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Girls' Education Challenge

THEATRE FOR A CHANGE

Endline Evaluation

of the Girls Education Challenge Tiphunzire Project by Theatre for a Change Malawi

Final Report

September 2016

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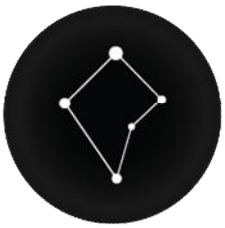

ONE SOUTH

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The GEC Endline Evaluation was carried out by **Andres O. Navarrete, Tariq Omarshah** and **Dr. Marieke van Egmond** from **One South, LLC**. The evaluation follows a cohort of girls and their households in rural areas of the Southern and Central Region in Rural Malawi since October 2013. This endline evaluation took place between June and July, 2016.

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Acronyms

AoC	Agent of Change
CLC	Community Listening Clubs
CSO	Community and Social Organization
CP	Child Protection
CPP	Child Protection Policy
CSM	Child Safeguarding Manager
DFID	Department for International Development (UK)
EGMA	Early Grade Mathematics Assessment
EGRA	Early Grade Reading Assessment
FGD	Focus Group Discussion
GBV	Gender-Based Violence
GC	Girls' Club
GEC	DFID-UKAID Girls' Education Challenge
HHS	Household Survey
IS	In-School
INGO	International Non-Governmental Organization
KAP	Knowledge, Attitudes and Practices
KII	Key Informant Interview
MEL	Monitoring, Evaluation and Learning
MoEST	Ministry of Education Science and Technology
OS	Out-of-School
SHN	School Health and Nutrition
SMC	School Management Committee
SRH	Sexual and Reproductive Health
SRHR	Sexual and Reproductive Health Rights
SRGBV	School-related Gender-Based Violence
TfaC	Theatre for a Change
TTC	Teacher Training College
UNICEF	United Nations Children's Fund
VfM	Value-for-Money
Y1 / Y2	Year 1 Cohort / Year 2 Cohort

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Executive Summary

Background to Project

The Tiphunzire project assumes that by improving marginalised girls' sexual and reproductive health[1], girls will be empowered to make better life decisions, remain or enrol in school and seek to improve their own learning and skills. By supporting schools to adopt child protection policies and practices the project also aims to make schools safer places where girls who fear abuse or have been victims of abuse are as likely to attend[2].

At the impact level, the project aims to improve the life chances of marginalized girls by supporting girls participating in the project to enrol and stay in school and to improve their learning outcomes in literacy and numeracy. Additionally, the project aims to secure additional funding through the life cycle of the project and establish mechanisms to ensure girls are enabled to complete a full cycle of education.

Through a partnership with the Malawian Ministry of Education, Science and Technology (MoEST), TfaC trained over 360 female teachers in innovative teaching practices that aim to develop the autonomy and efficacy of marginalized girls. TfaC has provided training and financial support to this group of teachers throughout project implementation.

At schools, TfaC-supported teachers are known as Agents of Change (AoCs) are pre-service teachers trained in TfaC's unique method to promote behaviour change, which uses aspects of participatory learning and interactive drama[3].

TfaC's intervention is delivered in schools of rural Malawi in the forms of Girls' Clubs and in communities through outreach activities.

Girls' Clubs are organised once a week as an extracurricular activity offered by the AoC and are attended by approximately forty in-school (IS) and out-of-school girls (OS). The girls' club curriculum incorporates interactive group activities to build self-confidence, drama-based activities to address real-life situations, and exercises to train literacy and numeracy skills.

Tiphunzire also promotes education, gender and sexual reproductive health rights in communities through Community Listening Clubs and radio programming and organizes periodical Open Days in schools to encourage school enrolment and parental engagement. TfaC has developed strategic partnerships with local government and civic society organizations through their intervention model and sought to institutionalize child protection policy (CPP) mechanisms in schools to make them safe and conducive to learning.

Once deployed in schools, AoCs:

- Organize and facilitate weekly Girls' Clubs including both in- and out-of-school girls;
- Promote girls' education and school enrolment among parents and the wider community through the organization of Open Days, Home Visits and monthly Community Listening Clubs;
- Mobilize school- and community-level authorities to identify and support marginalized girls and, in so doing, support their school in its attainment of Model School status;
- Engage school authorities and fellow staff in the adoption of Child Protection Policies (CPP), and child-friendly and gender-sensitive teaching practices, and;
- Provide monitoring data so as to improve programming and project delivery.

[1] Theatre for a Change (2013): Theory of Change (internal document). Furthermore, Cultural norms promote early marriage, often also leading to early pregnancy and subsequent dropout of school. The UN Foundation (2012) found that "50% percent of all girls in Malawi are married by age 18 and 25% of all adolescent girls already have a child". Almost 9% of girls who dropped out of school in 2010 did so because of early marriage and pregnancy, citing embarrassment around menstruation as a reason for missing school (see M&E Framework)

[2] Abuse in Malawi schools has been well documented. See Rancourt (2012) *Ending School Related Gender Based Violence in Nsanje (Baseline, Concern Worldwide).*

[3] Theatre for a Change (2016): Theatre for a Change Methodology Overview [Unpublished].

