did not use drinking facilities in the school, while the comparable figure was 27 per cent of girls in intervention schools.

- **Parents appear to understand need for educating girls, but have to balance this against chances of early pregnancy and other practical considerations**

Interestingly, almost all parents and girls agreed on the importance of educating girls. Less than 10 per cent of caregivers wanted girls to leave school before completing their secondary education, and the average age until which household respondents wanted girls to stay in school until was 21 years. While such declarations may be related to respondents trying to present the socially acceptable answer, our qualitative analysis shows that the picture is much more nuanced. We found that parents felt the need to balance their aspirations with chances of adolescent girls getting pregnant early, alongside practical considerations related to financial barriers, and household chore burdens.

3.4 Intersection between key characteristics and barriers

We analysed how our key characteristics and barriers interacted with each other, and found only a handful of obvious intersections. Economic barriers for instance were more prominent in poorer households, and girls who do not speak Portuguese reported more anxiety when reading or doing maths in front of the class. Our most interesting finding was the extent of regional differences in barriers. These are presented for the full sample including intervention and comparison girls.

We found that:

- As a whole, key barriers are more prominent in Tete and least prominent in Gaza.
- Economics barriers appeared to be more prominent in Tete.
- Access barriers for primary schools are more prominent in Manica, and for secondary schools are more prominent in Gaza and Tete. Safety to school and in school is better in Manica than in the other two provinces.
- Teaching and learning barriers are mixed across the provinces. Gaza has the most incidence of corporal punishment, teachers are most likely to be absent often in Tete, and caregivers think quality of schools is worse in Manica. In Tete, 22 per cent of the girls do not speak Portuguese, which is substantially higher than in Gaza and Manica.
- Gender and social norms are also mixed across provinces. Girls are the most confident in Gaza, girls have high chore burdens in Manica, and parental attitudes towards schooling are least positive in Tete.

Table 15: Regional differences on characteristics

	Total sample	Gaza	Manica	Tete
Financial				
Difficult to afford to send girl to school	77%	76%	78%	81%
Cannot meet basic needs without charity	46%	47%	39%	55%
Access				
Distance to the closest primary school – more than 1 hour walk	16%	16%	20%	10%

	Total sample	Gaza	Manica	Tete
Distance to the closest secondary school – more than 1 hour walk	64%	69%	49%	62%
Caregiver feels travel to school is unsafe	17%	18%	14%	17%
Girl feels travelling to school is unsafe	11%	14%	7%	10%
Girl does not feel safe at school	8%	11%	3%	5%
Teaching and Learning				
Agrees teachers treat boys and girls differently in the classroom	62%	61%	54%	76%
Agrees teachers often absent from class	32%	28%	29%	50%
Teachers use corporal punishment	54%	65%	35%	51%
Girl does not speak language of instruction	6%	0.4%	7%	22%
Caregiver feels the school has poor quality	6%	5%	7%	5%
Social and gender norms				
If girls are involved in house chores, they have a high chore burden	22%	17%	33%	22%
Caregiver thinks that girl should drop out before completing secondary	10%	9%	10%	13%
Girl gets nervous when she has to read in front of others	45%	38%	52%	51%
Girl gets nervous when she has to do maths front of others	43%	38%	51%	48%

3.5 Appropriateness of project activities to the characteristics and barriers identified

The previous section explored the characteristics of the sample, and the variety of barriers prevalent for girls in our cohort. In this section, we summarise our earlier analysis of correspondence between the beneficiary mapping and evaluation sample. We also present our analysis of how well the project's Theory of Change addresses key barriers identified.

STAR-G's programming is gender-sensitive and targets learning. Yet, it does not adequately address lack of access to secondary schools, and economic barriers, which may hinder transition. In addition, programming may not be sufficient to address concerns of married girls and young mothers, disabled girls, and girls involved in child labour

- **STAR-G's design is gender-sensitive, with three components of programming most likely to be gender-transformative**

The Theory of Change underpinning STAR-G intends to promote gender equality through supporting a shift towards more gender sensitive attitudes in communities, schools, and within girls themselves. Interventions that are likely to be gender transformative are the ones that are most likely to challenge gender norms and lead to long-term and sustained change. In STAR-G, these could include (1) girls' clubs with curricula and activities that enable girls to openly discuss gender norms and feel empowered enough to challenge the status quo, (2) work with matron and patron groups to engage parents and communities in discussions around alternatives to early marriage and early pregnancy, and (3) training for teachers on gender responsive pedagogy and more inclusive approaches to education to support embedding of these approaches in schools.

- **There is a serious mismatch between the evaluation sample and project's estimates of three marginalised subgroups: (1) married girls and young mothers under the age of 18, (2) disabled girls and (3) girls engaged in child labour. Programming for these marginalised subgroups may also be inadequate**.

As noted earlier, the sample consists of a limited number of married girls and young mothers, disabled girls, and girls engaged in child labour. All three subgroups have negligible representation in the sample when compared to the percentages estimated by the project as part of their beneficiary mapping.

The reason for this discrepancy is noted earlier in this section, and is challenged in Chapter 1 as well. Because our sampling methodology included only girls who were in attendance in school on the day of the survey, our ability to include these marginalised groups was limited. However, these groups are also systematically excluded from schools more generally, so a school-based approach is likely to always yield a limited sample of these subgroups.

Moreover, because the project's own beneficiaries numbers are based on school enrolment figures, project estimates of the composition of these subgroups in the beneficiary pool is likely also overstated. On deeper examination, we find that programming for these subgroups

also appears to be limited. While Girls' Clubs tackle some of the issues relevant to married girls and young mothers, as do STAR-G's community sensitization initiatives, challenges related to disability and child labour are hardly addressed in the project's ToC.

Depending on how important the project considers these three subgroups, the midline and endline should be adjusted to include a purposively selected cohort representing them.

- **Programming around teachers and student support are likely to have a direct impact on the learning outcomes**

STAR-G's programming on teacher professional development and on Literacy and Numeracy Boosts are the most likely to have a direct impact on learning outcomes for girls. While our analysis of the Teaching Quality IO in Chapter 5 presents some mixed perceptions of the quality of teaching, the literature overwhelmingly agrees that teacher competence and training are concerns in Mozambique. One further concern about teachers that came out of our girls' survey is not addressed by STAR-G is absenteeism. While the professional development offered to teachers may serve to improve their motivation to attend school, more direct measures to address this issue are notably absent from STAR-G's programming.

- **Project's Theory of Change does not adequately address economic barriers, and barriers related to access. Transition may thus not necessarily occur**

Economic barriers presented the most prominent barrier to educating girls in our analysis above. However, the project's programming around financial constraints appears to be limited to providing bursaries to just 140 girls.

Interviews with project staff probed this issue of appropriateness of programme design further. According to these interviews, project staff were aware of the financial barriers in Mozambique, but were also conscious of the cost constraints associated with conducting programming to address all prevalent barriers. A senior member of the team commented, 'It is not practically possible for us to address everything.'

Another key barrier the programming does not address adequately is related to access, and specifically the supply of secondary schools. Around the 140 communities in which STAR-G operates, only 35 secondary schools exist. For many communities and girls, as noted in the previous section, not only are these secondary schools too far to access, but for a chunk of the evaluation sample, we found that even primary schools were too far. From project documentation and project staff interviews, we understand that a bicycle scheme was introduced to improve access for girls in such instances. In addition, the redesign of the project is likely to include distance learning and community based education as key solutions to solving the access barrier as girls transition into secondary schooling.

- **Girls who do not speak Portuguese, and girls from Tete appear to be the most marginalised girls in the sample. STAR-G programming for the former is stronger than the programming for the latter**

In addition to married girls and young mothers, and disabled girls, it is girls who do not speak Portuguese and those residing in Tete who appear to be the most marginalised in the sample when we consider our contextual analysis, barriers analysis, and learning results.

STAR-G's programming for girls who do not speak Portuguese is addressed mostly through their Literacy Boost intervention, and teacher professional development and is likely to also provide necessary support for this marginalised subgroup. However, programming for girls across all provinces is similar, when girls from Gaza appear to be less marginalised than girls from Manica and particularly girls from Tete.

STAR-G SAYS

- For some of the sample characteristics, the project acknowledges that its initial mapping was different from the evaluators' findings. The project was never in a position where it had to conduct a detailed analysis of all its beneficiaries and their marginalisation characteristics, and the information put forward in the MEL Framework was taken from available public sources and reports. However, as explained by the External Evaluators, the evaluation sample only includes girls in school, which means that some of the characteristics, such as young mother/married girls and children with disability, might affect out of school girls, who are not part of our sample. During the project's first year, STAR-G has also struggled to pin down the most accurate number of beneficiaries in total, mainly because the original estimated figures were generated using MINEDH data, then updated through the project's headcount of students in schools, and finally, the revised total number of beneficiaries have now been confirmed and harmonised with MINEDH.
- The project was not able to address all the barriers to girls education during the initial design of STAR-G, due to budget constraints and donor requirements. In terms of the financial barriers, the project under GEC1 didn't address the economical challenges faced by girls and their families (except giving out bursaries to 190 girls to attend secondary schools), therefore, it would have been difficult for STAR-G, as a continuation of PAGE-M, to introduce a whole new component on economic barriers while poverty issue is a very broad challenge to tackle. Given the financial resource, the human resource and expertise, and the capacity to take on another complex issue such as tackling economic barriers (i.e. poverty), the project had to decide not to focus on this topic and remove it from its current Theory of Change. In addition, the endline evaluation for PAGE-M showed that there was no statistical significance between girls who received bursaries and their learning outcomes (although this result was contentious as only applicable to 190 girls). However, as part of the project's redesign, STAR-G will be tackling teacher's absenteeism and Portuguese as the LoI through better-supported and improved teacher professional development, as well as girls' access to secondary schools through the improvement of existing distance learning centres and the creation of new distance learning centres, as well as Community Based Education. This leads to the project changing and adapting its Theory of Change to better address the challenges girls face to attend and learn in school, and transition through key grades..

Chapter 4

Key Outcome Findings

4 Key Outcome Findings

4.1 Learning Outcomes

In this section, we describe our learning results from the baseline. We begin by outlining the learning assessments. We then provide headline statistics by intervention and comparison groups, before delving deeper into how intervention group students performed. For more details on the learning assessments and their design, see Annex 9.

4.1.1 Learning tests and scoring methods

We used a combination of EGRA/EGMA style assessments, and SeGRA/SeGMA assessments to gauge student performance in literacy and numeracy at baseline. The EGRA/EGMA assessment models were originally developed by RTI to provide simple measures of literacy and numeracy in lower primary grades. The SeGRA/SeGMA assessment model was developed by the GEC in order to extend literacy and numeracy measurement to upper primary and secondary school levels.

Both assessment models employ the use of subtasks that get progressively more difficult. For literacy for instance, the most basic subtask tests letter recognition, before assessing ability to recognise words, and finally assessing ability to read connected text. For numeracy, the most basic subtask tests number recognition, and then moves on to test basic number operations, followed by more complex number operations.

The full EGRA/EGMA assessments we developed include five and six subtasks respectively, while the full SeGRA/SeGMA assessments include two subtasks each. We determined which subtask to deliver to which grade based on the results of the pilot and discussions with STAR-G and GEC. **We administered EGRA 4 and 5 and SeGRA/SeGMA 1 to all cohort girls in grades 4 to 7.** These overlapping subtasks will form the basis of all Dif-in-dif calculations at future evaluation points. For the lower grades of 4 and 5, we also delivered the earlier subtasks of EGRA and EGMA and we present these results for completeness of analysis wherever relevant. In addition, for benchmarked grades we added SeGRA/SeGMA subtask 2.

The table below summarises the assessment subtasks, along with the number of questions or items they contain, and the number of available marks in the baseline assessment, alongside the grades they were administered to. For the purposes of all learning analysis, each subtask is scored out of 100, and we weight the overlapping subtasks a student sat equally to yield a score out of 100. EGRA subtask 5 measures reading fluency, or Words Per Minute (WPM). We use actual words per minute read as scores for this subtask. For students who read more than 100 words per minute, we cap the score at 100. The last column in the table indicates which grades the subtask should be appropriate for in line with the Mozambican curriculum.

Table 16: Assessment design – Baseline

	Content	Total Questions	Total marks available	Grades sitting subtask	Curriculum matched to grade
Numeracy					
EGMA Subtask 1	Number Identification	1	20	4, 5	1
EGMA Subtask 2	Quantity Discrimination	1	10	4, 5	1,2
EGMA Subtask 3	Missing Numbers	1	10	4, 5	1,2
EGMA Subtask 4	Addition	1	25	4, 5	2,3
EGMA Subtask 5	Subtraction	1	25	4, 5	2,3
EGMA Subtask 6	Word problems	6	6	4, 5	3
SeGMA Subtask 1	Advanced multiplication, division etc.	16	15	4, 5, 6, 7 Benchmarking: 8, 9, 10	4,5
SeGMA Subtask 2	Algebra	16	15	Benchmarking: 8, 9, 10	6,7
Literacy					
EGRA Subtask 1	Letter Identification	1	100	4, 5	1
EGRA Subtask 2	Familiar Word	1	50	4, 5	1,2
EGRA Subtask 3	Invented Word	1	50	4, 5	1,2
EGRA Subtask 4	Oral Reading Fluency	1	103	4, 5, 6, 7 Benchmarking: 8, 9, 10	2,3
EGRA Subtask 5	Comprehension	5	5	4, 5, 6, 7 Benchmarking: 8, 9, 10	3
SeGRA Subtask 1	Comprehension (analytical)	10	12	4, 5, 6, 7 Benchmarking:8 , 9, 10	4,5
SeGRA Subtask 2	Comprehension (inferential)	9	10	Benchmarking: 8, 9, 10	6,7

4.1.2 Learning findings

In the two tables that follow, we present our headline learning results for literacy and numeracy by intervention and comparison group. To allow meaningful comparison and analysis, we present results for subtasks that were only administered to grades 4 and 5 and results for subtasks that were administered to all cohort girls separately. Only the subtasks that were administered to all cohort girls are used for target calculation as these will be used for our future Dif-in-dif strategy. Nonetheless, wherever useful, we present analysis for all subtasks delivered. Moreover, to prevent confusion over which subtask was given to which grade, we repeat this information in both tables. We also include N for each group, and provide T-tests to show statistically significant differences at the 10% level (denoted using *).

Our four headline findings include:

- Overall performance of students is weak. On the overlapping subtasks administered to all students in grades 4 through to 7, the weighted average score of intervention students for literacy is 14.95 (out of 100), and the weighted average score of numeracy of intervention students at 3.3 (out of 100). On the additional subtasks delivered only to students in grades 4 and 5, the weighted average score of intervention students for literacy is 30.17 (out of 100), while the weighted average score of numeracy intervention students is 37.94 (out of 100)

- Performance on numeracy on overlapping tasks is negatively affected by the decision to administer only SeGMA subtask 1 to students in grades 6 and 7. Although the subtask is written at the grade 5 curriculum level, it appears to be too challenging for most of the cohort. We suggest that at midline and endline, STAR-G and GEC consider adding EGMA subtask 5 and 6 for the girls who are currently in grades 6 and 7 to help understand the performance of weak students better

- At baseline, the literacy scores and numeracy scores on overlapping subtasks are not statistically different for intervention and comparison groups, but at grade level and subtask levels there are some differences. In our view, this does not have any implications for our intended Dif-in-dif strategy as our strategy will measure improvements over and above the comparison group

- Students found each progressive subtask more difficult in general, with SeGRA/SeGMA subtask 1 being too difficult for most students even in grades 6 and 7. In other words, at the baseline, most students entering in to grades 6 and 7 had not yet mastered the grade 5 curriculum

Table 17: Literacy (EGRA/SeGRA)

Subtasks given to Grade 4 and Grade 5 only							
Grade	Subtasks	N # Intervention	Intervention Mean	N # Comparison	Comparison Mean	SD Intervention	T test (p)
Grade 4	EGRA ST1 to ST3	379	24.81	378	21.08	23.51	0.022*
Grade 5	EGRA ST1 to ST3	371	35.65	387	31.07	25.27	0.051
Total		750	30.17	765	26.64	24.98	0.005*
Subtasks given to all grades (Grade 4 to Grade 7)							
Grade 4	EGRA ST4 and ST5 + SEGRA ST1	379	7.87	378	6.13	12.42	0.037
Grade 5	EGRA ST4 and ST5 + SEGRA ST1	371	12.51	387	12.18	15.49	0.774
Grade 6	EGRA ST4 and ST5 + SEGRA ST1	217	19.71	214	21.37	18.27	0.367
Grade 7	EGRA ST4 and ST5 + SEGRA ST1	217	26.76	214	28.49	19.76	0.374
Total		1184	14.95	1193	14.84	17.44	0.875

Table 18: Numeracy (EGMA/SeGMA)

Subtasks given to Grade 4 and Grade 5 only							
Grade	Subtasks	N # Intervention	Intervention Mean	N # Comparison	Comparison Mean	SD Intervention	T test (p)
Grade 4	EGMA ST1 to ST6	379	**34.97**	378	**33.79**	20.51	0.429
Grade 5	EGMA ST1 to ST6	371	**40.98**	387	**42.68**	21.35	0.283
Total		750	**37.94**	765	**38.29**	21.13	0.754
Subtasks given to all grades (Grade 4 to Grade 7)							
Grade 4	SEGMA ST1	379	**0.26**	378	**0.22**	1.95	0.801
Grade 5	SEGMA ST1	371	**0.95**	387	**0.72**	4.56	0.469
Grade 6	SEGMA ST1	217	**6.88**	214	**6.13**	13.29	0.516
Grade 7	SEGMA ST1	217	**9.06**	214	**11.58**	13.2	0.075*
Total		1184	**3.31**	1193	**3.48**	9.21	0.636

4.1.3 Subtask analysis

In the next four tables, we categorise the students into bands of achievement. We first present analysis for students in the intervention group, and then follow this with analysis for students in the comparison group. Moreover, to prevent confusion over which subtask was given to which grade, we repeat this information in all four tables and provide the full number of students who were administered each subtask. This row should allow readers to distinguish between overlapping subtasks that were given to all students, and additional subtasks that were only given to students in grades 4 and 5. For all subtasks other than EGRA 4, which measures WPM, we use the following bands based on guidance from the GEC.

- Non-learner: 0% of items
- Emergent learner: 1%-40% of items
- Established learner: 41%-80% of items
- Proficient learner: 81%-100% of items.