Tiphunzire was implemented in two phases since 2013. During Phase 1 AoCs were deployed in 36 schools across 6 districts (Balaka, Salima, Dedza, Nkhotakota, Chikwawa and Lilongwe Rural West) in Southern and Central Malawi. During Phase 2 the project scaled-up and AoCs were deployed to an additional 189 schools also covering 4 new districts (Mchinji, Blantyre, Lilongwe Rural East, and Ntcheu). Tiphunzire operates in 10 of the 28 districts of Malawi.

According to Tiphunzire's Theory of Change, the project aims to enable marginalised girls to complete a full cycle of education and demonstrate enhanced learning. This aim will be achieved through four key outputs:

1. Teachers receive training and demonstrate the ability to teach literacy and numeracy in participatory and interactive ways, delivering girl-friendly education across Malawi.
2. Marginalised girls at risk of dropping out of school demonstrate increased participation and confidence at school. Out-of-school girls enrol back to school as a result of project activities.
3. Parents and communities have a more supportive attitude towards girls attending school, have increased knowledge around and confidence to discuss SRH and gender rights with their girls, as a result of community meetings and listening clubs.
4. Schools are safer for girls as a result of the institutionalization of child protection policies, leading to increased participation of girls in school.

Evaluation Approach

Scope

Through a variety of approaches, the project seeks to synthesize past learning and test assumptions affecting implementation in order to improve upon selected strategies and inform future programming. After three years of implementation, Tiphunzire wishes to obtain rigorous evidence to answer the following questions:

- To what extent has the project reached and affected marginalised girls?
- What impact has Tiphunzire had on marginalised girls' learning?
- What impact has Tiphunzire had on enabling marginalised girls to be in school?
- What has worked, why and with what effects?
- How sustainable are any changes the project has led to?

Methodological Approaches

Individual-level data for Year 1 learners and their households was gathered at baseline in 2013, at midline in May/June 2015, and at Endline in June and July 2016. For the Year 2 data was gathered at two evaluation points, a Baseline in November 2014 and the Endline in June and July 2016.

The study aims to assess the project's contribution to the changes in impact-level outcomes using a cohort-tracking design. This cohort-tracking design enables empirical observations on the changes in project outcomes, most notably in the changes in literacy, numeracy, attendance, and enrolment of marginalized girls over the course of the intervention. To measure a change in the level of learning outcomes, we rely in a cross-sectional approach for baseline-to-midline, and midline-to-endline comparisons.

Through a mixed-methods approach, this evaluation seeks also to study how the development of self-esteem and sexual and reproductive health (SRH) knowledge among girl participants influence their education and improve their chances in life through better decision making. Through these approaches, we aim to establish project benchmarks for all three evaluation periods to diagnose strengths and areas of improvement in intervention programming and implementation for a rural Malawian context.

Standardized literacy and numeracy data was gathered using the Malawi Early Grade Reading Assessment (EGRA) and the Early Grade Mathematics Assessment (EGMA). Attendance data was gathered at the individual-level from attendance registers made available to the data collection team at participating schools. Attendance registers were periodically verified through three random spot-check visits to the schools to ensure the validity and reliability of the data and assess whether attendance trends changed throughout the year.

The evaluation also relied on the administration of primary research instruments to collect attitudinal and demographic data for intervention participants using the Girls' Semi-Structured Questionnaire, the Household Survey and ad-hoc questionnaires, and key informant interviews (KIIs) and focus group discussions (FGDs).

Quasi-Experimental Approach

To assess the project's impact, we measured Tiphunzire's attribution to the changes in learning outcomes, access and retention of a stratified sample of Girls' Clubs participants[4] using a quasi-experimental approach. This approach relies in the study of a 'counterfactual' as a way of controlling for unobserved phenomena and of estimating the project's achievement by means of a cross-sectional model. This design is well suited to non-randomized interventions and when the sample experiences attrition above 20%[5].

To estimate impact, quasi-experimental designs rely on the study of a counterfactual as a way of estimating the treatment effects of this type of intervention. In general, this means the creation of a control group by gathering data on populations not exposed to any development intervention. This way, a beneficiary group (or treatment group) can be compared to a non-intervention group (or control group) to reveal treatment effects.

The data was analysed through three fixed effects regression models (cross-sectional approach) using literacy, numeracy and attendance scores as dependent variables. For enrolment, we use a logistic regression function to predict the odds of being classified as 'enrolled'. By virtue of its cross-sectional nature, this approach follows a quantitative appraisal of the project's achievement on the levels, rather than on the individual changes, of education outcomes.

Findings

Literacy

In order to assess project impact on literacy, the study administered the Malawi Early Grade Reading Assessment, at Baseline, Midline and Endline. The EGRA assessment contains eight sub-tasks, namely (1) Letter name knowledge; (2) Phonemic awareness; (3) Letter sound knowledge; (4) Familiar word reading: (5) Unfamiliar word reading; (6) Oral reading fluency with comprehension; (7) Listening comprehension; and (8) Dictation.