For EGRA subtask 4, scores reflect correct words read per minute. Therefore, we use the four learning categories as follows:

- Non-reader: 0-5 WPMs
- Emergent reader: 6-44 WPMs
- Established reader: 45-80 WPMs
- Proficient reader: 80 WPMs plus

Table 19: Foundational numeracy skills gaps – intervention group

Categories	EGMA 1 Number Identification	EGMA 2 Quantity Discrimination	EGMA 3 Missing Numbers	EGMA 4 Addition	EGMA 5 Subtraction	EGMA 6 Word problems	SEGMA 1 Advanced multiplication, division etc.	Overall
Grades administered to	4, 5	4, 5	4, 5	4, 5	4, 5	4, 5	4, 5, 6, 7	
Non-learner 0%	1%	4%	12%	19%	40%	43%	80%	20%
Emergent learner 1%-40%	22%	23%	70%	51%	45%	41%	19%	60%
Established learner 41%-80%	33%	44%	15%	25%	12%	13%	0.34%	19%
Proficient learner 81%-100%	44%	29%	3%	5%	3%	3%	0.34%	0.51%
N	750	750	750	750	750	750	1,184	1,184
Total	100%	100%	100%	100%	100%	100%	100%	100%

Table 20: Foundational literacy skills gaps – intervention group

Categories	EGRA 1 Letter Sound Identification	EGRA 2 Familiar Word	EGRA 3 Invented Word	EGRA 4 Oral Reading Fluency	EGRA 5 Comprehension	SEGRA 1 Comprehension (+ analytical)	Overall
Grades administered to	4, 5	4, 5	4, 5	4, 5, 6, 7	4, 5, 6, 7	4, 5, 6, 7	
Non-learner 0%	16%	32%	34%	40%	61%	83%	18%
Emergent learner 1%-40%	61%	31%	33%	35%	26%	16%	63%
Established learner 41%-80%	22%	24%	28%	19%	13%	1%	19%
Proficient learner 81%-100%	1%	13%	5%	6%	0.17%	0%	0.08%
N	750	750	750	1,184	1,184	1,184	1,184
Total	100%	100%	100%	100%	100%	100%	100%

Our key findings based on subtask analysis for students in the intervention group include:

- **A sizeable proportion of the intervention sample comprises of non-learners who scored zero on the subtasks administered to them**

Overall, 18 per cent of students in the intervention group scored zero in literacy, and 20 per cent of the students scored zero in numeracy. The low starting point for the baseline is alarming. When we consider non-learners by subtask, an expected pattern emerges. The number of non-learners increases as subtasks get harder. By the time we reach SeGRA and SeGMA, over 80 per cent of the students in the intervention group score zero.

This finding demonstrates worse performance than the pilot students, for whom zero scorers comprised 30 per cent of the group for SeGRA and 50 per cent of the group for SeGMA. Two factors explain this discrepancy. First, we conducted the pilot in the outskirts of Maputo for practical reasons, and the pilot group may have been less marginalised than the intervention group. Second, we initiated formal subtask continuation rules for the baseline. Continuation rules are common in EGRA/EGMA assessments and their purpose is to minimize the distress caused to students during testing by discontinuing the test if students are unable to perform against a pre-set rule rather than continuing to the next sub-task. In some cases, students may be able to answer a few questions of the next subtask but being able to answer one or two questions is not considered worth subjecting students to more difficult subtasks that are largely beyond their ability. For our continuation rules, see Annex 9.

The results show moderate evidence of floor effects for the highest subtask, but no ceiling effects for any subtask.

- **Students were generally not performing in line with curricular expectations for numeracy**

The subtask analysis allows us to analyse performance of students across two curricular benchmarks in particular: grade 3 by examining performance for top-end of EGMA, and grade 5 by examining performance on SeGMA subtask 1. We found that only 3 per cent of students in grades 4 and 5 had mastered the grade 3 curriculum. Moreover, we also found that almost no students in the sample could perform numerical operations at the grade 5 level. This included students entering grades 6 and 7 who should have mastered this curriculum before moving on.

- **Poor numeracy performance is consistent with other statistics from Mozambique**

To set the numeracy results against other results seen in context, we considered results from two other studies conducted in Mozambique. While the studies are not directly comparable, they do suggest that our results are consistent with others from Mozambique.

The first was a citizen-led assessment conducted in 2016 in Nampula province (Wilson, 2017). The study assessed 9,900 children aged 7 to 16 from across 306 villages. They found that only 20 per cent of students in this age bracket could complete simple addition

exercises. The second study we considered was the SACMEQ II, which was implemented in 2007, but had the benefit of having representative data from across all provinces of Mozambique. The study found that 33 per cent of students in grade 6 could not convert verbal information into arithmetical problems (Magaia *et al.,* 2011). Interestingly, Magaia *et al.* (2011) also note that the performance of Mozambican students in numeracy was significantly lower than that of students from the 15 other Southern and Eastern African countries that participated in SACMEQ. The exact figures differ from our findings, likely due to differences in the composition of the sample, but do suggest weak performance is common in Mozambique.

- **Students were not performing in line with curricular expectations for literacy**

As we did with numeracy, we analysed the performance of students across two curricular benchmarks for literacy: grade 3 by examining performance on EGRA 4 on reading fluency, and grade 5 by examining performance on SeGRA subtask 1. The results were consistent with those seen in numeracy. We found that only 6 per cent of students in grades 4 through to 7 could read proficiently at 80 words per minute or more and only 0.2 per cent of students could answer questions written for a grade 3 level comprehension paragraph. Moreover, we also found that almost no students in the sample could comprehend a paragraph written at the grade 5 level. This included students entering grades 6 and 7 who should have mastered this curriculum before moving on.

To understand the literacy performance better, we further analysed scores for EGRA subtask 4 to consider average reading fluency in the sample. Students in intervention schools are reading at a proficiency of 26.11 WPM, while students in comparison schools are reading at a proficiency of 24.24 WPM. The difference is not statistically different. When compared to established industry norms, and examined against the performance of students in other developing countries, these figures are telling. The established standard is that students should be reading 45 to 60 WPM by the end of grade 2, whereas students in higher grades from our sample are clearly not achieving this benchmark. Performance of the sample is weak even when compared to the performance of students in developing countries. Reading fluency studies indicate that students in 17 developing countries are reading approximately 23 WPM in grade 2, and 62 WPM in grade 4 (Abadzi 2011).

- **Poor literacy performance is consistent with other statistics from Mozambique**

As with numeracy, we attempted to set our results against other results seen in context by considering the results of three studies. While the studies are again not directly comparable, they do suggest that our results are consistent with others who also found evidence of poor levels of literacy among children in Mozambique.

The citizen-led assessment conducted in 2016 in Nampula province (Wilson, 2017) mentioned above found that 45 per cent of students aged 7 to 16 from across 306 villages could not read letters. The second study we considered was the SACMEQ II, which was implemented across all provinces of Mozambique. The study found that 44 per cent of grade six students were unable to read to link and interpret information located in various parts of the text (Magaia *et al.,* 2011). Interestingly, Magaia *et al.* (2011) also note that the

performance of Mozambican students in literacy was significantly lower than that of students from the 15 other Southern and Eastern African countries that participate. The final study we reviewed was the Burchfield *et al.*, (2017) study from the province of Cabo Delgado. The study administered an EGRA to students in grades 1 through to 3, and found that 92 per cent of students in these grades could not read more than 5 words per minute. Our non-learner category for EGRA 4 includes 40 per cent of the sample; our students are older than the Burchfield sample.

- **Qualitative findings on perceptions about teaching and learning were mixed**

Our findings from six in-depth community case studies on perceptions about quality of teaching and learning were mixed. While several parents noted a decline in learning levels, others appeared to be satisfied with the performance of schools and teachers. As suggested in 3.3 above, it is probable that many caregivers lack the awareness or experience to assess the quality of schooling, or to compare it with education in other contexts. Girls and boys in general considered their teachers to be good, but highlighted challenges around corporal punishment. Teachers themselves highlighted challenges related to the size of classes, availability of materials, and parental engagement and support. Our qualitative findings are presented in more depth in the next chapter.

Table 21: Foundational numeracy skills gaps – comparison group

Categories	EGMA 1 Number Identification	EGMA 2 Quantity Discrimination	EGMA 3 Missing Numbers	EGMA 4 Addition	EGMA 5 Subtraction	EGMA 6 Word problems	SEGMA 1 Advanced multiplication, division etc.	Overall
Grades administered to	4, 5	4, 5	4, 5	4, 5	4, 5	4, 5	4, 5, 6, 7	
Non-learner 0%	3%	6%	15%	16%	38%	41%	81%	20%
Emergent learner 1%-40%	20%	24%	68%	47%	44%	41%	18%	57%
Established learner 41%-80%	35%	44%	15%	30%	15%	15%	2%	24%
Proficient learner 81%-100%	42%	27%	2%	7%	3%	3%	0%	0.08%
N	765	765	765	765	765	765	1,193	1,193
Total	100%	100%	100%	100%	100%	100%	100%	100%

Table 22: Foundational literacy skills gaps – comparison group

Categories	EGRA 1 Letter Sound Identification	EGRA 2 Familiar Word	EGRA 3 Invented Word	EGRA 4 Oral Reading Fluency	EGRA 5 Comprehension	SEGRA 1 Comprehension (+ analytical)	Overall
Grades administered to	4, 5	4, 5	4, 5	4, 5, 6, 7	4, 5, 6, 7	4, 5, 6, 7	
Non-learner 0%	17%	40%	44%	42%	61%	80%	16%
Emergent learner 1%-40%	60%	29%	29%	34%	25%	18%	67%
Established learner 41%-80%	22%	24%	24%	19%	14%	2%	17%
Proficient learner 81%-100%	0.39%	7%	3%	4%	1%	0.17%	0.25%
N	765	765	765	1193	1193	1193	1,193
Total	100%	100%	100%	100%	100%	100%	100%

Our findings based on subtask analysis for students in the comparison group are similar to those presented for the intervention group. A large proportion of students in the comparison group are scoring zero, particularly in SeGRA and SeGMA subtask 1, which is targeted at the grade 5 level. As in the intervention group, the distribution for higher subtasks is skewed towards zero and there is an evidence of a moderate floor effect. For lower subtasks, there is no evidence of any strong ceiling effects.

4.2 Subgroup analysis of the Learning Outcomes

The previous section highlights that differences in the literacy and numeracy scores between the intervention and comparison group are not statistically significant at baseline. The headline learning results presented nonetheless mask some variation across subgroups. In this section, we try to unpack the results by first presenting literacy and numeracy scores for the full sample (intervention and comparison groups combined) on the basis of key characteristics and then by important barriers. We use categories similar to those presented in Chapter 3, and present both scores of overlapping subtasks and those of the additional subtasks given only to grades 4 and 5 separately.

In order to help explain the data presented in the next two tables, we conducted correlation analysis to check the strength of relationships. We also ran a handful of regression specifications in which we regressed literacy and numeracy on girls' characteristics (age, orphan, married, disabled, linguistic ability), household characteristics (financial proxies, household head education), school characteristics (teacher absenteeism, perceived quality of school, distance, seats in classroom), girls' self-esteem (confidence, ability to decide when to marry) and provincial fixed effects. We do not present the results of these specifications here as they are indicative only, but share some findings below particularly in cases where the table presentation appears counterintuitive. Regression results are available upon request.

Table 23: Learning scores of key subgroups (full cohort)

	Average literacy score		Average numeracy score	
	Common subtasks All Grades	Subtasks Grades 4 and 5 only	Common subtasks All Grades	Subtasks Grades 4 and 5 only
Full sample (Learning cohort)	14.9	28.39	3.39	38.12
Girl's household profile				
Single Orphans	16.18	28.67	3.41	40.54
Double Orphans	17.65	38.43	3.76	37.83
Living without both parents	17.42	32.96	3.72	39.94
Living in female headed household	17.41	31.49	4.01	38.62
Disabled	16.65	25.64	4.88	38.06
HoH has no education	13.66	26.63	3.22	36.41
Primary caregiver has no education	12.90	25.21	2.92	36.07
Girl's marital and early pregnancy profile				
Married	16.24	33.18	3.71	36.04
Mothers Under 18	16.35	38.72	5.18	39.45
Mothers Under 16	15.58	38.72	5.25	39.45
Poverty profile				
Household unable to meet basic needs	14.21	27.51	2.94	36.41
Difficult to afford for girl to go to school	14.51	27.96	3.32	38.38
Household doesn't own land for themselves	12.51	19.74	3.94	33.52
Material of the roof is mud, thatch or tarpaulin/plastic	13.04	26.49	2.51	36.09
Gone to sleep hungry	14.82	29.63	2.99	38.11
Linguistic profile				
Lol different from mother tongue	14.96	28.19	3.53	38.30
Girl doesn't speak Lol	3.54	12.09	1.11	25.42
Region				
Gaza	21.07	38.26	4.93	44.53
Manica	9.22	18.22	1.69	32.23
Tete	5.5	14.93	1.46	28.3

Table 24: Learning scores based on key barriers (full cohort)

	Average literacy score		Average numeracy score	
	Common subtasks All Grades	Subtasks Grades 4 and 5 only	Common subtasks All Grades	Subtasks Grades 4 and 5 only
Full sample (Learning cohort)	14.9	28.39	3.39	38.12
Financial – see above table				
Access				
Distance to the closest primary school – more than 1 hour walk	16.43	29.88	3.74	40.76
Distance to the closest secondary school – more than 1 hour walk	16.36	30.54	3.94	40.80
Caregiver feels travel to school is unsafe	16.11	30.32	4.39	41.66
Girl does not feel safe at school	15.78	36.52	2.38	45.32
Teaching and learning				
Agrees teachers treat boys and girls differently in the classroom	14.62	28.89	2.95	37.18
Agrees teachers often absent from class	12.56	24.7	2.6	33.97
Disagrees teachers make them feel welcome	12.75	26.71	1.63	36.61
Language of instruction different from the girl's mother tongue	14.96	28.19	3.53	38.30
Caregiver feels the school has poor quality	13.87	22.18	2.94	40.32
Caregiver feels the school head teacher has a fair/poor performance	15.02	28.22	3.60	33.94
Attends school half/ less than half the time	14.03	24.15	1.96	29.62
Difficult to move around school	14.01	27.33	2.34	37.42
Doesn't use drinking water facilities	14.98	26.55	3.26	37.95
Doesn't use toilet at school	13.59	29.12	2.21	38.03

	Average literacy score		Average numeracy score	
	Common subtasks All Grades	Subtasks Grades 4 and 5 only	Common subtasks All Grades	Subtasks Grades 4 and 5 only
Doesn't use areas where children play/ socialise (n=22)_	19.61	28.44	1.81	45.07
No seats for all students	13.98	27.69	2.74	39.91
Social and gender norms				
If girls are involved in house chores, they have a high chore burden	13.67	29.78	2.79	30.4
Caregiver thinks that girl should drop out before completing secondary	11.61	28.56	1.84	32.33
Doesn't get support to stay in school and do well	11.81	29.79	3.21	36.47
Girl gets nervous when she has to read in front of others	12.06	24.66	2.36	32.62
Girl gets nervous when she has to do maths front of others	12.66	25.02	2.36	33.59

Our findings in light of these two tables include:

- **Living in a household where the head has no education, not speaking Portuguese, having a high chore burden, and going to schools in which teachers are absent and/or treat boys and girls differently are all correlated with lower assessment scores**

For a handful of characteristics and barriers, relationships appear to be straightforward and as expected. For instance, living in a household where the head of the household has no education is correlated with having lower scores, which is consistent with the literature (see for example Huisman and Smits, 2014). It is also expected that girls who do not speak Portuguese, which is the language of instruction, score dramatically lower than girls who do speak the language. Girls who report that teachers are absent from school and/or those who believe teachers treat boys and girls differently also display lower test scores in both literacy and numeracy. Moreover, expectedly, girls who have a high chore burden generally have lower scores.

- **Besides not speaking Portuguese, the most important dimension of differentiation is region as girls from Manica and Tete perform dramatically worse than do girls from Gaza**

The regional differences are stark. Girls from Gaza perform better than average, while Manica girls perform worse than the average. The performance of Tete girls is even worse. The difference in literacy is greater than that seen in numeracy. The average literacy score

based on overlapping subtasks for girls in Gaza is 21.07, against 9.22 for Manica, and 5.50 for girls in Tete. Importantly, these differences hold even after we ran our regressions, controlling for socioeconomic and attitudinal variables.

- **A handful of relationships appear to be counterintuitive, particularly for access-related variables, single orphans, married girls, and living in a female headed household**

According to the tables, it appears that girls who are married, or orphaned have better school performance. Once we ran our regressions controlling for other key characteristics, the relationships for single orphans and married girls disappeared for both literacy and numeracy, indicating that other socioeconomic factors are influencing these findings.

However, living in a female-headed households, and living far from schools displayed mixed results even after we had controlled for other characteristics. On the other hand, living far from schools had unexpected positive results in numeracy. The latter may indicate that that distance is a barrier for access but not learning. It may also suggest the possibility of self-selection into this group. In other words, students who perform well are more motivated to go to school in spite of the distance barrier.

- **Some relationships such as those for poorer households are not strong**

Of the indicators we use for proxies of financial standing of the household, clear relationships were not obvious from our sample. Households that report that they are unable to meet basic household needs without resorting to charity, households that do not own land, and households that report that they have gone to sleep hungry do have worse scores. However, households that report it is difficult to afford to send girls to school do not have the expected relationship. In our full regression, we found that none of these variables were statistically significant.

- **Getting nervous in front of the class, and caregivers thinking that girls should drop out before completing school are negatively correlated with test scores**

The barriers table shows that girls who reported getting nervous when reading or doing maths in front of others, and girls whose caregivers think they should drop out before completing secondary school have lower attainment. On one hand, this could indicate that low self-esteem and poor parental attitudes negatively influence girls' school performance. On the other, there could be reverse causality in this instance. For instance, girls who are weak at reading and maths could be more likely to get nervous in front of others. Or parents may feel that girls who are weak in school should not bother to complete secondary schooling. Our regressions yielded statistically significant relationships for the variables around girl's anxiety, and for the caregivers' aspirations.

4.3 Transition Outcome

4.3.1 Defining transition

In Table 25, we define transition pathways for our main sample and our benchmarking sample separately. The main sample consists of girls enrolled in primary school i.e. grades 4 through to 7.

We determine transition statistics in the following section by comparing the girls' current status to her status in the previous year. As a result, successful transitions for these girls include progressing in primary school, enrolling in alternative education, and entering employment at a decent wage if aged above 18. In the future, moving to secondary school will also be considered a successful transition. The benchmark sample consists of girls aged 11 to 18, who may be out of school, or in primary or secondary school. Successful transitions for these girls include enrolling or re-enrolling in school, progressing in school, enrolling in alternative education, and moving into secondary school.