For Midline-to-Endline comparisons, the chosen dependent variable for analysis is Oral Reading Fluency (ORF) as measured in Words per Minute (WPM). In the context of EGRA, ORF is understood as 'the ability to translate letters into sounds, unify sounds into words, process connections, relate text to meaning, and make inferences to fill in missing information'[6].

- From baseline to midline, the regression model found that the Tiphunzire project had an impact at the $p<.05$ significant level on literacy ($p=.037$). Tiphunzire accounted for 4.1 points of EGRA[7] improvements made by the treatment group by the time of the Midline Evaluation. The model was able to explain 18.1% of variance in the data, which is a very good predictive power according to Cohen's criteria.
- From midline to endline, the cross-sectional model revealed that the project had no impact on literacy when both year groups are considered in the analysis. Neither the model nor the interaction variable were significant at the $p.<05$ level, suggesting that other factors better explained literacy outcomes.
- However, the cross-sectional regression found impact at significant levels in the levels of literacy of Y1 cohort members. The intervention's additionality for this group was 8 words per minute ($p<.001$). The model was able to correctly explain 10% of the variance in literacy scores, demonstrating a good predictive power [$r^2=0.102$ $F=55.423$ (3. 1466) $p<0.05$]. The fact that the intervention has been working in year 1 schools for a year longer than in year 2 schools suggests that literacy acquisition might be better appreciated after receiving the full three years of the intervention.
- To find the most telling predictors of literacy, we constructed three regression models and studied the effect of several covariates in the treatment group. Based on regression findings, the key predictors of

[4] See stratification criteria in p.10.
[5] At Endline, this study experienced 21% of random attrition spread across relevant sub-groups.

[6] RTI International. Early Grade Reading Assessment Toolkit, 2009
[7] EGRA Overall Score (weighted- see EGRA Annex 3 and Annex 7)

literacy outcomes in this group were the extent to which the girl experiences hardship, attends school more, and has an affinity towards reading. Self-esteem, and whether a girl is married were also significant predictors of a girls' literacy. The model demonstrated that higher self-esteem results in higher literacy, unless the girl is married, in which self-esteem no longer visibly predicts literacy.

- All key subgroups targeted by the intervention (mothers, sexually active girls, married girls, girls who have been pregnant, and orphans) outperformed changes experienced in literacy over and above their control group counterparts, over time. These findings suggest that the intervention is well targeted and achieves its strongest changes in literacy amongst targeted sub-groups.
- On average married girls in the treatment group exhibited the highest change and increased their oral reading fluency by 31.32 words per minute between Midline and Endline. This change was an average of 13.3 words more than what was experienced by married girls in the control group.
- District comparisons determine that, within the treatment group, girls in Blantyre, Lilongwe, and Salima have the highest average literacy levels. The lowest performing districts were Mchinji, Balaka, and Ntcheu. Although district differences are minimal, there is a notable trend in that more urban districts such as Lilongwe, Blantyre and Salima have on average higher literacy. The Malawi National EGRA Baseline (2010) found similar findings, with urban schools performing better than rural schools in all test areas[8].

Numeracy

The EGMA assessment tested girls on eight components including (1) Oral Counting; (2) Rational counting; (3) Number recognition; (3) Quantity discrimination; (4) Pattern completion; (5) Word Problems; (6) Addition Questions (level 1 and 2); (7) Subtraction Questions (level 1 and 2); and (8) Written Exercise. For each subtask, the total number of correct answers is divided by the total number of possible correct answers. To calculate the EGMA overall percentage, scores from subtasks 3 to 9 are averaged and multiplied by 100 to obtain an overall percentage.

- According to the cross-sectional approach and for a sample of 2323 participants, the regression model found that the Tiphunzire project had an impact at the p<.001 significant level on numeracy outcomes (p=.000) as measured through an overall EGMA percentage (midline to endline). Tiphunzire accounts for 4.4% points of EGMA improvements made over and above the control group across time. The constant of the model was quite high (81.7%) suggesting that other factors also contribute to better numeracy. The model was able to explain 1.2% of the variance in the data at significant levels [r-square = .012; p<.001; F (3, 2326)= 9.382].
- From baseline to midline, the regression model found no visible impact at significant levels as measured through the EGMA test (p=.243). The cross-sectional model was significant though of low predictive power as demonstrated by a low R-square of 4% [F=19.781 (3,1326) p<.001].
- By the Endline, treatment cases outperformed control across all years and in both cohorts. Out of school girls outperformed their peers in control schools by as much as 6.5% in the Year 1 Group and 7% in the Year 2 group. Girls in the original Standard 5 cohort fared better in treatment schools than control by 3% in both Year groups and Standard 6 by 2% in both year groups.
- A simple regression shows that attendance, measured as the Average Proportion of Days Attended in a School Calendar Month (%), is a significant predictor of Numeracy *b = .092, t (0.16) = 5.733, p<.001.* This means that for every extra day a girl goes to school in a given month, her numeracy score will be likely to increase by 1%. In Malawi, mathematics is taught from Standard 1 all the way until the end of secondary school[9]. However, attendance level explained only a small portion of the variance in numeracy scores [R^2 *= 0.018, F (1,1765)= 32.866, p<.001].* This means that whilst promoting school access can remain a core aspect of education programming, a girls' numeracy can also be enhanced through other mechanisms.

[8] Mejia, J. (2010). Early Grade Reading Assessment: National Baseline Report.

[9] US Embassy: Education System of Malawi

- According to FGDs, AoCs shared that peer-to-peer learning allows for learning differentiation and core numeracy skill teaching builds confidence to deal with math problems. Both strategies were found especially effective ways to teach numeracy.
- From the side of the students, barriers to numeracy are both social and individual and are mostly sourced at the school. According to AoCs, prior to the project "many girls looked down on themselves because they believed that mathematics is a subject of boys yet that's not the case anymore".
- To encourage learning in mathematics, girls will be motivated when they know they are able to demonstrate progress and succeed in exams. In this case, motivation finds its source in a performance expectation, occurring when the individual feels capable of succeeding. When girls do not think they will succeed, or think they cannot succeed, they will be less prone to pursue learning in mathematics.
- In addition to performing well in exams, learning mathematics is related to future aspirations and dealing with day-to-day life.
- Regression results show that poverty-related variables had no individual effect on numeracy at significant levels (model 1). In the second model, attendance and academic self-efficacy were both significant predictors suggesting that motivation in mathematics is indeed driven by expectations of performance. In the third model, self-esteem and self-efficacy become important predictors of numeracy, as well as being sexually active or married. Being a mother or ever given birth before does not affect numeracy scores.
- According to sub-group analysis, the project has made the biggest difference for girls who are married or living with a man as if married (36% numeracy improvements over and above control), for mothers (10% numeracy improvements over and above control), and girls who have been pregnant (11.59% numeracy improvements over and above control group). This finding suggest that the project is well targeted towards its key populations.

Attendance

Attendance was measured using historical attendance data made available by school authorities through school registries and attendance records. Attendance was measured as the percentage proportion of days a girl is present in a school calendar month. For the midline the study used historical attendance records for the months of February 2015 as proxy of the attendance level. For the endline, we used the month of February 2016[10].

- From baseline-to-midline, while the model was able to explain 14.6% of the total variance at p.<001 for 1069 cases, the impact of the intervention on the attendance level was not visibly significant (p=.912). From midline to endline, the cross-sectional analysis yielded no visible impact on attendance either (r^2=0.029 F=18.135 (3, 1831) p=0.979).
- At Endline, the largest change over time was exhibited by OS girls (enrolled) in the treatment group between Midline and Endline. OS girls in this group improved their attendance by an average of 21.8%. This was compared to a change of only 16% in OS girls (enrolled) in the control group between Midline and Endline.
- Based on multiple regression models done for the treatment group, it was found that the best predictors for a girl's attendance are a girl's self-esteem, whether she has ever been pregnant or has given birth.
- Tiphunzire had a significant impact on the self-esteem of girls, and self-esteem matters for attendance. Although, the intervention had no visible impact on attendance, a time-fixed effects regression model determines that the intervention did have a statistically significant impact on self-esteem (r2=0.111 F=91.453 (3, 2194) p<0.005). The model was able to explain 11% of variance in self-esteem at highly statistically significant levels.
- Within the treatment group the sub-group that exhibited the greatest change from midline to endline was married girls. Married girls on average increased their attendance by 28.34%. However, for mothers, sexually active girls, orphans, girls who have been pregnant, and married girls control group changes over

[10] We selected these months as these are outside the harvest or raining seasons and these factors are known to significantly affect attendance. The records were found in school registers or attendance books that were made available by head teachers in all midline schools.

time outperformed treatment group changes over time. This disaggregation is in line with the lack of impact found for attendance at Endline.

Enrolment

Enrolment is measured at the individual level using a cross sectional approach. To estimate the project's additionality, we calculate the probability of being classified as "enrolled" or "not enrolled" in school using a logistic regression function[11] of three predictors, namely (1) time (midline-to-endline), (2) treatment status and (3) an interaction variable between (1) and (2). The significance of the predictor is calculated using a Wald statistic. Enrolment is measured through the Girls SSQ "are you currently attending school?". We triangulate findings with the HHS question "Is [GIRL] currently enrolled in school?".

Readers should bear in mind that only girls who take part in Girl Clubs receive the full intervention and thus only girls who participate in Girls' Clubs take part on this study. As such, findings are representative of the treatment group, composed of a selected group of marginalized girls at a given school. Girl Clubs are attended by in-school girls and out-of-school girls alike. To replace out of school girls lost due to attrition, we followed one-for-one replacement rules and sought to match replacement cases to lost cases in enrolment status whenever possible. Given this characteristic of the intervention, we opted to measure enrolment at the individual rather than at the aggregate school-level.

- From baseline to midline, the project made a significant contribution in affecting the chances a girl is enrolled in school. According to the logistic regression model, a girl was 6.2 times more likely to be enrolled in school when attending the Girls' Club [CI (95%): 2.1 - 18.7], compared to their peers in control schools [B = 1.833; Wald (1) = 10.7, p.<001]. The overall logistic regression model was significant [Chi-square (3) = 206.4; p<.001] and 19% of variance can be associated with the predictors according to Nagelkerke R-square tests. This means that the model correctly predicts an important portion of the variance in enrolment classifications.