Table 25: Transition pathways

	Baseline point	Successful Transition	Unsuccessful Transition
Main cohort : 2377 girls			
Upper primary	**Enrolled in Grade 4, 5, 6, 7**	Enrols/re-enrols in school Progresses in school Enrols in alternative education (TVET, distance learning) Moves into gainful employment if older than 18 Moves into secondary school	Drops out of school Repeats grade Moves into work, but is below legal age
Benchmark sample : 330 girls			
Primary	**Enrolled in Grade 1 to 7**	Enrols or re-enrols in primary school Progresses in school Moves into secondary school Enrols in alternative education (TVET, distance learning)	Drops out of school Repeats grade Moves into work, but is below legal age
Secondary school	**Enrolled in Grade 8 and above**	Progresses in school Enrols in alternative education (TVET, distance learning)	Drops out of school Repeats grade Moves into work, but is below legal age Moves into employment, but is paid below minimum wage
Out of school	**Not in school**	Enrols or re-enrols in primary school	Remains out of school

4.3.2 Transition in the sample

In Tables 26 to 28, we present transition rates, first for the benchmark sample, and then for the main cohort, presenting statistics separately for the intervention and comparison groups.

Table 26: Benchmarking for the Transition Outcome

Benchmark sample								
Age	**(#)**	**Remained out of school**	**Dropped out**	**Repeated grade**	**Re-enrolled**	**Progressed in school**	**Moved into secondary**	**Successful transition**
11	85	4%	4%	14%	1%	78%	0%	79%
12	59	2%	2%	12%	2%	83%	0%	84%
13	54	4%	2%	20%	6%	57%	11%	74%
14	48	6%	4%	13%	0%	68%	9%	77%
15	29	10%	0%	3%	3%	59%	24%	86%
16	23	10%	10%	29%	5%	29%	19%	52%
17	16	6%	13%	38%	6%	31%	6%	44%
18	16	20%	0%	20%	13%	20%	27%	60%
Weighted avg.		6%	3%	16%	3%	64%	14%	75%

Table 27: Transition of intervention group

Intervention girls					
Age	**(#)**	**Repeated grade**	**Enrolled or re-enrolled**	**Progressed in school**	**Successful transition**
8	12	8%	0%	92%	92%
9	101	2%	0%	98%	98%
10	179	7%	1%	92%	93%
11	224	13%	0%	86%	87%
12	236	16%	2%	82%	84%
13	192	15%	3%	83%	85%
14	127	21%	1%	78%	79%
15	78	21%	4%	76%	79%
16	24	33%	0%	67%	67%
17	10	30%	30%	40%	70%
18	1	0%	0%	100%	100%
Weighted avg.		14%	2%	84%	86%

Table 28: Transition of comparison group

Comparison girls					
Age	**(#)**	**Repeated grade**	**Enrolled or re-enrolled**	**Progressed in school**	**Successful transition**
8	20	0%	0%	100%	100%
9	122	2%	2%	97%	98%
10	208	11%	0%	89%	89%
11	216	14%	1%	85%	86%
12	216	15%	2%	83%	85%
13	188	20%	1%	79%	80%
14	116	23%	4%	73%	77%
15	74	22%	1%	77%	78%
16	22	45%	5%	50%	55%
17	11	45%	18%	36%	55%
Weighted avg.		**15%**	**2%**	**83%**	**85%**

Our key findings from the transition data are summarised below.

- **Girls aged 11 to 18 do not appear to have transitioned into work or alternative education**

When we examined the transition data for benchmark girls, we did not find any girls who were primarily working, or any who were actively enrolled in alternative education. While these pathways are theoretically valid, movement into them appears to be limited.

- **Successful transition rates are high, but drop as girls hit sixteen years of age**

We analysed data for the benchmark sample by age, and found successful transition rates of 75 per cent for girls aged 11 to 18. However, there is a dramatic shift in rates as girls reach sixteen years of age. The transition rate for girls less than 16 is 79 per cent, against a successful transition rate of 42 per cent for girls aged 16 and older.

A similar pattern is seen in the main cohort sample. Overall transition rates for this sample are understandably higher, as we sampled girls who were already and still in school. Successful transition rates for girls currently in grades 4 to 7 stood at 86 per cent for the intervention group, against 75 per cent in the benchmark sample. The transition rate for girls aged less than sixteen in the main sample's intervention group is 86 per cent, against a successful transition rate of 69 per cent for girls aged 16 and over.

- **Transition rates are marginally better in the intervention group, but the difference is not statistically different**

In the main cohort, we find a successful transition rate of 86 per cent for the intervention group and 85 per cent for the comparison group. The overall differences are not statistically different. However, here it is important to highlight a difference in transition patterns by age. Girls aged 16 and over in intervention communities have a transition rate of 69 per cent against a transition rate of 55 per cent for comparable girls in the comparison group. This may be the consequence of intervention communities having received and benefited from PAGE-M programming earlier.

- **Repetition rates stand at 16 per cent in the benchmark sample, and at 15 per cent for the full cohort**

Mozambique formerly had a system of retaining students if they did not meet the grade level benchmark, but moved to semi-automatic promotion in 2014. Across primary and secondary school, repetition rates are still high in the country, averaging 14 per cent (Fox et a. 2012). In our sample, repetition rates are slightly higher, standing at 16 per cent in our benchmark sample, and at 15 per cent in the full cohort. Rates generally increase at higher grade levels, although the pattern is not as obvious when examining the tables above. This is because the above tables are generated by age, and data is confounded due to late entry and mixed age classes.

- **Transition rates seem to be substantial, and contrast with qualitative findings**

Our qualitative findings suggested that barriers to transition were likely to be much higher than those indicated by the quantitative data. Parents and girls reported challenges around

distance to schools, and economic barriers were likely to become more pronounced at the secondary stage of schooling. In addition, stakeholders highlighted practical considerations such as chores, early pregnancy, and societal norms around marriage, which could hinder the transition of girls.

4.4 Sub-group analysis of the transition outcome

In Table 29, we present the successful transition rates for girls from the benchmark sample based on region. Due to an error in data collection, we were unable to collect data on other girls' characteristics and barriers for the benchmark sample. We find slightly different transition rates for girls in Gaza, Manica, and Tete. Tete has the highest rate of successful transition at 78 per cent, while Gaza's transition rate is 74 per cent and Manica's is 70 per cent.

Table 29: Sub-group analysis of transition for benchmark sample

	Benchmark
All girls	74%
Region	
Gaza	74%
Manica	70%
Tete	78%

In Table 30, we present the successful transition rates for girls from the cohort sample by characteristic and barrier. As the results of the intervention and comparison groups were not statistically different, we combine them in this analysis for ease of presentation.

Table 30: Sub-group analysis of transition in cohort sample

Successful transition (%)			
Full sample (Learning cohort)			85%
Girl's household profile		**Access barriers**	
Single Orphans	84%	Distance to the closest primary school – more than 1 hour walk	84%
Double Orphans	87%	Distance to the closest secondary school – more than 1 hour walk	83%
Living without both parents	83%	Caregiver feels travel to school is unsafe	83%
Living in female headed household	84%	Girl does not feel safe at school	82%
Disabled	85%	**Teaching and learning**	
HoH has no education	82%	Agrees teachers treat boys and girls differently in the classroom	85%
Primary caregiver has no education	83%	Agrees teachers often absent from class	85%
Girl's marital and early pregnancy profile		Disagrees teachers make them feel welcome	80%
Married	88%	Language of instruction different from the girl's mother tongue	85%
Mothers Under 18	78%	Caregiver feels the school has poor quality	80%
Mothers Under 16	76%	Caregiver feels the school head teacher has a fair/poor performance	84%
Poverty profile		Attends school half/ less than half the time	76%
Household unable to meet basic needs	84%	Difficult to move around school	84%
Difficult to afford for girl to go to school	86%	Doesn't use drinking water facilities	86%
Household doesn't own land for themselves	90%	Doesn't use toilet at school	88%
Material of the roof is mud, thatch or terpaulin/plastic	84%	Doesn't use areas where children play/ socialise	73%
Gone to sleep hungry	80%	No seats for all students	85%
Linguistic profile		**Social and gender norms**	

Successful transition (%)			
Full sample (Learning cohort)			85%
Girl's household profile		**Access barriers**	
Lol different from mother tongue	85%	If girls are involved in house chores, they have a high chore burden	84%
Girl doesn't speak Lol	89%	Caregiver thinks that girl should drop out before completing secondary	84%
Region		Doesn’t get support to stay in school and do well	85%
Gaza	81%	Girl gets nervous when she has to read in front of others	86%
Manica	90%	Girl gets nervous when she has to do maths front of others	86%
Tete	90%		

Unsuccessful transitions for cohort girls in practice only meant that they repeated their grade so readers should exercise due caution in reviewing these findings. Our own analysis does indicate three results worth highlighting. First, girls who have children are slightly more likely to repeat grades than girls who do not have children. Second, girls in Gaza are more likely to repeat grades than girls in Manica and Tete – this may be due to an uneven implementation of the semi-automatic promotion policy that was implemented in Mozambique in 2014. Finally, girls who attend school less than half the time, and those who do not use play areas are less likely to transition. On the latter, however, the sample size is quite small so figures may be misleading.

4.5 Cohort tracking and target setting

Cohort tracking

As this evaluation employs a longitudinal approach, fieldwork protocols around cohort tracking are particularly important. Three protocols that we have put into place should facilitate a successful joint cohort strategy at midline and endline.

1. We identified the relevant schools and communities using GPS coordinates provided by SCI, or by liaising with the relevant government district officials. We recorded any additional information we needed to locate the community on a sample tracker, including key landmarks, time needed to reach location from central location, and contact details of head teachers and prominent community members. This step should ensure that we can easily locate communities and schools again.
2. When conducting girls' surveys, we solicited detailed contact information from girls. This included address, if known, and contact numbers for caregivers. We used this information to "follow the girl" home, and at the home, we recorded further information about the address of the household. All girls received unique IDs, and data about the girls, linked by the ID, is maintained in a secure file for use in future longitudinal tracking. Our protocol calls for this list to be shared with STAR-G within six months of completion of the baseline.
3. We created paper ID cards containing the unique ID and handed these over to caregivers. We informed them of the longitudinal approach of the study, sought their consent, and asked them to keep the ID card safe. The ID card contained information on how to contact our local data collection partner if the household had any questions or concerns.

   At the next evaluation point, field staff will be dispatched to the same schools as the baseline assessment, and will attempt to contact the same students. If students are not available in the school, the teams will attempt to contact the students in their homes using the telephonic contact details we have on file. Should this prove troublesome, field staff will work with the head teacher and prominent community members to locate the family through local networks. As home addresses are recorded in detail, attempts will be made to reach the household itself physically should telephonic attempts fail.

   Once girls and/or household are reached, names, ages, date of birth, and other such characteristics will be mapped to ensure that the girl and/or household is the same as the one in the cohort. If a girl cannot be located at midline, she will be substituted using the agreed replacement strategy. The endline evaluation will be conducted in the same manner, tracking girls from the midline and substituting those lost due to attrition as necessary.

Target setting

The following table summarises midline targets. Midline targets set are intended to be achieved over and above the comparison group.

The targets in the table below are set by using the GEC outcomes spreadsheet. In the spreadsheet, projects must achieve 0.25 standard deviations improvements per year of implementation over and above the counterfactual. The standard deviation is taken from the average score of the benchmark grade or the grade above the current grade of the cohort.

That said, we advise caution in adopting these targets for midline given the imminent project redesign. The nature of the redesign, and its implementation schedule will likely affect whether the targets set below will be achievable, and should be reviewed in collaboration between GEC and STAR-G prior to adoption.

Table 31: Target setting

Outcome	Baseline	Midline target (actual increase expected over comparison group)
Learning	Literacy: 14.95/100	Literacy: 4.59
	Numeracy: 3.31/100	Numeracy: 2.84
Transition	Main cohort: 85% Benchmark: 75%	8%

4.6 Sustainability Outcome

At baseline, we were unable to draw any firm conclusions on sustainability of the project. Due to an imminent redesign, STAR-G did not prepare a comprehensive sustainability scorecard. As our strategy for evaluating several sustainability indicators relied heavily on project sourced data, we are only able to provide a limited amount of evidence on sustainability at this stage.

It is important to highlight that a key risk to sustainability of programme impact may be the redesign itself. The programme has run for a year already, and is expected to change dramatically in its second and third years of implementation. It is unlikely that we will therefore see any noticeable changes in sustainability between baseline and midline. In addition, readers should be aware that sustainability challenges may continue into endline given the short time the project will have to reinforce the changes they would like to affect.

Conversely, our interviews with government officials in Mozambique did yield some positive findings on this front. Government officials, for instance, were largely aware of SCI and their programming in their regions, and held a positive view of the impact programming was having. One official from Manica noted, "…of the partners that we have, the most involved is Save the Children, [which] gives training seminars on sexual reproductive health, also talks about reading and writing, also talks about early marriages and pregnancy, also forms girls' clubs…" The government official in Gaza was likewise optimistic – he thanked SCI for their

interventions, and spoke positively about their close collaboration with the government. These positive findings should nonetheless be considered with caution – government interviewees in our view followed the official line in their interviews, and were almost never critical of policies or practices around girls' education. Furthermore, it is not surprising that government officials should praise a partner-supported programme during an evaluation commissioned by the partner. Their comments should be understood against the background of a strong desire for the programme to continue, particularly in the current context of reduced donor support for education programmes.

We did also find indicative evidence that SCI's programming may be making a sustainable change at the school and community level. In schools, we found some evidence that school councils were supporting girls' education. School councils and matrons and patrons highlighted instances where issues of drop out due to early marriage and pregnancy had been addressed, and noted that awareness and sensitization to these topics were on the rise. Parents also noted their overall commitment to supporting both girls and boys through school, although they were conscious of the multiple barriers that persisted.

We summarise the anecdotal and descriptive data on sustainability indicators we gathered at baseline in the table below. Our overall score on sustainability at baseline is 1 out of 4, indicating a latent rating in which stakeholders are becoming aware of the challenges around girl's education. Given that the score is based on limited data, we advise readers to exercise caution in interpreting the score. In the table, we also highlight the key changes that will be needed at midline and endline to improve our ability to draw conclusions about sustainability, highlighting any notable changes in the evaluation strategy that need to take place at midline and endline. A key recommendation of this report is that the evaluation approach to sustainability be reviewed urgently in conjunction with the project.

Table 32: Sustainability indicators

Outcome	Tool and mode of data collection at baseline	Indicator recommendations	Findings
School (Score: 1 out of 4)			
School councils' perception of the importance of girls' clubs' input in school development plans	KIIs with school council members	*To calculate percentages of school councils for these indicators, a large N quantitative survey will be required at midline and endline*	Anecdotal evidence that girls' clubs in intervention communities do not input into school council meetings formally. In Gaza intervention community, informal input is provided and collaboration occurs on a case to case basis. In Manica intervention community, school council members attend girls' clubs meetings Girls' clubs were not as active in comparison communities
Percentage of school councils that include strategies in their school development plans to secure contextually appropriate learning materials	Project source Triangulated with school council KIIs		According to government officials, textbooks should be inclusive and gender-sensitive. No evidence that school councils are aware of need for this, or implement any actions related to this
Percentage of schools where developing and maintaining functional girls' clubs is part of the school's long-term strategy	Project source Triangulated with school council FGDs and KIIs with girls club leaders		Some anecdotal evidence from matrons, girls' club members, and council members in intervention communities that councils support girls and girls' clubs Girls' clubs were not as active in comparison communities

Outcome	Tool and mode of data collection at baseline	Indicator recommendations	Findings
Community (Score: 1 out of 4)			
Percentage of matron/patron groups who acknowledge Sexual and Reproductive Health (SRH) as one of the girls fundamental rights (disaggregated by gender)	Project source Triangulated with FGDs with stakeholders	*To calculate percentages of matron/patron groups for these indicators, a large N quantitative survey will be required at midline and endline. As these groups are not always found in one place, this may not be practical. We recommend revising this indicator*	Anecdotal evidence that matron/patrons in intervention communities are aware of rights of the girl, and of importance of sexual and reproductive health training
Change in parents' perception and attitudes related to girls early marriage as opposed to getting education (disaggregated by gender)	FGDs with parents, household survey Triangulated with KIIs and FGDs with other stakeholders		In the household survey, caregivers in both intervention and comparison communities believed that girls should stay in school till they are 21. There was no difference based on gender of respondent. However, through our qualitative work, we found that practical considerations related to economic barriers and gender and social norms were likely to affect the age of marriage.
Percentage of parents/guardians who feel that it is equally valuable to invest in a daughter's education as a son's even when funds are limited (disaggregated by gender)	Household survey Triangulated with KIIs and FGDs with other stakeholders		In the household survey, caregivers overwhelmingly agreed that it was valuable to invest in a girls' education. Approximately 95% of caregivers in intervention groups, and 97% of caregivers in comparison groups responded positively to this question. There was no difference based on gender of respondent. However, through our qualitative work, we found that practical considerations related to economic barriers, access barriers, and gender and social norms were likely to affect the practical support for education.

Outcome	Tool and mode of data collection at baseline	Indicator recommendations	Findings
System (Score: 1 out of 4)			
Girls clubs model is adopted by district school supervisors as part of the inspection checklist for schools	Project source Triangulated with government official interview	*To address these indicators, surveys and interviews will be needed with district school supervisors and teacher training colleges at midline and endline. We recommend that these indicators are tracked by the project directly*	No evidence that the model is adopted by district supervisors in their checklists. However, government officials believe model is important and implements activities to improve awareness of girls' clubs through gender focal points
Percentage of provincial IFPs that adopted the National Teacher Professional Development model	Project source Triangulated with government official interview		Government officials did not have any information on this indicator
Teacher Training Colleges (IFPs) develop plans to diversify income self-sustainability	Project source Triangulated with government official interview		Government officials did not have any information on this indicator

STAR-G SAYS: **Project targets on sustainability**

	Community	School	System
Change: what change should happen by the end of the implementation period	Parents, matrona and patron groups are sensitized about SRH and girls' rights in general. They have been receptive to key messages during trainings and have started to promote their newly acquired knowledge in the community and changed their own attitude and behaviour towards girls' rights.	Girl students' voice is valued by school councils, who also believed that girls' club is a key aspect to improve learning and school environment in the long term. School council's members were receptive to Save the Children's work and recognise the benefit of girl student's input to be a high performing school.	District officials acknowledge and believe in the benefits of girls clubs to enable a school to be high performing. The teacher training colleges (IFPs) can see the benefit and positive effects of the Teacher Professional Development model promoted by the project. They are willing to and ready to adopt the model across the province and schools.
Activities: What activities are aimed at this change?	Sensitization events and trainings for parents, boys and girls, and matrona/patron groups on girls' rights and SRH. Campaigns and advocacy activities within the community are also planned, to identify and encourage girls' rights champions.	Close collaboration between members of school councils and members of girls' clubs through girls' led safety audits at school. Trainings of members of girls' clubs to strengthen their agency and self-efficacy.	Advocacy campaign to the Ministry of Education and district education officials. Training of teachers' coaches and district education officials, including working closely and partnering with IFPs and its leadership team.