- From midline to endline, however, the intervention did not have a significant on enrolment. The predictor 'interaction' was not able to predict a girls' enrolment better than chance at significant levels [B=-1.91; Wald (1) = .034, p=0.535]. While significant impact was found from baseline to midline, no visible impact on enrolment was found for the intervention group. Notwithstanding, the overall logistic regression model was significant [Chi-square (3) = 73.737.4; p<.001] and less than 1% of variance can be associated with the predictors according to Nagelkerke R-square tests. This means that the model correctly predicts enrolment classifications, though a limited power.

- Given that the study samples from Girl Clubs, we estimate that enrolment changes are not visible in midline to endline comparisons due to the fact that most OS had re-enrolled back to school at the time of endline observations.

- To check these findings against the quantitative data, we created three logistic regressions models to study the effect of poverty, motivational and SRH factors on the enrolment of marginalized girls that are part of the intervention. Results show that poverty-related variables had no individual effect on enrolment at significant levels (model 1). The model is itself not significant, according to the significance of the chi-square test for the logistic regression.

- In the second model, academic self-efficacy and self-esteem are very significant predictors suggesting that enrolment is driven by expectations of value of school and the personal belief that one can succeed in school. Perceived power to make decisions, does not affect the chances of whether a girl finds herself in school or not. To girls going school is related to becoming a strong individual "As for me I want to get educated and be like the Head teacher since she is also a woman".

- Perceptions of school safety also affect enrolment, as girls who perceive schools to be safer are more likely to be enrolled. Only a small portion of the variance in probability scores is explained by the model according to Nagelkerke R-square tests.

[11] Details of the Logistic Regression Function see Annex 2.

- In the third model, academic self-efficacy becomes one of the most important predictor of enrolment status, as well as being sexually active, having ever been pregnant and perceiving the school to be a safe place.
- The third model's constant is not significant, suggesting that SRH variables are the most important predictors of the odds that a girl is enrolled or not. This model was able to explain a significant portion of variance in the probability of enrolment status (24%) at a significant level of p.<001. Being pregnant, having ever been pregnant and being sexually active will significantly affect a girls' chances of being in school.
- Contrary to qualitative findings, when many girls complained about menstruation management (predominantly due to lack of bathrooms), whether a girl has problems in school due to menstruation does not affect her chances of being enrolled in school, though this may be a treatment effect bias given that we expect menstruation to become less of a problem as a result of the intervention.
- According to sub-group analysis, Tiphunzire made significant improvements over and above the control group for those girls who live in households with three or more children, out of school girls and sexually active girls. The intervention did not perform above control group for orphaned children, households in hardship, girls who have been pregnant or married girls. While the intervention devotes significant efforts to encourage the re-enrolment of girls from these subgroups, it can also explore ways to target them more effectively.

Self-Esteem & Self-Efficacy

Girls' Clubs are primarily designed to enhance the girls' levels of self-efficacy (i.e., to empower girls) and to improve their self-confidence.

- The intervention had a significant impact on the academic self-efficacy of girls. Linear regression analyses revealed a significant interaction between time and treatment status ($t(3,2429) = 4.74$, $p < .001$). The girls in the treatment schools improved more than the girls in control schools and even score higher at Endline, even though their scores were lower at the start of the intervention.
- The project had an impact on the self-esteem of participants of the Y1 cohort ($t(3, 1571) = .182$, p.<001). In this group, girls experienced larger gains in self-esteem than those in control groups over time. However, impact on self-esteem for the Y2 group was non-significant.
- Sub-group analyses (moderation analyses) reveal that at Endline, there is a smaller difference in the levels of self-efficacy of in and out of school girls at treatment schools, than there is at control schools (interaction: $F(1,1355) = 40.03$, $p < .001$, R2 change = .03). In other words, there is a big difference between the self-efficacy levels of out of school girls at treatment and control schools, with out of school girls at treatment schools scoring much higher (B = .66***).
- Self-efficacy plays a significant role in the relationship between attendance and the reported ability to say no to unwanted sex. In its theory of change, TfaC relates school attendance with lower levels of risky sexual behaviour. Mediation analyses[12] reveals school attendance increases the chances that girls say no to unwanted sex, because of the fact that school attendance is associated with higher levels of self-efficacy (indirect effect: B = .13 (LLCI = .02, ULCI = .25).

Sexual and Reproductive Health

The Tiphunzire Project aims to improve marginalised girls access, retention, and learning outcomes in primary school, primarily through improved sexual reproductive health and self-confidence. In order to drive these improvements, clubs adopted a highly interactive and participatory behaviour change approach

- When comparing the differences between treatment and control using chi-square tests, results suggest that girls have significantly improved their SRH after Tiphunzire. At Baseline in 2013, treatment and control schools had similar proportions of all relevant SRH groups. At Midline, there were significantly less sexually active girls in the treatment group, a trend that was sustained by Endline. At Endline, there

[12] Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach. By Andrew F. Hayes.

were significantly less married girls in the treatment group as a result of the intervention. The table below shows these results:

- A Pearson Chi-square test finds an association between whether a girl has been pregnant and her treatment status across Midline and Endline data ($p<0.05$). Girls in the control group are more likely to have been pregnant than girls in the treatment group. A Chi-square test also determined that there is a strong statistically significant association ($p<0.001$) between treatment status and sexual activity with girls in the control group being nearly twice as likely to be sexually active. Whilst these are only tests of association and not causality, treatment girls are less likely to ever have been pregnant or be sexually active than control girls.
- Whether a girl has been pregnant is a statistically significant predictor of a girl's attendance and literacy for both the treatment and control group. Whether a girl is a mother is a statistically significant predictor of attendance and literacy for both the treatment and control group and a statistically significant predictor of numeracy for the treatment group.
- Although for both the treatment and control group, ever been pregnant was a statistically significant predictor of attendance, the model for the treatment group only explained 5% of the variance in attendance data compared to the model for the control group which explained 13% of the variance in the data. This suggests that although having ever been pregnant has a negative effect on attendance for both groups, the effect is more visible in the control group. This is likely due to the fact that girls in treatment schools who have been pregnant received targeted treatment.
- Overall, these findings demonstrate that the intervention is relevant to the contextual barriers facing marginalized girls due to low sexual and reproductive health. However, key subpopulations targeted by the intervention, on average, were only able to outperform their non-treatment peers in literacy and numeracy and not in attendance.

What has worked, why and with what effects?

This section assesses whether project activities could successfully overcome barriers to education or not, and whether this change was sufficient to lead to project outcomes of learning, attendance and enrolment. This section matches findings against the assumptions of the Theory of Change, which held true throughout the life of the project. Individual items are discussed below:

1. **Girls receive more tailored support from AoCs due to small group sizes and subsequently learn more effectively.** Most girls strongly agreed or agreed that it was easier to learn reading in Girls' Club than in school (79.1%), and that it was easier to learn mathematics in the Girls 'Club than in school (77.4%). In Girls' Clubs almost all girls (89%) felt as if the AoC was able to answer all their SRH related questions and that the skills learned in girls' clubs are usable in everyday life (94.6%). When asked what makes Girls' Clubs so different, girls mentioned that Girls' Clubs are better in promoting participation and interaction, are more girl-friendly, and allows extra time for re-teaching of core skills, which is often needed by many marginalized girls.
2. **Girls' Clubs provide targeted support through a highly participatory and empowering methodology**. By Endline, 72% of AoCs were able to demonstrate the ability to teach literacy, numeracy and life skills in interactive ways based. AoCs reported that "games, are natural to kids… [They] like to play and if you teach them like you're playing then they will not forget that easily"[13]. However, only 73% of AoCs sampled by Endline scored 80% correct or higher on SRH knowledge items (19% below target). In terms of SRHR, 90.2% of AoCs by Endline had correct knowledge of girls' gender and SRH rights compared to only 65% at Baseline.
3. **Building the confidence and self-efficacy of girls positively impacts girls' attendance and learning because they the enhance effort, persistence and resilience[14] and promote a more positive perception of one's self**. Through the girls' clubs, the intervention had a significant impact on the academic self-efficacy of girls, ($t(3,2429) = 4.74$, $p < .001$). The girls in the treatment schools improved more than the girls in control schools and even score higher at Endline, even though their scores were

[13] FGDs with AoCs on Girls' Clubs and Sustainability in Chilanga; June, 2016

[14] Bandura, A. (1997). Self-efficacy: The exercise of control. New York: Freeman; Pajares, F., & Schunk, D. (2001). The development of academic self-efficacy. *Development of achievement motivation. United States*, *7*.

lower at the start of the intervention. Similarly, the project had a visible impact on the self-esteem of participants (t (3, 1571) = .182, p.<001). These variables are found to be very important predictors of learning outcomes, suggesting that the intervention had both an indirect and direct effect on the learning and access of girls to school. Self-esteem correctly predicted attendance, literacy and numeracy at significant levels and self-efficacy was found to be an important predictor of enrolment, literacy and numeracy. The project also reached a significant level of impact on the degree to which girls enjoy school and feel part of the school community (interaction: t(3,2428) = 5.90, p < .001).

4. **Improving the Sexual and Reproductive Health of girls affect her chances to be in school and learn within**. Delaying sexual debut, or being sexually active are important predictors of enrolment and literacy. Being a mother significantly affects the chances of acquiring better literacy, predominantly due to low readership. Being married significantly affects numeracy, but less so other learning outcomes. Becoming pregnant significantly affects the odds of being enrolled in school, and may thus represent a great risk towards improving literacy and numeracy skills. When comparing the differences between treatment and control using chi-square tests, results suggest that girls have significantly improved their SRH after Tiphunzire. At Baseline in 2013, treatment and control schools had similar proportions of all relevant SRH groups. At Midline, there were significantly less sexually active girls the treatment group, a trend that was sustained by Endline. At Endline, there were also significantly less married girls in the treatment group as a result of the intervention.