	Community	School	System
Stakeholders: Who are the relevant stakeholders?	Girls' mothers and fathers, members of matrona groups, members of patron groups, other influential community members such as village leaders or religious leaders	Members of school councils, members of girls' clubs.	District education officials in Tete, Manica and Gaza; IFPs' leadership team; IFP coaches, Ministry of Education.
Factors: what factors are hindering or helping achieve changes? Think of people, systems, social norms etc.	Social and cultural norms are very well anchored in the community, and it usually takes at least 1 generation to truly see change happens. If community influential members can be convinced on key messages, these will certainly help social norms grow and slowly change its harmful practices for girls.	The willingness and openness of members of school councils to accept girl students' voice, and to acknowledge the importance of girls' clubs to be a high performing and gender-balanced school. Social and cultural norms and beliefs could hinder the progress in change if members of school councils are not open to new ideas and change.	Financial barriers could hinder the deployment and scale-up of Teacher Professional Development model. IFPs and the Ministry of Education have been very positive and receptive to STAR-G's work on TPD, and also showed support to take this forward.

STAR-G SAYS

Project targets on sustainability

In terms of the project's sustainability at the community level, we aim to create positive change among key community members' behavior, attitudes and practices towards girls' rights. The project has interventions with matrona and patron groups, with boys and girls, and with parents to sensitize them about sexual reproductive health (SRH), especially around girls, and about girls' rights in general. The goal is to increase SRH knowledge among key community members who conduct initiation rites with boys and girls, which also prepare them for marriage. By improving knowledge about SRH and by conducting social behavior change communication (SBCC) activities to promote girls' rights and the importance of girls' education, the project aims to produce long term effect on attitudes and practices among community members, which will take at least one generation to improve. But STAR-G is aiming to lay the ground work during the project life and encourage early adoption of the promoted attitudes and practices to slowly change cultural norms around early marriage, SRH and education.

In terms of the project's sustainability at the school level, STAR-G aims to empower members of girl's clubs through trainings and support them to conduct girls-led safety audits in the school. Using those audit results, girls can demonstrate and advocate for a safer and more girl-friendly school structure and learning environment to the school councils. The project also works towards increasing knowledge and willingness of the school councils to collaborate with girls' clubs and integrate their voice in decision-making. Working closely with school councils and girls' clubs, STAR-G has the objective to demonstrate that a high-performing school is one that is gender sensitive, if not transformative, where gender equality is mainstreamed, where school structure and classrooms are appropriately equipped to cater for both boys and girls, and where the learning environment is safe for children with a gender-sensitive pedagogy. Key stakeholders at this level are members of girls' clubs, especially the girls' clubs leaders and most active members, and school councils' members, including the school management.

In terms of the project's sustainability at the system level, the project aims to promote girls' clubs and get the model adopted by all Education District Officials to become a key component of their checklist and be scaled up to other schools in the non-intervention areas. In addition, STAR-G works closely with the Ministry of Education and the national IFPs to improve the national teacher professional development (TPD) curriculum, and implement an innovative model developed by Save the Children to allow teachers to be trained regularly throughout the year and improved their skills and competences where needed. If the promoted TPD model is approved and adopted by the Ministry of Education, the nationally-recognized IFPs will be able to scale up the model and train all primary teachers in all three provinces and their districts following a high quality and high standard TPD curriculum.

Chapter 5

Key Intermediate Findings

5 Key Intermediate Outcome Findings

In this chapter, we present our findings related to the four intermediate outcomes of Attendance, Teaching Quality, Self-esteem, and Community Attitudes.

We begin by summarising our quantitative and qualitative findings in table 33 for all of the IOs. We also provide a baseline rating of green, amber, or red to indicate the level the indicator based on our analysis. A green rating would indicate positive or high levels of the IO at baseline, amber would indicate moderate levels, while a red rating would indicate low baseline levels. We then discuss each IO in depth, triangulating findings across methods, and discussing any challenges with the indicators. Wherever relevant and available, we provide findings by subgroups.

The regression analysis we present in the previous chapter combined with the insights we present in this chapter together allow us to attempt to link the IOs with the outcomes of learning, transition, and sustainability. Our summary findings by IO are summarised below:

- We contend that **attendance** is likely to be linked to the outcomes of learning and transition. Self-reported attendance rates are high, but there is evidence that these are lower for marginalised subgroups such as disabled girls, and married girls. Moreover, there is indicative evidence that attendance in girls' clubs is low and that respondents expect attendance rates to drop substantially at the secondary level. Unless girls are supported through the removal of barriers, particularly those more relevant for secondary school such as distance and economic status, **transition** is unlikely to occur. In fact, any drops in attendance rates at future evaluation points are likely to be detrimental to both the learning and transition outcomes.
- We argue that **teaching quality** is likely to be linked most directly to the learning outcome. While the IO indicators collected would imply that quality of teaching is acceptable and that our regression indicates that the link is tenuous, we suggest this is because (a) girls and stakeholders are unable to gauge levels of quality adequately, and (b) we do not have appropriate measures of teaching quality. As a consequence, in order to improve the **learning** outcome, our key recommendation in the next chapter is to intensify the level of pedagogical and subject-level support the project is providing to teachers.
- We suggest that **girls' self-esteem** is likely to be linked to the IO of attendance, and to the outcome of learning and transition, although the links are less direct than those related to teaching quality. Moreover, two issues around measurement are also important to consider: (1) girls are reporting high levels of self-esteem, and (2) there is likely to be some reverse causality involved in these metrics and those related to learning and transition. As much of the self-esteem programming is delivered through girls' clubs, our key finding presented in the next chapter is that the project's gender-transformative programming has not been fully adopted yet. This must be addressed if appropriate **learning** and **transition** is to take place.
- We indicate the **community attitudes** are most directly linked to the outcomes of transition and sustainability, and indirectly to the outcome of learning. Although

stakeholders report high levels of support for girls' education, there is evidence that this may drop as girls move to higher levels of schooling. Much of the community behaviour programming is delivered through matrons and patrons, and our key finding presented in the next chapter related to this is that the project's work with matrons and patrons has not been fully adopted yet. If the project does not continue to sensitise the community to the rights and needs of girls for the next few years, **sustainability** of the project is likely to negatively affected.

When reading this chapter, readers should keep in mind two challenges around the qualitative work. First, the analysis presented is based on only six case study communities, and views therefore are only illustrative. They may not be representative of the whole sample. Second, the quotations presented are based on translations from Portuguese and/or other regional language transcripts, and may not always be clearly articulated.

5.1 Intermediate outcome findings

Table 33: Target setting

ATTENDANCE			
Outcome	**Baseline rating**	**Quantitative results**	**Qualitative results**
Attendance in classroom	Amber	Caregivers report girls attend school on most days it is open. Findings are consistent across intervention and comparison groups, but differences seen for regions and disability status • Intervention: 95% • Comparison: 98% • Gaza: 93% • Manica: 97% • Tete: 89% • Disabled: 80% • Caregivers with no education: 92% • Caregivers with some education: 95% • Able to meet basic needs: 96% • Unable to meet basic needs without charity: 91%	Parents, girls, and boys report that girls attend school most of the time, except when the weather is bad or when they are ill. Findings are consistent across intervention and comparison groups and region, but differences seen based on certain characteristics • **Parents say:** Parents report that attendance rates are adequate, and have been increasing due to improved awareness and government and NGO drives • **Girls and boys say:** Girls and boys self-report high attendance rates except when weather is bad or due to illness • **Marginalized groups:** All stakeholders note that disabled girls, girls who are married, or pregnant do not attend school in many cases. Some pregnant girls attend night school
Attendance in girls' clubs	Red	Not available	Girls' club champions report that attendance is challenging. Gaza's intervention case study has more challenges related to attendance than

ATTENDANCE			
Outcome	**Baseline rating**	**Quantitative results**	**Qualitative results**
			Manica and Tete: • **Gaza intervention group:** Girls' club leader notes that regular attendance is challenging so meetings are only held once a week. • **Manica intervention group:** Girls' club leader reports meetings are held twice a week, but participation low due to lack of efficacy. Boys no longer attend. • **Tete intervention group:** Girls' club leader reports that meetings are held twice a week, but out of 48 members, only 15 attend as many girls live far away.

Students' views on the main barriers that may prevent girls' ability to attend school regularly	Amber	Multiple barriers including around access, teaching and learning, and gender and social norms were explored at baseline (see Chapter 3). Key barriers related to attendance solicited from girls include: Girls who report travelling to school feels unsafe. Older girls (14+) were slightly more likely to report feeling unsafe when travelling to school than younger girls (aged 8-13): • Intervention: 12% • Comparison: 10% • Younger girls: 11% • Older girls: 12% Girls who report teachers are absent often. Younger girls were more likely to report that teachers are often absent: • Intervention: 33% • Comparison: 32% • Younger girls: 33% • Older girls: 27%	Girls and boys report multiple barriers which may prevent girls from attending school. Findings are consistent across intervention and comparison groups and regions, but differences are reported for certain subgroups • **Girls say:** Peers may miss schools when they are ill, have a death in the family, or have household chore responsibilities. Girls also report safety, distance, and economic challenges. Some girls do not go to school when menstruating. • **Boys say:** Girls miss school due to distance, lack of interest in school, and early marriage and pregnancy. • **Marginalized groups:** All stakeholders note that disabled girls, and girls who are married or pregnant do not attend school in many cases. Some pregnant girls attend night school. • **Transition:** All stakeholders reported that distance would be a barrier for attendance in secondary school.

TEACHING QUALITY			
Outcome	**Baseline Rating**	**Quantitative results**	**Qualitative results**
Proportion of teachers trained who demonstrate improvement against four or more competencies within the national teacher competency framework.	Amber	**Teachers:** Teachers self-report high levels of competencies. According to STAR-G's baseline survey on teacher competencies, 66% of teachers say they are at proficient or advanced level on planning lessons, delivering lessons, assessing lessons, and on attitudes. Male: 68%, female: 62% **Classroom observations**: Observations show that most teachers arrive to class on time, have a written lesson plan, and use clear language. Teachers, however, appear to give limited opportunities to students to ask questions, and to express their own ideas and experiences.	Teachers in intervention and comparison groups recall receiving training in recent past. Teachers in intervention group highlight pedagogical and child protection training, claiming they are trying to implement their training. They do highlight challenges around parental support, large classes, and lack of classroom materials. Teachers expect more training on gender sensitivity and dealing with disabilities.
Girls' perception towards their teachers' teaching methods and ability	Amber	Girls believe teachers treat boys and girls differently, that they are often absent from class. Use of corporal punishment is also reported. Findings are similar across intervention and comparison groups. Younger girls were more likely to report that teachers treat boys and girls differently (63%) than older girls (58%), however, use of corporal	Girls generally appear to be happy with their teachers. However, they report use of corporal punishment, and use of school chores for discipline. Findings are similar across intervention and comparison groups. **Caretakers:** Parents present mixed opinions on quality of teaching. Some are positive, others highlight that quality of

<table>
<tr><th colspan="4">TEACHING QUALITY</th></tr>
<tr><th>Outcome</th><th>Baseline Rating</th><th>Quantitative results</th><th>Qualitative results</th></tr>
<tr><td></td><td></td><td>punishment was reported consistently across age groups.
<table>
<tr><th></th><th>Intervention</th><th>Comparison</th></tr>
<tr><td>Agrees teachers treat boys and girls differently in the classroom</td><td>67%</td><td>57%</td></tr>
<tr><td>Agrees teachers often absent from class</td><td>33%</td><td>32%</td></tr>
<tr><td>Teachers use corporal punishment</td><td>51%</td><td>56%</td></tr>
</table>
Caretakers: Few caregivers believe quality of schooling is poor. Findings differ across intervention and comparison groups, especially in Manica, with comparison groups believing quality is worse.
<table>
<tr><th></th><th>Intervention</th><th>Comparison</th></tr>
<tr><td>Total</td><td>1.1%</td><td>3.3%</td></tr>
<tr><td>Gaza</td><td>1.3%</td><td>2.7%</td></tr>
<tr><td>Manica</td><td>0.3%</td><td>6.6%</td></tr>
<tr><td>Tete</td><td>1.9%</td><td>0.9%</td></tr>
</table></td><td>teaching has declined over time. Findings are consistent across intervention and comparison groups.</td></tr>
</table>

COMMUNITY ATTITUDES			
Outcome	**Baseline Rating**	**Quantitative results**	**Qualitative results**
Proportion of boys championing girls' right to education by taking concrete actions to support them (e.g. taking on household chores, walking with them to school etc.)	Red	No quantitative results available.	Boys are supportive of girls being in school, and most boys are aware of the barriers girls face, mentioning early pregnancy, early marriage and the burden of household work as barriers to girls' educational progression. However, some boys do hold discriminatory attitudes towards their female peers, and no examples of concrete actions to support girls are evidenced. Findings are consistent across region and sub-groups. **Boys say:** Girls should be in school and that education for girls supports them to seek employment in future. **Girls say:** Boys respond negatively when girls outperform boys in school, breaking gender stereotypes about academic performance.
Change in parents' attitudes towards girls continuing to attend school and learn beyond the project intervention	Amber	Parents agree that investing in a girls' education is worthwhile. They also believe that girls are as likely to use their education as boys. Parents have high ambitions for their daughter's continuing education to the end of upper secondary and beyond. A higher proportion of fathers expect their daughters to continue into post-secondary education than mothers. **Mothers**: Upper secondary: 41% **Mothers**: College or University: 48%	Both mothers and fathers expressed their support for girls to be school. However, parents feel that girls can become less invested in their own education than boys, because of the risk of pregnancy and the pressures to marry. As a result, parents are less willing to support girls over boys. Furthermore, challenges frequently emerge with regard to financial constraints, which ultimately lead to more support for boys. **Mothers say:** Educating girls helps them to have a better future, and gives them the tools to be able to support their families.

COMMUNITY ATTITUDES Outcome	Baseline Rating	Quantitative results	Qualitative results
		Fathers: Upper secondary: 40% **Fathers**: University: 52% Quantitative results also suggest positive attitudes to supporting girls, even when funds are limited. **Intervention**: 95% think it is worthwhile investing in girls when funds are limited **Comparison**: 97% think it is worthwhile investing in girls when funds are limited	**Fathers say:** Sending girls to school is positive. As girls progress through school, they can become less engaged in learning, and pregnancy and/or marriage leads to them dropping out of school.
Proportion of girls who feel they are given appropriate support to meet their needs, stay in school and to perform well	Green	Most girls (98%) feel they are given support by their families to stay in school and perform well. Most girls (97%) feel they are given support from their teachers, and are made to feel welcome in the classroom. Findings are consistent across regions.	Most girls feel supported by their parents, particularly when they are in primary school, through a range of different forms of support, including material/financial, and social/personal. A small number of mothers noted how they have adapted domestic chores to better support girls to study. Girls also allude to this, indicating that this can help them to be able to attend school.

COMMUNITY ATTITUDES			
Outcome	**Baseline Rating**	**Quantitative results**	**Qualitative results**
Support by matron/patron groups to postpone early marriage	Red	No quantitative results available.	Matron and patron groups are engaged in community activities designed to postpone early marriage. Matron engagement in Girls' Clubs in interviews with Girls' Club Leaders, in terms of providing support to raise awareness about girls' rights. Whilst there is limited awareness of these groups amongst girls, boys, mothers and fathers, there is a higher level of awareness of their activities in intervention communities compared to comparison communities.

SELF-ESTEEM Outcome	Baseline Rating	Quantitative results	Qualitative results
Proportion of girls reporting increased self-confidence and ability to communicate their practical and strategic needs and concerns	Green	Girls report feeling confident about answering questions in class (71%), and are able to ask a teacher for help when needed (78%). There are differences between some sub-groups (girls who do and do not speak the Language of Instruction), and between intervention and comparison groups in terms of confidence when answering questions: **Speaks LOI:** 71% **Does not speak LOI:** 63% **Intervention:** 70% **Comparison:** 72% Older girls felt significantly more confident working in a group with other people than younger girls, suggesting increase levels of confidence: **Younger girls:** 82% **Older girls:** 88% Almost half of girls feel nervous either reading or doing maths in front of others. There are differences in intervention and comparison groups, and between some sub-groups (girls who do and do not speak the Language of Instruction). No differences were found on these measures based on the age of the girl. **Intervention Maths:** 41% **Comparison Maths:** 45%	Girls claim they are aware of how to communicate their needs at school, suggesting that they would discuss issues with either their school director or teacher. Corporal punishment occurs in schools, with girls reporting that it affects girls' communication with teachers and how they feel about attending school. These findings are largely consistent among regions and sub-groups.

SELF-ESTEEM Outcome	Baseline Rating	Quantitative results	Qualitative results
		Intervention Reading: 42% **Comparison Reading:** 47% **Speaks LIO Maths:** 43% **Does not speak LOI Maths:** 54% **Speaks LOI Reading:** 44% **Does not speak LOI Reading:** 55%	
Change in girls' perceptions of their influence in the home, school and/or community	Amber	Just over half of girls report feeling they have no influence around the decision to attend or stay in school (55%). There is a difference between intervention and comparison groups, and among the regions. **Intervention:** 51% **Comparison:** 58% **Gaza Intervention:** 40% **Gaza Comparison:** 54% **Tete Intervention:** 42% **Tete Comparison:** 55% **Manica Intervention:** 80% **Manica Comparison:** 70% For most girls (48%), their families make decisions about what age they will get married compared to smaller proportion of girls who either make the decision themselves (26%) or make the decision jointly with their families (27%). There are some regional differences in terms of decision-making around marriage: **Manica** - 55% of girls' families decide for them	While mothers tended to suggest that girls have some influence on decision making around who to date and marry, discussions with fathers reveal that decisions about when to marry remain largely in the domain of parents. These decisions are often financially driven. Whilst girls said that they might challenge parental decisions, they suggested that ultimately, their influence would not be strong enough to affect the outcome. Girls' club leaders are seen to recognise their influence on peers at the intersection of the school and community. However, they too face challenges in terms of holding influence in the face of other community figures.