5. **Self-efficacy beliefs as well as increased levels of performance are likely to result in higher levels of SRH.** Correspondingly, school retention reduces the risk that marginalized girls engage in risky sexual practices, leading to more positive health outcomes[15]. Girls that have been exposed to the intervention express higher levels of self-efficacy and therefore like reading better (indirect effect: B = .08, LLCI = .05, ULCI = .12). It was also found that girls that are able to go to school more frequently also experience higher levels of efficacy. Self-efficacy plays a significant role in the relationship between attendance and the reported ability to say no to unwanted sex. The evaluation provides evidence in favour of the effectiveness of the intervention in achieving empowerment, since the project reaches a significant level of impact for the extent to which girls feel that they have the power to make their own life decisions (interaction: F (1,2634) 22.2, p < .001).

6. **Attending school is possible with Parental Support, in spite of poverty.** Poor or uninformed attitudes towards girls' education among parents affect the chances of a girl to return to school. The intervention had an impact on the extent to which guardians feel that it is equally valuable to invest in a daughter's education than a son's when funds are limited [b = .243, t(123) = 1.794, p < .05]. At endline, 97% of parents in treatment schools believed that girls have as much right to go to school in spite of hardship, though only 76% of parents believe that girls can make use of their education as much as boys. Qualitative evidence suggests that this is a pervasive belief in Malawi. However, the project has performed well above endline targets for these indicators. Parents at both control and treatment schools report to desire higher levels of education for their girls. The number of parents who reported that they would like their daughter to complete primary school or any higher level increased from 73% to 99% at treatment schools and from 79% to 97% at control schools.

7. **Increased attendance leads to higher grades**. Attending school correctly predicts numeracy and literacy, though other predictors alongside attendance improve the quality of this predication. This means that attendance alone may not necessarily lead to better grades. There is a substantial body of evidence that shows that increased attendance at school is the first step to improving learning outcomes amongst children[16]. Although the quality of teaching in many rural Malawian schools is low, the additional contact

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[15] Hallfors, D., Cho, H., Rusakaniko, S., Iritani, B., Mapfumo, J., & Halpern, C. (2011). Supporting adolescent orphan girls to stay in school as HIV risk prevention: evidence from a randomized controlled trial in Zimbabwe. *American journal of public health*, *101*(6), 1082-1088.

[16] Newman Ford, L., Fitsgibbon, K., Lloyd, S. & Thomas, S. (2008). A large scale investigation into the relationship between attendance and attainment: a study using innovative, electronic attendance monitoring system. *Studies in Higher Education*, 33, 6: 699-717

Attendance Works (2014). Research brief: Attendance in the Early Grades: Why it Matters for Reading. Available at: http://www.attendanceworks.org/wordpress/wp-content/uploads/2014/03/Attendance-in-the-Early-Grades.pdf

Roby, DE 2004, 'Research on school attendance and student achievement: a study of Ohio schools', Educational Research Quarterly, vol. 28, no. 1, pp. 3–14.

Daraganova, Mullan, & Edwards (2014). Occasional Paper No. 51. Attendance in primary school: factors and consequences. Commonwealth Australia.

time offered to TfaC's target girls by specially trained AoC teachers through the project will mean that increased attendance leads to more engagement with quality literacy, numeracy and life skills sessions, ultimately resulting in higher marks in annual school tests.

8. **Girls face additional barriers to education when compared to their male peers.** At midline, girls had mentioned to have problems attending school during menstruation. At endline, however, the provision of sanitary pads and pain killers made it less difficult for girls to attend school. In regression models for the treatment group, menstruation was not a predictor of attendance or enrolment. Aside from menstruation management, girls mentioned the importance of Girls' Clubs' as being an environment where girls can feel comfortable to participate and receive feedback. In normal classrooms, qualitative findings suggest that girls are usually subject to peer pressures and bullying from boys. Low progress on the domain of enabling girls to have ability to confidently interact with boys in coed learning environments (-19% under target) show this is a barrier that is yet to be fully overcome.
9. **Parents of marginalised girls (and particularly out-of-school girls) feel alienated by the physical school environment which leads to lack of support for girls' education.** Getting parents of out-of-schools girls to 'cross the threshold' and come into schools for Listening Clubs was an important step in engaging parents in their girls' education and aims to remove the fear parents may associate with school as a result of their own experiences as children or their lack of engagement with education in general. Based on monthly attendance data from December 2015 – July 2016, average attendance at Girls' Clubs and Holiday Clubs was 82.5% by Endline. When asked what difficulties prevented attendance, participants mentioned that their own time constraints, rather than organizational or technical issues prevented them from coming and only on occasion.
10. **Parents, guardians and schools allow teaching on SRH and family planning and pregnancy in school.** After participating in listening clubs, parents increasingly understand the consequences of not supporting the SRHR of girls. "My child would have had two kids by now because I wasn't concerned and she would have just stopped school.". However, TfaC performs -32% below endline target (still 16% above control), revealing important shortcomings of the intervention in improving community attitudes towards the sexual and reproductive health rights of the girls. When asked whether girls have a right to know about contraceptives, parents answered across many FGDs that "…no, they don't. Because they are still young", "…no, because if they know then they will start bad behaviours" and because, "if we do let them know that, then we are encouraging them to start having sexual relations." Given that 13% of the treatment population is sexually active, the project may do well in exploring a strategy to gain parental support to expand SRH education into teaching condom use and safe sex practices. Generally, thanks to the intervention, Parents and guardians have also become more comfortable to speak about contraception with their daughters. The interaction effect is significant ($t(3,942) = 2.60$, $p < .01$), which means that the increase in comfort to talk about this issue is higher at treatment schools.
11. **Girls who fear abuse/ are victims of abuse at school are less likely to attend.** Whether a girl perceives the school to be a safe place significantly affect her odds of being enrolled. School safety was also shown to be a predictor of school attendance. By Endline 85% of club girls feel safe at school. A cross-sectional regression model finds that interaction is a statistically significant predictor of perceived safety, indicating that the project had a positive impact on perceived safety over time. Qualitative sessions supported these findings with many girls stating that they now feel safe in school as the school now has a Child Protection Officer.