SELF-ESTEEM Outcome	Baseline Rating	Quantitative results	Qualitative results
		Gaza – 47% of girls' families decide for them **Tete** – 38% of girls' families decide for them	

5.2 Attendance

5.2.1 Introduction

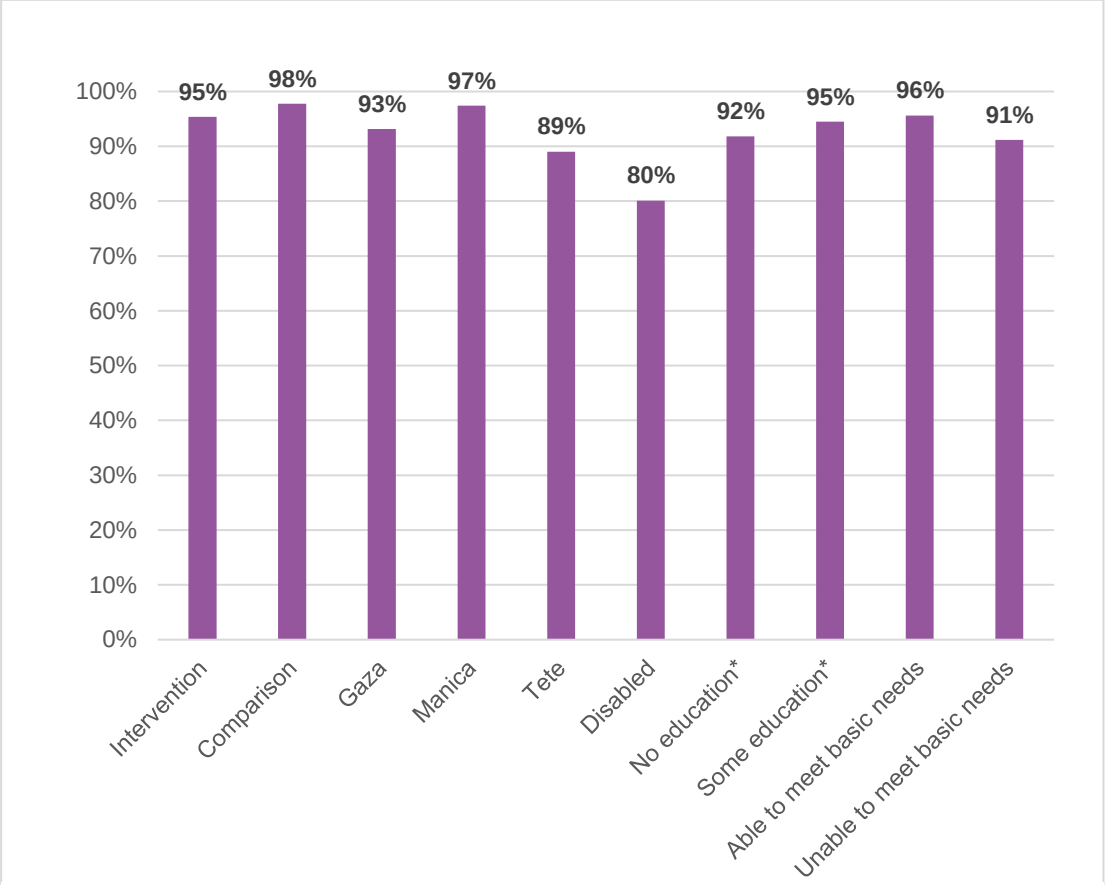
Attendance in school is not only a precursor to learning, but analysis of this intermediate outcome can likely also provide a strong indication of whether girls will transition to the next stage of schooling. Moreover, attendance is also expected to be linked to the other three IOs of quality of teaching, self-esteem, and community attitudes as good teaching, high self-esteem of girls, and positive community attitudes may enhance the ability of girls to attend school. In order to improve attendance, STAR-G works to professionalise teachers, works with matrons and patrons to sensitise them to girls' rights, and provides safe spaces for girls through girls' clubs.

The Attendance IO has been assessed using three indicators at baseline: (1) attendance in the classroom, (2) attendance in girls' clubs, and (3) students' views on the barriers that prevent girls from attending school.

5.2.2 Attendance in the classroom

Overall, the self-reported findings on classroom attendance are optimistic. In the household survey, over 95 per cent of caretakers indicated that girls in the sample attended schools on most days it was open, with figures slightly higher in the comparison group but not statistically significant. Figures also varied by background characteristics of the caregiver. Caregivers with some education themselves were more likely to report that girls attended school more often than caregivers with no education, and those able to meet basic needs were 5 per cent more likely to report that girls attended school on most days the school was open than caregivers who were unable to meet basic needs without charity (see figure 2).

Figure 2: Caregivers say girls attend on most days school is open



*'some education' includes some primary, primary, lower secondary, upper secondary and university

The overall high attendance rates are not unexpected given our sampling approach of selecting the cohort from the population of girls who were in school the day the survey took place. We did find some variation by region, with Manica respondents reporting the highest levels of attendance, and Tete reporting the lowest rates. For the 49 disabled girls in the sample, 80 per cent of caretakers reported that girls attended school on most days that it was open.

Our qualitative case studies corroborated these results, but also yielded three interesting, nuanced findings:

i. First, most girls and boys were reluctant to admit that they missed school themselves except in the case of bad weather or illness; *"I haven't missed the classes yet"* (Boy, Manica, Intervention); Interviewer: *"Who misses school here?"* Respondent *"No one…others miss if they are sick"* (Boy, Manica, Comparison). They were nonetheless less reluctant in discussing absenteeism in their peers. A handful of boys indicated that girls were sometimes absent *"A girl from grade 7 does not come to school either…her house is far from here…others miss classes, some from time to time"* (Boy, Manica, Intervention), and girls agreed that their peers were not always in attendance. Nonetheless, according to parents, attendance rates across almost all case study

communities had been improving, although they still considered that more boys attended school than girls.

ii. Second, across all stakeholders, respondents generally noted that attendance was more challenging for disabled girls, and young mothers and pregnant girls under the age of 18.

iii. Finally, a few respondents suggested that attendance of marginalised groups was increasing. In the intervention community in Manica, for instance, a father expressed optimism for changes in the attendance of these marginalised groups, noting that things were being accepted due to increased awareness and sensitisation; *"there were even changes, because last year the ladies worked hard, we had a group of mothers who sensitised the children and last year they worked hard".* A handful of respondents corroborated this, highlighting that pregnant and married girls did attend the night shift of school.

5.2.3 Attendance in girls' clubs

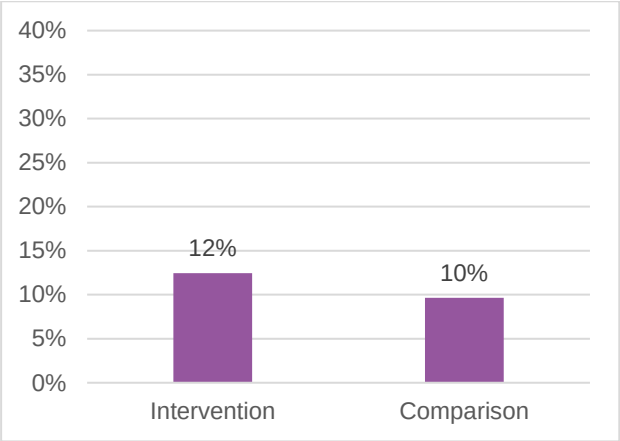
Although the project did not collect large-scale survey data from girls' club members, as part of the baseline we did interview leaders of girls' clubs to solicit their views on attendance. We noted two distinct trends in the qualitative case studies. First, they indicated that girls' clubs were less active in comparison sites than in intervention sites. This finding is encouraging. While reforms in Mozambique implemented in the past few decades have attempted to set up clubs in schools across the country, in practice the level of activity of these clubs varies. Girls' clubs in intervention sites were supported in the PAGE-M programme earlier, and as a consequence, we were easily able to locate and interview leaders in these sites.

Second, our findings indicate that, in the intervention case study sites, attendance is weak and is limiting the efficacy of the clubs. In Gaza, for instance, the girls' club leader noted that the school shift system was a challenge as it was difficult to schedule meetings to suit girls from the morning and the afternoon shifts. As a result, girls' club meetings had been reduced from twice to once a week. She highlighted, *"they do not all show up all of them, today a number of 20 can appear while the total must be 30, the following day 15, 10, it depends…so this does not make it easy for the club to progress"* (Girls' club leader, Gaza, Intervention). The leader in Manica reported similar challenges, highlighting that girls were attending less this year as compared to the previous year. She attributed this to her view that the club was not serving girls' needs adequately. In Tete, while there were 48 members in the club, only 15 attend regularly as the remaining girls lived far away.

5.2.4 Students' views on barriers to attendance

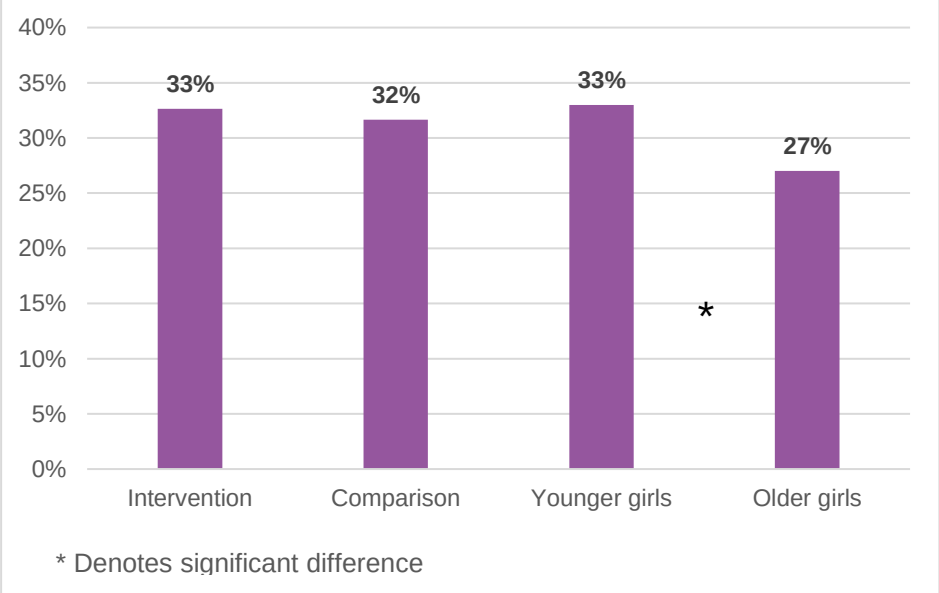
Our quantitative surveys solicited information on potential barriers to attendance from girls themselves. Of the multiple barriers highlighted in Chapters 3 and 4, we asked girls in particular about two specific barriers: safety concerns, and attendance of teachers. 12 per cent of girls in the intervention group reported that the journey to school was unsafe, against 10 per cent of the girls in comparison communities (see figure 3). When comparing girls from households which were able and unable to meet basic needs, there was no noticeable difference on this measure.

Figure 3: Girls report travelling to school feels unsafe



When asked about whether teachers were often absent from class, in both intervention and comparison communities, over 30 per cent of girls noted that teachers were often not in attendance (see figure 4). Younger girls were significantly more likely to report that teachers were absent often than older girls.

Figure 4: Girls report teachers are absent often



The qualitative case studies provided rich material that supplemented our understanding of the barriers faced by girls in attending school. Girls, for example, highlighted that their peers may miss school because of access-related concerns such as safety and distance to schools. Economic barriers were also mentioned, particularly as they relate to additional fees for secondary schools. One girl noted *"You know, it's not like we don't want to study and finish, it's just that to go further money is needed"* (Girl, Gaza, Intervention). Economic barriers were seen by respondents to be more acute for orphans.

Barriers related to teaching and learning came up less often in the discussions, but gender norms and chore burdens did appear to play a significant role. Girls reported not attending school when menstruating (Interviewer: *"A whole week at home"*, Respondent: "*Yes"* [Girl, Manica, Intervention), and noted that married and pregnant girls in particular did not attend school. They also indicated that their peers may miss school to take care of children or fetch

water or help with work on the farm. For example, a girl from the Gaza comparison community indicated that *"Others don't come because they are grazing cattle and say they will not go to school because they are grazing cattle, they say they will go on another day."*

5.2.5 Reflections

The evidence indicates that attendance of students may be adequate for some groups, but marginalised groups such as disabled girls, married girls, pregnant girls, and young mothers, are clearly not attending school. In addition, the barriers highlighted imply that transition to secondary school is likely to be compromised as safety, distance to schools, and early pregnancy and marriage will feature even more prominently for STAR-G beneficiaries over the next few years.

For midline, we advise some caution around setting ambitious numerical targets based on the overall class attendance figure. Instead, the project should consider:

- setting specific targets for attendance of more marginalised subgroups
- setting ambitious targets for attendance in girls' clubs

The three indicators for attendance do appear to be fit for purpose and logical. However, there appear to be two specific issues related to measurement. First, measuring changes in students' views on the main barriers may prove to be challenging at midline and endline. This is because although a variety of barriers were discussed in the six community case studies, the relative weight of each was not interrogated in depth. A change in the instrument at further evaluation points may be required to gauge the strength of barriers better. Second, no quantitative data was collected for attendance in girls' clubs, so measurement had to rely on a small number of illustrative case studies. Girls' clubs meetings occur on different days in different communities and it may not be practically possible to use spot checks for these meetings. A strong alternative would be for the project to gather this data intermittently.

5.3 Quality of teaching

5.3.1 Introduction

The quality of teaching is likely to be a key determinant of whether girls who are attending school become literate and numerate. Poor teaching practices, and teachers who lack the requisite competencies can hinder learning, while strong pedagogy and teacher competence can allow students to learn more effectively. In order to improve the quality of teaching, STAR-G works to professionalise teachers, and implements Literacy and Numeracy Boosts that help teachers build their skills to teach Portuguese and Mathematics.

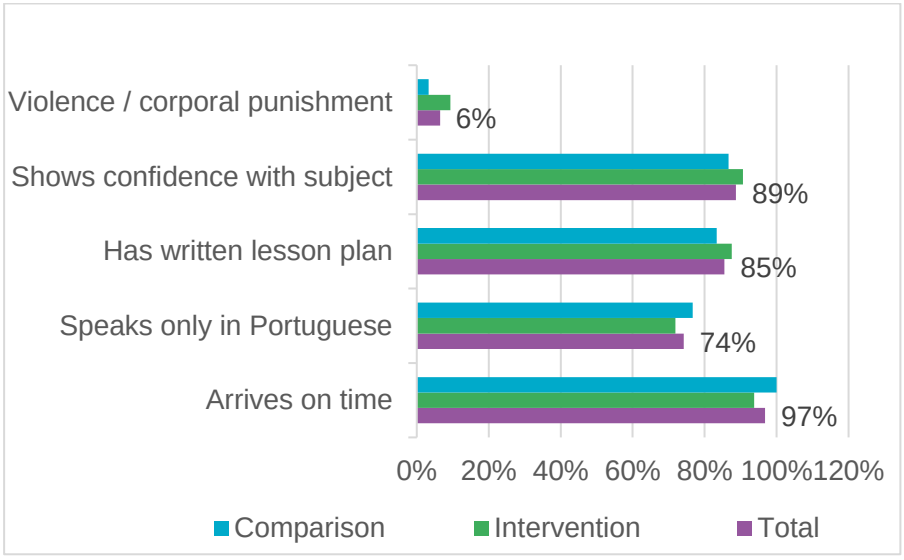
The Teaching Quality IO has been assessed using two indicators at baseline: (1) Proportion of teachers trained who demonstrate improvement against four or more competencies within the national teacher competency framework and (2) Girls' perception towards their teachers' teaching methods and ability.

5.3.2 Proportion of teachers trained who demonstrate improvement against four or more competencies within the national teacher competency framework

The Mozambican national teacher competency framework outlines four key areas in which teachers must show competency, including in planning lessons, delivering lessons, assessing lessons, and in displaying positive teacher attitudes. In September 2017, STAR-G conducted a baseline, and asked teachers to self-report proficiency levels against these four key areas. According to STAR-G's baseline survey on teacher competencies, 66% of teachers say they are at proficient or advanced level on planning lessons, delivering lessons, assessing lessons, and on attitudes. The statistic was higher for male teachers at 68%, against 62% for female teachers. Their baseline nonetheless did suggest that physical and verbal punishment were common, and students reported that teachers treated boys and girls differently.

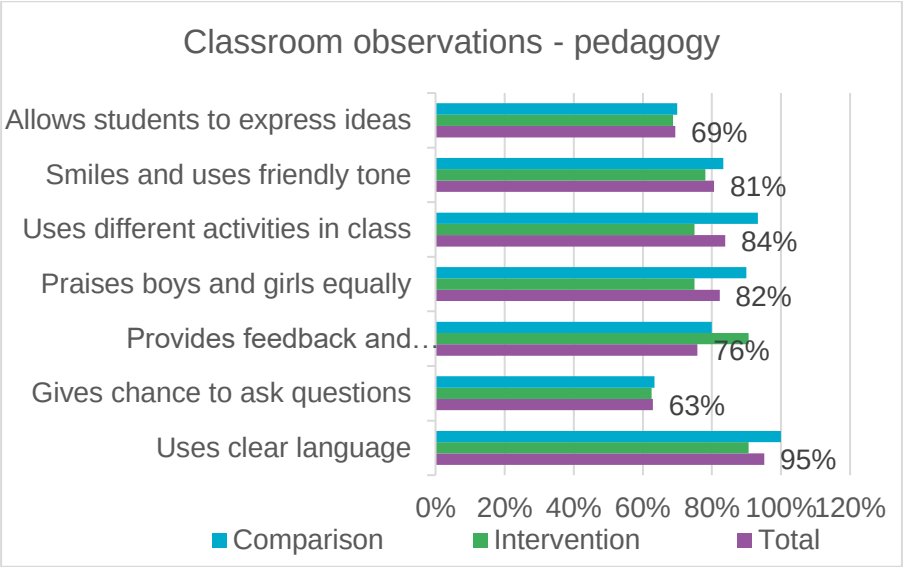
To supplement the data provided by the project on teaching quality, we conducted 62 classroom observations. We observed lessons of Portuguese for grades 4 through to 7 across intervention and comparison communities. We present our results in figures 5 and 6 below. The number of observations are small, so although differences exist in percentage terms between intervention and comparison groups, in practice this translates to a difference in a small number of observations only and we do not find them concerning.

Figure 5: Classroom observations - general



The teachers observed generally arrived on time to class. Most teachers had written lesson plans, and demonstrated confidence with the subject material. Overall, only 26 per cent of teachers used regional languages during the class. We saw limited evidence of violence between students, or corporal punishment.

Figure 6: Classrooms observations - pedagogy



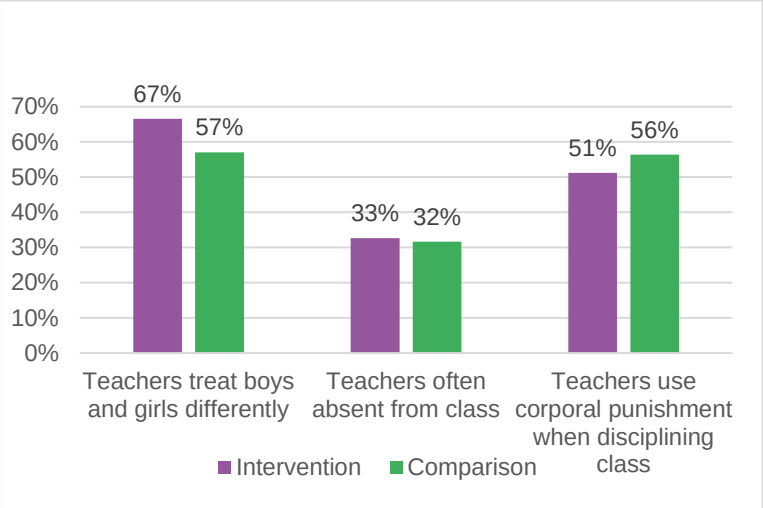
In figure 6 above, we display a handful of indicators related to pedagogy. By and large, teachers across intervention and comparison schools used accessible language and a friendly tone while teaching. Fewer teachers across the two sets of schools gave students the chance to ask questions, or to express their own ideas. This indicates that in classrooms a more traditional style of teaching is being used. Intervention and comparison groups show some differences in style, but due to the small number of observations, the differences are not concerning.

We further supplemented the classroom observations by conducting focus group discussions with teachers from intervention and comparison communities. Teachers in both groups recalled receiving training in the recent past: *"I think we all received psycho-pedagogical training"* (Teacher, Gaza, Comparison); *"I received a cycle of pedagogic training and I learned a lot about teaching"* (Teacher, Gaza, Intervention). Teachers in the intervention group highlighted pedagogical and child protection training, claiming they found the material useful and were trying to implement their training *"last year I participated in a seminar on girls, the aim was to protect, such as safeguarding the child, more or less protect the child then talked of abuse no to abuse and violence and other points that resulted"* (Teacher, Gaza, Intervention). Across the intervention and comparison groups, teachers did highlight that challenges around parental support, large classes, and lack of classroom materials remain, and hinder their ability to teach effectively "*education has two parts, there is the teacher's part and there is the caretakers' part, first the caretakers should encourage their children, give a positive message to their daughters or sons"* (Teacher, Manica, Comparison). Teachers expected more training on gender sensitivity and dealing with disabilities to improve their practice.

5.3.3 Girls' perception towards their teachers' teaching methods and ability

In the girls' survey, we asked girls some questions about their perceptions on teaching. We found that girls in general believed teachers treated boys and girls differently, especially in the intervention group. Girls also reported that teachers were often absent from class, and that they used corporal punishment when disciplining the class.

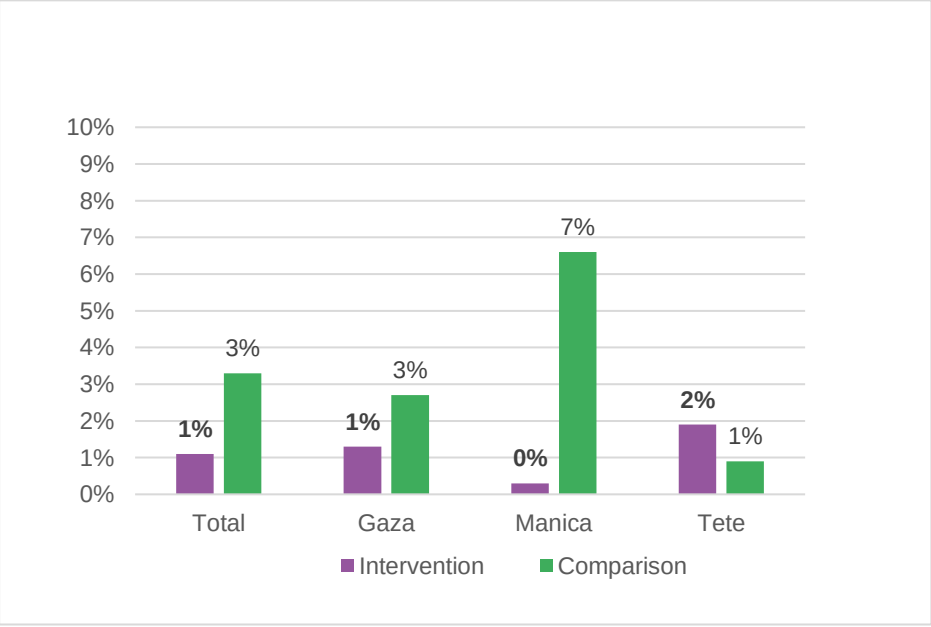
Figure 7: Girls' perceptions on teaching quality



Our qualitative case studies did not yield much data on girls' perceptions towards their teacher's teaching methods and ability. Girls generally appeared to be happy with their teachers *"They are very good teachers…because they teach us how to read and calculate"* (Girl, Gaza, Tlocola). However, all students report use of corporal punishment *"They beat us and then tell us not to make noise"* (Girls, Tete, Intervention), and use of school chores for discipline *"they put us cleaning the WC, work at the school's garden, clean the school's yard" (Boy, Tete, Intervention).* Findings are similar across intervention and comparison groups.

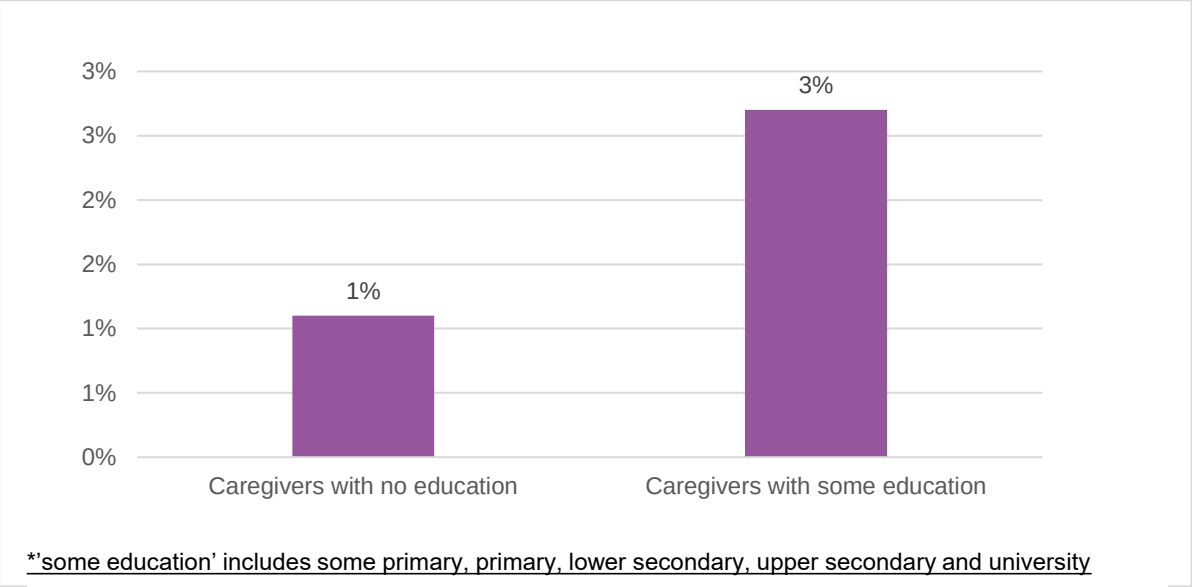
We tried to corroborate these findings by examining what caregivers thought of teaching. Caregiver's views in general on the quality of the school also seemed acceptable – only 1 per cent of caregivers in the intervention group perceived quality of teaching to be poor, against 3 per cent in the comparison group. We did see noticeable differences in Manica, where 7 per cent of the comparison group reported that the quality of teaching was poor (see figure 8).

Figure 8: Caregivers who perceive school quality is poor



Furthermore, caregivers who themselves had some education were more likely to perceive school quality as poor, than caregivers with no education (figure 9).

Figure 9: Caregivers who perceive school quality is poor by caregiver education level



*'some education' includes some primary, primary, lower secondary, upper secondary and university

The qualitative case studies also presented a mixed picture of caregiver's perceptions on quality of teaching. Some parents for instance were quite positive, while others highlighted that quality of teaching is poor "*My son enters the room, but he does not know a single thing, he really does not know*" (Mother, Manica, Intervention), or has declined over time; *"….if we were to compare with the colonial time, [ehhh] a child of grade two was able to read, but now the child goes to secondary school and does not know how to indicate that this is A and this is B. So I will say this way, now they are going but we don't see the output*" (Father, Tete, Comparison). Findings were consistent across intervention and comparison groups.

5.3.4 Reflections

The evidence indicates that in general teachers, girls, and parents perceive quality of teaching is acceptable. This contrasts strikingly with the poor levels of learning reported in the previous chapter. As suggested previously, it is probable that none of these informant groups, including the teachers, have much knowledge or experience of what effective teaching may look like, through lack of exposure to other educational systems and contexts. Teachers' own levels of education, literacy and numeracy, are often low, given they are themselves the product of a poor system. The fact that teachers report teaching quality to be acceptable, in the face of manifestly poor learning, suggests they have a poor understanding of the teaching-learning process and what is needed for teacher behaviour to translate into students acquiring skills and knowledge. Furthermore, the system does not currently encourage teachers to recognise and identify their own areas of weakness in order to engage in targeted professional development. Key issues that were highlighted were use of corporal punishment, and limited use of student-centred pedagogical techniques.

We advise caution around relying heavily on teachers' self-reported proficiencies, or on students' and caregivers' perceptions about the quality of teaching. More objective

benchmarks such as those based on classroom observations should be considered as the basis of target setting. Of course, targets around reduction in corporal punishment and differing treatments of boys and girls should be useful in gauging the efficacy of STAR-G's training.

The two indicators for teaching quality do appear to be fit for purpose and logical. However, there do appear to be two specific issues related to measurement. First, STAR-G's teacher competency baseline is based on a pre-post design, and does not take into account how the comparison group is faring. Our qualitative case studies suggested that even teachers in comparison groups were undergoing training, and so the methodology may fail to take into account what proportion of any improvements are due to STAR-G's programming. Second, our case studies were quite limited in size. Therefore it is possible that we have not captured girls' views of teaching adequately. One way to address this at midline would be to increase the number of beneficiary FGDs and to probe teaching and learning issues more thoroughly.

5.4 Girls' self-esteem

5.4.1 Introduction

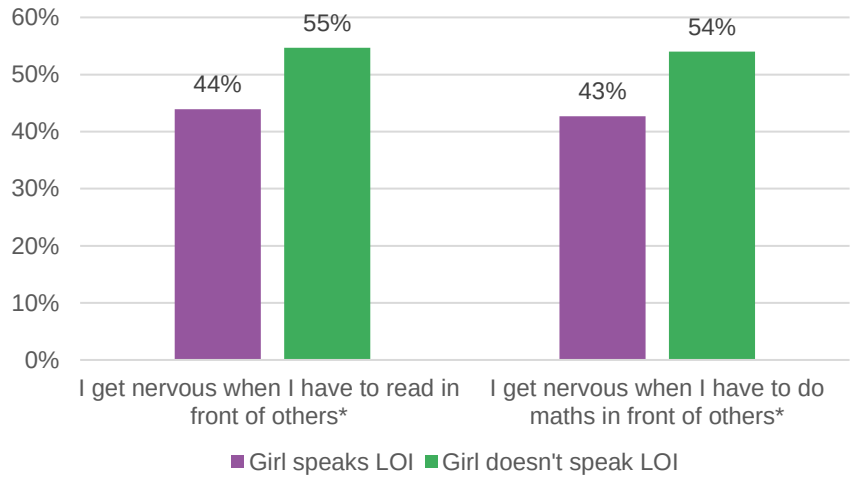
Improved self-esteem and self-confidence for girls is likely to positively impact on their school attendance as they feel more confident and comfortable in the classroom, and more able to communicate their needs. Combined with improved teaching quality and gender-sensitivity in the classroom, this should improve learning outcomes for girls, and make it more likely that girls remain in education and transition into the secondary phase of school. STAR-G supports the development of girls' self-esteem through girls' clubs, building their academic self-efficacy through the Literacy and Numeracy Boost interventions, and teacher training and development.

The Self Esteem Intermediate Outcome has been assessed using two indicators at baseline: (1) proportion of girls reporting increased self-confidence and ability to communicate their practical and strategic needs and concerns, and (2) change in girls' perceptions of their influence in the home, school and/or community.

5.4.2 Proportion of girls reporting increased self-confidence and ability to communicate their practical and strategic needs and concerns

In the Girls' Survey, we asked girls about their sense of confidence in class and their communication skills. The majority of girls (71 per cent) felt confident about answering questions in class. When asked about how they felt about their participation in class in relation to particular subjects or skills, they were less confident. As Figure 10 shows, more girls felt nervous about either doing maths or reading in front of others, particularly if they do not speak the Language of Instruction. There were also differences between intervention and comparison groups. A higher proportion of girls from the comparison group reported that they felt nervous reading (47 per cent), and doing maths (45 per cent), in front of others, compared to intervention groups respectively (42 per cent and 41 per cent).

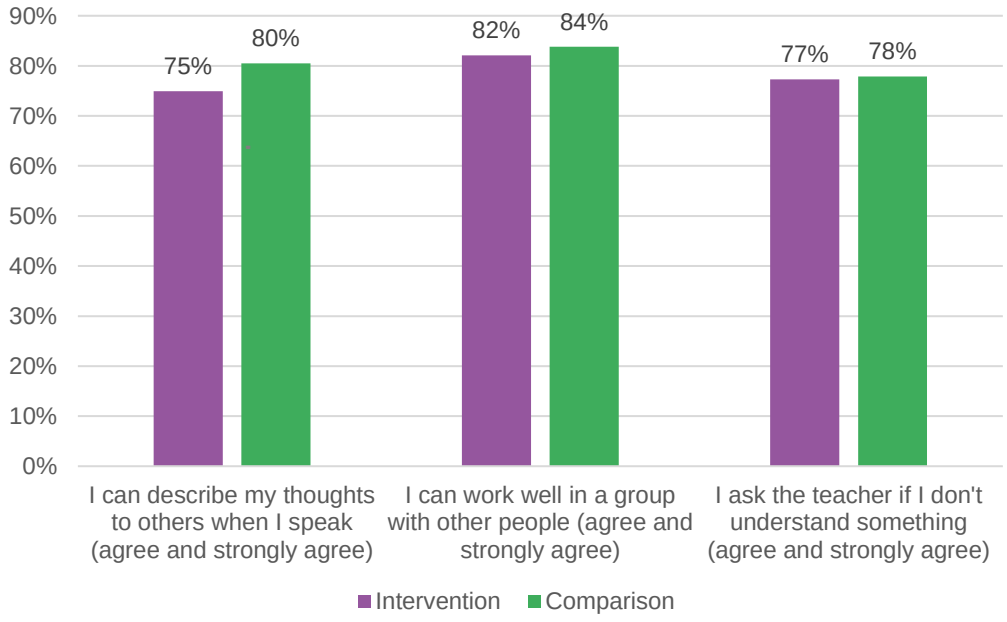
Figure 10: Girls report feeling nervous when reading and doing maths in front of others



***Girls responding 'agree' or 'strongly agree'**

A high proportion of girls surveyed (78 per cent) felt they would be able to ask their teacher for help when they did not understand something. Girls were also sure about their own communication skills, stating that they could describe their thoughts to others in speech (78 per cent), and work well in groups alongside others (83 per cent). These factors also differed between intervention and comparison groups. As figure 11 indicates, a larger proportion of girls from the comparison group responded positively to questions about communication skills; this was significant in some cases.

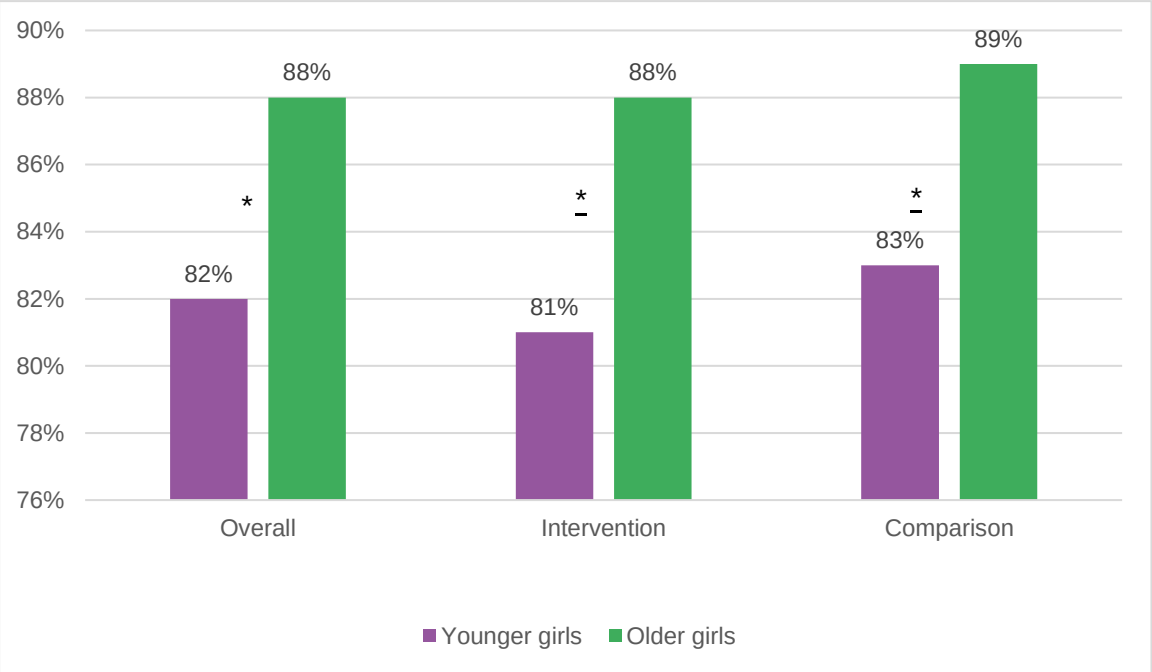
Figure 11: A larger proportion of girls from the comparison group responded positively to questions about communication



***Indicates a significant difference**

Findings that older girls were more likely to report being able to work well in a group with other people than younger girls gives some indication that levels of confidence were higher amongst older girls (aged 14+) than younger girls (aged 8-13) (Figure 12).

Figure 12: A larger proportion of older girls responded positively to questions about working with other people



***Indicates a significant difference**

In order to supplement our understanding of these findings, qualitative focus groups discussed self-esteem and confidence. Most girls taking part in these focus groups explained that they are aware of how to communicate their needs at school, suggesting that they would discuss issues with either their school director or teacher. However, as the discussions progressed, girls highlighted that corporal punishment is still in use in schools, noting that it affects their ability to communicate with teachers and how they feel about attending school.

Interviewer: *"What does the teacher do to put you in order?"*

Respondent: *"Hit"…*

… Interviewer: *"Do you think that is a good thing?"*

Respondent: *"No"*

Interviewer: *"What should they do?"*

Respondent: *"Tell that they shouldn't do that, if they continue take them out of the room"…*

…. Interviewer: *"Do you usually talk to that teacher, to say that the teacher cannot hit you?"*

Respondent: *"No"*

Interviewer: *"Why don't you speak? Are you afraid?"*

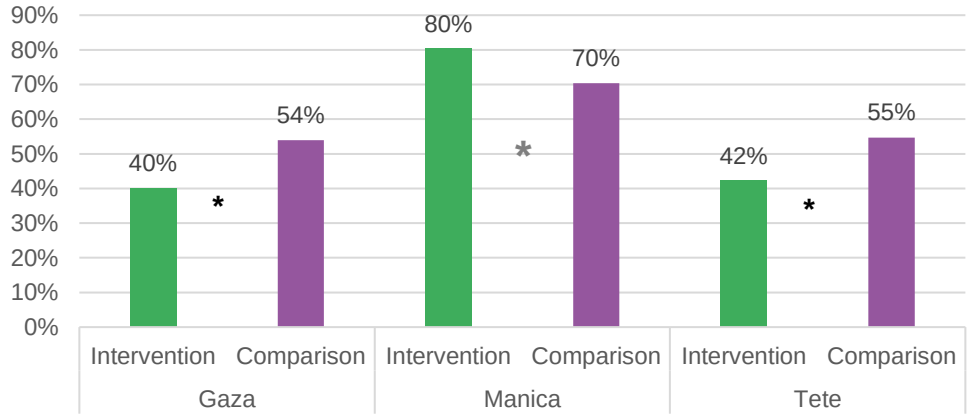
Respondent: *"Yes"*

Girls' Focus Group Discussion, Manica, Comparison

5.4.3 Change in girls' perceptions of their influence in the home, school and/or community

In the girls' survey, just over half of girls (55 per cent) reported feeling that they have no influence around the decision to attend or stay in school, and that have to accept what happens to them. When asked more questions about their sense of agency and influence in the home, almost half (48 per cent) noted that their families make decisions for them regarding when to marry, while just over a quarter can decide for themselves (26 per cent). As Figure 13 shows, there are differences in decision making trends between the intervention and comparison groups, and across the regions. For example, a much higher proportion of girls in Manica feel that they have no influence around school-related decisions compared with Tete and Gaza.

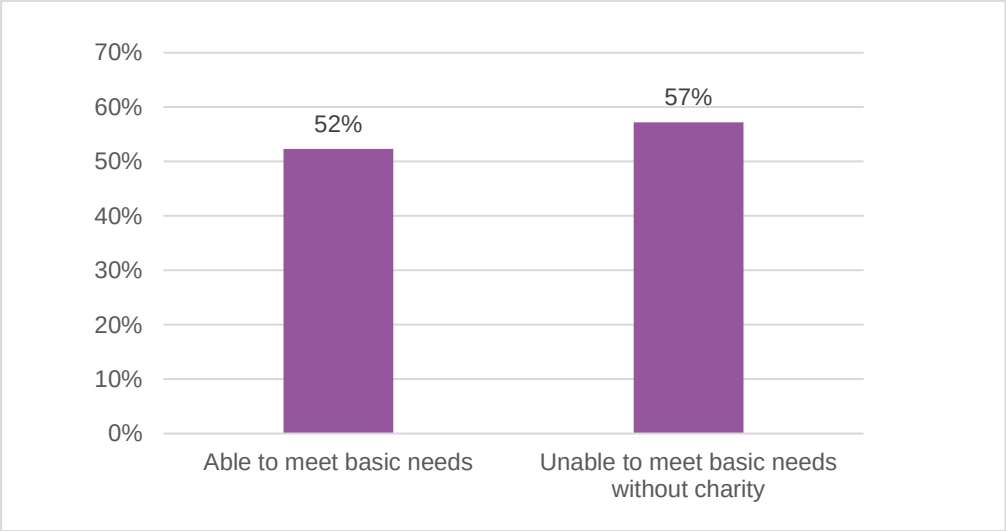
Figure 13: Proportion of girls indicating that they cannot choose whether to stay in school and just have to accept what happens varies by region



***Indicates a significant difference**

Furthermore, girls from households which are unable to meet basic needs without charity were more likely to respond that they cannot choose whether to stay in school and just have to accept what happens to them than girls from households which are able to meet basic needs (figure 14).

Figure 14: Proportion of girls indicating that they cannot choose whether to stay in school and just have to accept what happens by economic status of household



There was also a high level of awareness of the right of both girls and boys to go to school, with 99 per cent of girls responding positively to the question "Do you think girls have a right to go to school?", and 98 per cent responding positively to the question "Do you think boys have a right to go to school?".

As reporting on perceptions can be subjective, the qualitative case studies were further triangulated with survey responses. Qualitative case studies included rich and detailed discussions with girls, mothers and fathers about decision-making in the home, particularly around marriage. In the discussions, most parents said girls have some influence on decisions around *who* to date or marry *"other girls don't like to present their boyfriends to their parents, they solve things between them and at the end they start living together without their parents' knowledge, you even get surprised when you find out that your daughter is living with someone."* (Mothers Focus Group Discussion, Tete, Intervention). Fathers also indicate a similar sentiment: *"Usually, the guardians do not decide. The boyfriend comes and takes the girl away without the parent's knowledge"* (Father Focus Group Discussion, Gaza, Intervention). However, discussion with girls suggested decisions about *when* to marry remains in the domain of their mothers and fathers. Girls indicate that they would not accept if their father asked them to marry "*Deny. I do not want*" but that they would still be forced to marry *"Usually forces you, cry"* (Girl, Manica, Intervention). It also emerged that these decisions are often influenced by factors such as the household's economic circumstances.

Interviewer: *"Are there parents who force daughters to marry while they are children?"*

Respondent: *"Yes"*

Interviewer: *"Why do they force?"*

Respondent: *"Wanting money…"*

Girls' Focus Group Discussion, Manica, Intervention

Boys did not comment directly on decision making around marriage, but were aware that girls do often get married at a young age *"get married at 12 years old…others marry while*

are children" (Boys' Focus Group Discussion, Manica, Comparison). Boys' perspectives are discussed in greater detail in section 5.5.2.

Interviews with Girls' Club Leaders showed that these girls particularly feel their influence on peers at the intersection of school and community. One girls' club leader noted that there had been some communication and joint work with the head of the school council *"When they said, we have a pregnant child who no longer comes to school, so I did not go to her house first I spoke with the council chairperson. So I explained that we have a child that is in a situation xx but she doesn't come to school anymore. Then the president made himself available to talk to the child's parents so they could let the child come to school."* (Girls' Club Leader, Gaza, Intervention). Another described an attempt to persuade a peer to return to school; *"We went to a girl's house, we arrived and she told us that I'm not coming to school because of material (resources). And teacher told you, come to school we'll give you what school material. She said she would come tomorrow."* (Girls' Club Leader, Manica, Intervention), however, the respondent goes on to describe how the attempt was unsuccessful, and that the girl never returned to school. This once again highlights the fact that whilst girls may challenge decisions, other individuals (parents) in the community still have a greater influence over final outcomes.

5.4.4 Reflections

The evidence indicates that girls have high levels of self-esteem, and, in general, are confident answering questions in class. However, many girls are nervous about reading and doing maths in front of others, particularly if they do not speak the Language of Instruction. Girls feel they can communicate their needs in school – they can ask a teacher for help or report a problem in school. At home, most families make decisions about school and marriage on behalf of girls. In school, corporal punishment is common and some girls feel unable to speak up as a result.

We recommend some caution around setting ambitious numerical targets based on the high numbers reported, particularly around girls' self confidence in the classroom. We would advise using more qualitative data to determine more realistic targets for midline and endline, as there is a possibility that there is a self-reporting bias at play.

The two indicators for this Intermediate Outcome are fit for purpose. We were able to collect both quantitative and qualitative data that is reliable and valid. The indicators are logical as they respond to questions that are relevant to the project's Theory of Change about girls' self-esteem and their ability to communicate their needs.

There were some unexpected findings. More girls in the comparison group feel they can describe their thoughts, and more girls in the comparison group have a stronger self-concept. This could be due to an unintended limiting effect of the after school girls' club intervention on intervention girls' self-confidence when they return to the classroom for their formal lessons. If the classroom environment and pedagogical approaches have not changed, girls may feel that only spaces where they feel safe are the girls' clubs, so may be more likely to respond less positively than girls who have had no exposure to a girls' club intervention. We recommend that this is explored further through qualitative inquiry at midline.

5.5 Community-based attitudes and behaviour change

5.5.1 Introduction

If societal perceptions and attitudes towards girls' education improve, girls are more likely to attend school regularly and to stay in school. Combined with improved teaching quality and gender-sensitivity in the classroom, this should improve learning outcomes for girls, and make it more likely that girls remain in education and transition into the secondary phase of school. Dominant social norms that de-prioritise education for girls can act to prevent them from realising their full potential. In Mozambique, early marriage and motherhood at a young age, and the high level of violence in and around schools are also factors which act to limit girls' educational progression. STAR-G encourages shifts in communities' attitudes and behaviour through matron and patron groups, support for school councils, girls' clubs, and teacher training and development. Through sensitisation of the community to the rights and needs of girls, this intermediate outcome is likely to be of great importance if the project is to achieve the outcome of sustainability.

Four indicators were used for this Intermediate Outcome: (1) proportion of boys championing girls' right to education, (2) change in parents' attitudes towards girls continuing to attend school and learn beyond the project intervention, (3) proportion of girls who feel they are given appropriate support to meet their needs, stay in school and to perform well, and (4) change in support by matron/patron groups to girls to postpone early marriage.

5.5.2 Proportion of boys championing girls' right to education by taking concrete actions to support them (e.g. taking on household chores, walking with them to school etc.)

This indicator was measured through the qualitative community case studies and the evidence drawn from focus group discussions with girls, boys, mothers and fathers. Most respondents stated that boys are, in general, supportive of girls being in school. For example, in general, the mothers felt that boys were positive about their female peers; *"They go together [to school] and spend time together, we have never heard jokes about that…they go to school together"* (Mothers FGD, Manica Comparison). In all of the focus group discussions involving boys, most boys confirmed this. One stated that *"They (girls) must come to school every day always…because school helps in the future…she can be a nurse or a teacher."* (Boys FGD, Manica, Comparison). Most boys were themselves aware of the barriers girls face, mentioning early pregnancy, early marriage and the burden of household work as barriers to girls' educational progression.

Further probing revealed that some boys do hold discriminatory attitudes towards their female peers. Some suggested that girls are less serious about their education than boys *"Because when they (girls) arrive at school they stay playing. What they are taught at school they do not see again at home. When they are at home they do not touch the books."* (Boys, FGD, Tete, Intervention). These attitudes mirrored some of those expressed by fathers. There were also examples of incidences of gender based violence described in one focus group - *"We will tell the teachers to beat girls who do not want to go to school"* and *"I do beat my sister when she refuses to go to school"* (Boys, FGD, Gaza, Intervention), indicating harmful underlying attitudes about how boys relate to girls.

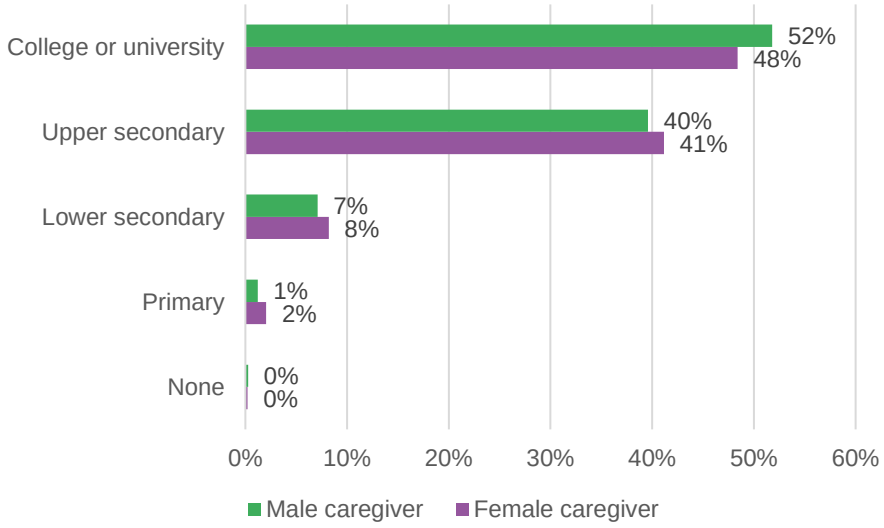
In some of the focus group discussions with girls, the discussion around boys' support in fact focussed on their lack of support. One girl suggested that boys respond negatively when girls break gendered stereotypes about academic performance; *"They (boys) feel bad because they get astonished that a girl is having good marks in relation to them that are boys, we want to know why they feel bad in their hearts."* (Girls, FGD, Tete, Intervention).

In sum, generally positive support from boys was expressed for girls to attend school, in particular primary school. However, there was little evidence of concrete action being taken. There were no noticeable trends across regions, or between intervention and comparison groups, in the qualitative data for this indicator.

5.5.3 Change in parents' attitudes towards girls continuing to attend school and learn beyond the project intervention

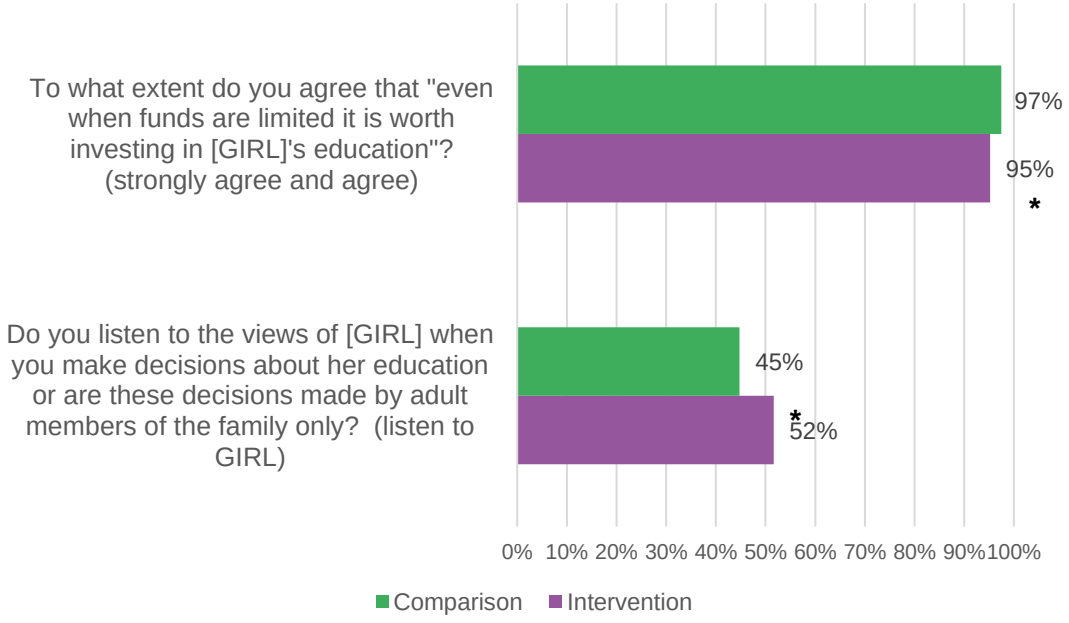
In the household survey, the vast majority (96 per cent) of parents agreed that investing in a girl's education is worthwhile, even when funds are limited. A similar proportion (96 per cent) also stated that they believed that girls are as likely to use their education as boys. Parents have high ambitions for their daughters; 41 per cent expecting them to continue to the end of upper secondary, and 49 per cent expecting them to continue to college or university. When disaggregated by gender, a higher proportion of fathers (52 per cent) reported that they expect their daughters to continue into post-secondary education than mothers (48 per cent). Figure 15 shows parental views on girls continuing in education in more detail. There was no significant difference between the intervention and comparison groups on this measure. Further analysis indicated that as caregiver level education increased, it was more likely that caregivers would aspire for girls to achieve higher levels of education. For example, 49% of caregivers with primary education aspired for their girls to reach college, compared to 64% of those with upper secondary education.

Figure 15: A high proportion of parents thought girls should achieve a level of schooling beyond secondary education



Just under half (48 per cent) of the parents surveyed indicated that they listened to the views of their daughter when making decisions about her education, and when asked about situations in which funds were limited, almost all parents (96 per cent) agreed that it was still worth investing in their daughter's education. These responses varied significantly between intervention and comparison groups, as shown in figure 16, with parents in intervention communities stating that they listen to girls more than in comparison communities, but stating less strongly that it is worth investing in their daughter's education when funds are limited.

Figure 16:Significant differences in parental attitudes between intervention and comparison communities



***Indicates a significant difference**

The qualitative research from community case studies helped to supplement our understanding of the views of mothers and father as expressed through focus group discussions and key informant interviews. While both mothers and fathers expressed their support for girls to go to school, when they were probed further, exploring how they felt about the value of girls' education *in comparison to boys*, a clear gender bias was revealed in favour of boys, particularly from the discussions with fathers.

Most fathers, for example, stated their overall commitment to supporting both girls and boys through school. This was supported by quantitative findings, where 96 per cent of parents agreed or strongly agreed that 'a girl is just as likely to use her education as a boy'. However, the attitudes of fathers towards educational progression and the pressures of supporting their daughters and sons, became clearer as respondents began to discuss the situation more freely: *"Another situation to consider is that when they finish primary school, others are no longer able to attend secondary school due to poverty since the parents do not work. Other girls end up marrying because of this situation."* (Fathers, FGD, Gaza, Comparison). Another father noted, *"I can say that the family does take that decision because when the boy's family send someone with money to the girl's house and they take the money, it means that they agree with her marriage."* (Fathers, FGD, Gaza, Intervention).

Some discussions confirmed that the more positive changes in parental attitudes being reported were fairly recent. One father explained; *"formerly it used to happen (early drop out), much more with girls, when you are 15 years old and 14 years old. Parents did not accept it. So when Save the Children came, they started to advise us. We also took in the community to advise the parents to let the child to study and at this moment, there are not too many."* (Fathers, FGD, Manica, Intervention). One of the mothers noted that *"We encouraged them……..it is different from our time. They gave us to marriage and we stayed there, but now you can get married but tomorrow she is coming back……."* (Mothers, FGD, Gaza, Comparison). In the intervention communities, a general sense of positive change around attitudes towards education was clear. Some mothers stated that *"Staying at home is no longer in fashion" "the [new] laws make you feel everyone is committed to school".* (Mothers, FGD, Manica Intervention). The mothers added that the number of girls attending school has increased since last year and suggested that the value placed on education was growing *"the boys are coming too, even the parents are coming to study."* (Mothers, FGD, Manica, Intervention).

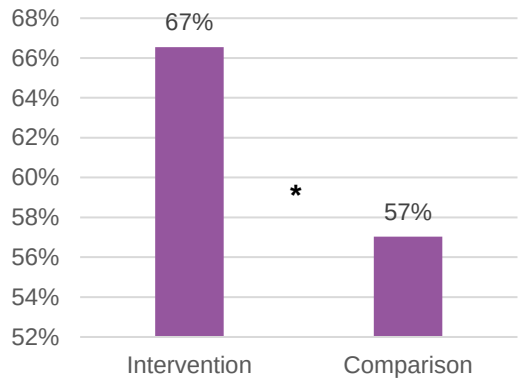
A government official also confirmed how the transition into secondary school can be a significant hurdle for girls, as this particular family decision in effect competes with other priorities in the household, *"when (she) reaches the age of transition to secondary school, some families think that she is ready to marry, she finds herself at some point, but all this is the lack of education of her own parents that did not have the opportunity and end up transmitting this evil, this value of not giving importance to the school."* (KII, Government Official, Maputo).

Overall, the discussions with mothers and fathers revealed the extent of the challenge – an intersection of increased financial costs of secondary education, their changing perception of girls, their roles and responsibilities as girls approach adolescence, and social pressure to marry.

5.5.4 Proportion of girls who feel they are given appropriate support to meet their needs, stay in school and to perform well

In the girls' survey, most girls (98 per cent) feel they are given support by their families to stay in school and perform well. This did not differ significantly between intervention and comparison groups, or by region. Most girls (98 per cent) also feel they are given support from their teachers, and are made to feel welcome in the classroom. In response to the statement, 'My teachers treat boys and girls differently in the classroom', 62 per cent of girls either agreed a lot or agreed a little. As figure 17 indicates, a higher proportion of girls in the intervention group agreed that teachers treated boys and girls differently, compared to the comparison group.

Figure 17: A higher proportion of girls in the intervention group indicate that teachers treat boys and girls differently in class



***Indicates a significant difference**

Focus group discussions with girls, mothers and fathers provided the opportunity to discuss a range of different forms of support, including material/financial and social/personal support, confirming that, in general, most girls are supported, particularly when they are in primary school. A small number of mothers noted, for example, how they have adapted the burden of domestic labour to better support girls to study *"Most of the time the child does not have the duty to help me with housework, because we have to give her time to go to school, give time to the child to solve the homework, we do not accept that the child is going to school to do other work , even here at home she can help but when she wants, she is not obliged to do the work because she has to do the homework, the duty of the child while at school is to do the homework given by the teacher so that she get knowledge, we do not accept that she goes and look for a work to do."* (Mothers, FGD, Gaza, Comparison) Another added, *"The child is supposed to go to school, this is the rule, the school is to help the child in the future, housework is for us, I have cattle but I do not give the children to go to graze, I let the children go to school*" (FGD Mothers Gaza, Comparison).

In the qualitative data, there were no significant differences for this indicator that demonstrate clear trends by household type (economic status), language of instruction or region..

5.5.5 Support by matron/patron groups to postpone early marriage

From a small qualitative evidence base, it was confirmed that matron and patron groups are engaged in community activities designed to postpone early marriage. One matron indicated

that *"we always talk about this (pregnant girls) in the meetings. If a girl is pregnant while is studying she must continue going to school"* (KII Matron, Gaza, Intervention). This was confirmed in all other Matron KIIs, where matrons reported discussing issues such as sexual health, equality between a husband and wife, and the importance of education for married girls.

Girls' club leaders indicated that matrons are involved in the girls' club both in terms of supporting the material cost of running the club *"they usually give us notebooks, pen, sharpener, rubber"*, but also to *"support us in awareness"* (KII Girls' Club Leader, Manica, Intervention). This was also confirmed by a Girls' Club Leader in another community, who referred to matrons as *"mothers who teach us, their teachings are for us to pass out to other girls."* (KII Girls' Club Leader, Tete, Intervention).

However, there was a limited awareness amongst other girls, boys, mothers, and fathers of the role of matron and patron groups. Some mothers responded *"what are matrons?" and "I do not know of this group of matron…we do not know of that"* (Mothers' FGD, Manica, Intervention). Generally, there seemed to be a higher level of awareness of their activities in intervention groups compared to comparison groups.

5.5.6 Reflections

Two of the indicators for this IO are fit for purpose and measurable; i) Change in parents' attitudes towards girls continuing to attend school and learn beyond the project intervention, and ii) Proportion of girls who feel they are given appropriate support to meet their needs, stay in school and to perform well. We were able to develop a baseline using both quantitative and qualitative measures for both of these indicators. However, we recommend some caution around setting ambitious numerical targets based on such high numbers and would advise also using more qualitative data to determine more realistic targets for midline and endline. There is a possibility that there is self-reported bias at play in relation to questions around how supportive respondents are of girls' education, generating a high proportion of positive responses.

Indicator 4.1 (Proportion of boys championing girls' right to education by taking concrete actions to support them) was only measurable through qualitative means, limiting our ability to set a reliable baseline level. It is expected that efforts to improve research with girls and boys at midline and endline would improve the quality of reporting for this indicator. Indicator 4.4 (Support by matron/patron groups to postpone early marriage) was difficult to measure, as there was limited awareness of the role of the matron and patron groups among the respondent groups. There is limited evidence to support reliable reporting on this indicator.

This particular Intermediate Outcome is a strong predictor of transition and sustainability, as parental attitudes and practical support are vital for girls to stay in school. The Mozambique context demands that parental support increases as girls progress through school - going to secondary school necessitates larger financial investment and ongoing practical support for boarding. However this is currently most likely to be the point at which parental support for girls' education declines, as social pressure increases for girls to marry and the reality of ongoing financial support for education becomes more apparent, making the STAR-G interventions particularly pertinent.

Chapter 6

Conclusions and Recommendations

6 Conclusions and Recommendations

6.1 Conclusions

- **Project beneficiaries are marginalised based on a variety of dimensions and face several barriers to learning and transition**

STAR-G's 15,000 beneficiaries are spread across Gaza, Manica, and Tete, and are currently in primary school in grades 4 through to 7. We find that beneficiaries are based entirely in rural areas, are largely from poor households, and that most girls speak a language different to Portuguese at home. We find a limited number of girls who are married or young mothers, disabled, or engaged in child labour in the randomly selected sample though. This is unsurprising as these groups are systematically excluded from enrolling in and attending school. As a consequence, STAR-G's penetration into these groups is also likely limited.

Like other girls in Mozambique, we find that the project beneficiary girls face a variety of barriers to education: **economic barriers, barriers related to access, teaching and learning barriers, and barriers related to gender and social norms**. Economic barriers appear to be prevalent, with over 74 per cent of households in the intervention group reporting that they find it difficult to afford to send girls to school. In addition, access barriers are also high. Approximately 16 per cent of our sample currently have to walk for over an hour to get to their primary school. To access the closest secondary school, more than 64 per cent of the girls in our intervention sample will have to walk for over an hour. In addition, 6 per cent of girls do not speak Portuguese at all, 67 per cent of girls believe teachers treat boys and girls differently, while 33 per cent of girls indicate that teachers are absent often. Finally, for 25 per cent of girls, chore burdens are high enough to affect time spent learning.

- **Learning levels at baseline are low, and girls are performing below curricular expectations**

We found that learning levels are low at baseline for both the intervention and comparison groups, with intervention girls scoring on average 14.95 out of 100 in literacy, and 3.31 out of 100 in numeracy on assessments designed in line with the primary school curriculum. Average WPM stood at 26.1 for the intervention group, against 24.2 in the comparison group. Weak performance was consistent with other findings from Mozambique that demonstrate that students are not performing in line with curricular expectations.

We found that most girls had not yet mastered foundational skills. Approximately 16 per cent and 32 per cent of the girls we tested in grades 4 and 5 could not recognise letters and familiar words, respectively. Similarly, just over 19 per cent and 40 per cent of the girls we tested in grades 4 and 5 could not do basic addition and subtraction, respectively. We found that less than 3 per cent of the girls in the intervention group in grades 4 and 5 were proficient in performing number operations appropriate for grade 3. In addition, only 6 per cent of girls in grades 4 to 7 were reading proficiently. We found high numbers of zero scorers or non-learners for many areas that we assessed . Overall, 18 per cent of girls tested

in the intervention group scored zero in literacy, while 20 per cent scored zero in numeracy. Moreover, over 80 per cent of the girls in the intervention group were unable to read and do number operations at the grade 5 level. This was true even of girls entering grades 6 and 7 – the majority of these girls had not mastered the grade 5 curriculum.

Performance of girls in Gaza, Manica, and Tete varied widely. Our findings indicate that girls in Gaza performed better than average, while girls in Manica and Tete did significantly worse, especially in literacy.

- **Transition rates are surprisingly high, and contrast with our qualitative findings on barriers related to transition**

We found that transition rates were relatively high. In our benchmark sample, which comprised of 330 girls aged 11 to 18 who we randomly selected from households, successful transition rates stood at 75 per cent. Given that this figure includes both transitions from one primary grade to the next and transitions from primary to secondary school, these statistics are largely consistent with UIS statistics that indicate over 66 per cent of girls transition from primary to secondary school in Mozambique (UIS 2014).

In our main cohort sample of 2377 girls, successful transition rates were higher, at 86 per cent for the intervention group, and 85 per cent for the comparison group. High rates in this sample are understandable as the main cohort comprises of girls who are currently in primary school, and unsuccessful transition in these cases signifies grade repetition only.

However, these figures do appear to contrast with our qualitative findings. While we found that parental support for girls' education was high, our case studies led us to expect that it will likely decline as girls progress through school. This is because the social pressure for girls to marry will likely increase and the reality of providing ongoing financial support for education will become more apparent. Secondary school will also necessitate larger financial investment and ongoing practical support for boarding because of the distance to school.

- **Sustainability of programme impact is likely to be affected by the imminent programme redesign**

At baseline, we were unable to draw any firm conclusions on sustainability of the project. Due to an imminent redesign, STAR-G did not prepare a comprehensive sustainability scorecard. As our strategy for evaluating several sustainability indicators relied heavily on project sourced data, we were only able to provide a limited amount of evidence on sustainability. Our evidence indicated that programme effects may be sustainable in some ways, with a handful of positive evidence seen at the school, and community levels.

A key risk to sustainability of programme impact will be the programme redesign itself. The programme has run for a year already, and is expected to change dramatically in its second and third years of implementation. It is unlikely that we will therefore see any noticeable changes in sustainability indicators between baseline and midline. In addition, readers should be aware that sustainability challenges may continue into endline given the short time the project will have to consolidate the changes they would like to affect.

- **Baseline levels for IOs are largely rated as amber, with mostly mixed findings for Attendance, Teaching Quality, Girls' Self-Esteem, and Community Attitudes**

We found that self-reported attendance rates were high, although all stakeholders agreed that girls who were married, pregnant, or disabled were less likely to attend school. We also found anecdotal evidence that attendance in girls' clubs was low. In addition, according to stakeholders, economic barriers and barriers related to access and distance to schooling were likely to become more prominent as girls entered the age to go to secondary school. The attendance IO is likely directly linked to the outcomes of learning and transition.

Our findings on Teaching Quality were mixed. Teachers self-reported high levels of proficiencies in planning classes, delivering classes, assessing students, and displaying positive attitudes. Our observations showed that most teachers arrive to class on time, have a written lesson plan, and use clear language. On the other hand, we found that use of student-centered teaching methodologies was limited. Girls and boys generally felt that quality of teaching was adequate, but indicated that corporal punishment was prevalent. Parents and other stakeholders presented mixed perceptions about the quality of teaching and learning. There is a striking contrast between perceptions of teaching quality and learning levels as measured: teaching is not translating into effective learning. Without a significant improvement in teaching quality, improvements in the other dimensions of attendance, community attitudes and girls' self-esteem are highly unlikely to result in improved learning outcomes for girls. The teaching quality IO is directly linked to the outcome of learning.

In terms of community attitudes, focus group discussions showed that boys support girls being in school and are aware of the barriers they face. However, some boys held discriminatory attitudes, and evidence of concrete actions in support of girls was limited. Parents also held high ambitions for their daughters to continue in education, however, economic barriers and associated pressures on girls to marry mean parents are more likely to support boys. Despite these challenges, most girls felt supported by families and teachers to remain in school, through both financial and personal means. Whilst there was evidence of matron engagement with gender-related issues in girls' clubs, communities generally showed limited awareness of matron/patron groups. The community attitudes IO is likely directly linked to transition and sustainability.

Girls' levels of self-esteem and confidence were generally good, but those who did not speak the language of instruction tended to self-report lower confidence levels than those who did. Girls stated they were aware of how to communicate needs in school. However, discussions with girls also highlighted the effect of corporal punishment on how they feel about attending school and communicating with teachers. With regard to decision making in the home, mothers suggested that girls have some influence on who they marry, though reports from girls themselves highlighted that decisions were ultimately in the hands of parents. Although girls' club leaders recognised their influence on peers, they too reported facing barriers to exercising influence in the community. The girls' self-esteem IO is likely indirectly linked to transition and learning.

- **STAR-G's programming around teachers and student support are likely to have a direct impact on learning, but as yet are not effective. In addition, project's ToC does not adequately address economic barriers, and barriers related to access. Thus, transition may not necessarily occur**

STAR-G's programming on teacher professional development and on Literacy and Numeracy Boosts are the most likely to have a direct impact on learning outcomes for girls. Yet, as our results in Chapter 4 demonstrate, this programming is not yet translating into better learning outcomes.

Where transition support is concerned, STAR-G's programming appears to be inadequate. Economic barriers presented the most prominent barrier to educating girls in our analysis in Chapter 3. However, the project's programming around financial constraints appears to be limited to providing bursaries to just 140 girls. In addition, for many communities and girls, secondary schools will be too far to access. We understand that the redesign of the project is likely to include distance learning and community based education as key solutions to solving the access barrier as girls transition into secondary schooling. Incorporation of these programming elements will be important as transition may not necessarily occur under the current programming

- **STAR-G's design is gender-sensitive, but programming that is likely to be gender-transformative is not fully adopted and effective at baseline**

The Theory of Change underpinning STAR-G intends to promote gender equality through supporting a shift towards more gender responsive attitudes in communities, including a shift in the attitudes of boys, introducing gender-responsive pedagogy in schools, and supporting girls to be more confident both inside and outside the classroom. Interventions that are likely to be gender transformative are most likely to challenge gender norms and lead to long-term and sustained change. In STAR-G, these could include (1) girls' clubs with curricula and activities that enable girls to openly discuss gender norms and feel empowered enough to challenge the status quo, (2) work with matron and patron groups to engage parents and communities in discussions around alternatives to early marriage and early pregnancy, and (3) training for teachers on gender responsive pedagogy and more inclusive approaches to education to support embedding of these approaches in schools. To date, our evidence indicates that these aspects of the project's interventions have not yet been fully adopted and effective. This may of course change at future evaluation points.

6.2 Recommendations

Design, including the calculation of beneficiary numbers

Our analysis yielded several findings related to project design. These include the following actions for the STAR-G project to consider.

- Consider the possibility of intensifying the literacy and numeracy boost given the poor performance of students across all learning assessments
- Consider possibility of intensifying programmatic support for Manica and Tete given worse performance of students on learning outcomes in these regions
- Review programming in light of prevalence of economic barriers, and barriers related to distance to secondary schools to improve chances of transition

- Reassess suitability of programming to cater to three marginalised subgroups including young mothers and married girls under the age of 18, disabled girls, and girls engaged in child labour
- Revise estimates of prevalence in beneficiary group of young mothers and married girls under the age of 18, disabled girls, and girls engaged in child labour in light of baseline results
- Improve internal monitoring capacity to track beneficiaries in communities, and to estimate dimensions of marginalisation found in beneficiary group

Monitoring, evaluation and learning of the project

In light of the analysis presented in this report and some of the challenges we faced during the baseline, we recommend the following changes be made to the evaluation approach. These actions would be undertaken by the evaluator but will require collaboration with STAR-G and GEC.

- Review evaluation approach in light of project redesign to ensure it is still fit for purpose
- Reassess learning and transition targets in light of project redesign implementation schedules
- Reconsider approach to measuring sustainability to allow firmer conclusions at midline and endline
- Based on STAR-G's priorities, consider possibility of including purposively selected samples of marginalised subgroups such as young mothers and married girls under the age of 18, disabled girls, and girls engaged in child labour to track performance of these marginalised group
- Introduce EGMA subtask 4 and 5 for girls in all grades to help gauge improvements in situations where levels of numeracy are low
- Increase number of qualitative case study communities and expand engagements with girls and boys in order to enhance richness of data collected, draw better conclusions about results chain, and improve quality of gender analysis

Scalability and sustainability

Due to our inability to capture sufficient data related to sustainability at baseline, and the imminent project redesign, our recommendations related to sustainability will require urgent consideration. They include:

- Improve project's internal monitoring capacity to gauge levels of sustainability
- Reconsider approach to measuring sustainability to allow firmer conclusions at midline and endline
- Reassess sustainability targets in light of project redesign implementation schedules

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