Sustainability of Project Activities

There are great chances for aspects of the project to continue so long as these do not impose a financial burden on AoCs. In many FGDs, AoCs manifested that they will do their best to keep running the clubs, in part due to their popularity in schools and strong parental support. Given TfaC strategies of communication, training and advocacy at various levels, many AoCs feel confident that they will be able to run the clubs after the project's conclusion and implement the project's teachings in their own classrooms.

Since the project begun, many AoCs also mentioned that stakeholders take them more seriously because TfaC was involved, including fellow teachers. This is also evidenced on the institutionalization of Child Protection Policy (CPP) across all treatment schools, which is widely respected and considered necessary by school communities. Given the straightforwardness of the policy and their wide acceptance, schools have effected long-lasting change in child protection.

TfaC has also greatly contributed to norm change in their communities, which is expected to continue in the long-term. Parents manifested in an increasing prioritization of girls' education when the funds are limited, a reduction of chores or at least their equal distribution within the household, and independent advocacy initiatives that parents carry out in their communities out of their own volition.

The project has also developed a sustainability strategy focused on three components to sustain project outcomes and promote continued improvements after funding ends. This include continuous training of teachers through other TfaC programmes in SRH and child-friendly teaching, monitoring Girl Clubs' which continue thanks to AoC efforts, district trainings with school authorities and officials on CPP, and the promotion of girls' education through radio programming and community listening clubs independently organized by AoCs.

Recommendations

1. The project should explore ways to integrate boys into the promotion of girls' education. Many of the barriers to being motivated to go to school and participating in class relate to class dynamics where girls are teased or laughed at for making mistakes, predominantly by boys. Given all the progress made regarding self-esteem, school belonging and self-efficacy, it remains a challenge to improve the capacity of girls to confidently interact in coed educational environments.

2. While parents and community members have become increasingly more open to speak about SRH with their children, the same cannot be said about discussing contraception with girls due to perceptions that it may lead to promiscuity. While sexual education is imparted in schools, discussion of contraception above abstention will remain a contentious policy challenge to the intervention. Notwithstanding parental values towards discussing SRH, the intervention may focus future health promotion activities to consider raising awareness about condom use and early sexual debut among Malawian youth.

3. Tiphunzire may also study programmatic differences that exist between Y1 and Y2 interventions. Given that the project achieved more for the Y1 cohort, further research can consider whether programmatic differences (and not unobserved phenomena) can account for changes in literacy and attendance from midline to endline. While we can assume that some differences are due to the fact that Y1 schools have had an additional year of the intervention, the project should also consider whether there were key implementation differences between the two cohorts and explore how these could have affected differences in outcomes.

4. A high proportion of AoCs have reported improved support from traditional authorities in the promotion of girls' education. The project should work actively to engage Head teachers in project implementation and future consultations, thereby bolstering the credibility that AoCs need to engage the wider school community. Whilst AoCs report that the project has held meetings with head teachers on child protection and other key topics, future implementation should more actively integrate school authorities into project activities so as to improve the effectiveness of AoCs within target schools. A number of head teachers reported to feel excluded from the project, others commented that TfaC had adapted its approach because of this but many would appreciate having a greater role in project activities. The project could for example engage head teachers actively in the recruitment of club participants. Some AoCs reported this as being very helpful in the identification of at risk girls. Head teachers are also figures of authority within their communities, and could more actively support wider engagement with surrounding community structures.

5. require more frequent training in order to improve their sexual and reproductive health knowledge and capacity to support marginalized girls. SRH knowledge regressed by an average of 11.2% between Baseline and Endline. Furthermore, only 52% of AoCs by Endline could correctly describe child protection reporting processes. Future intervention planning should account for some loss of knowledge over time and plan for targeted refresher trainings in key areas.

6. Promote awareness of child protection reporting mechanisms. Although the intervention had a positive impact on school safety, all stakeholders reported that reporting mechanisms are often not utilized. While AoCs assume this is because schools are safe the project should more actively raise awareness of reporting mechanisms to ensure all cases can and are reported. This is especially important as only 52% of AoCs at Endline correctly described reporting processes.

7. Track key subpopulations in routine monitoring activities. The intervention selects participants based on a checklist which targets orphans, sexually active girls, married girls, and young mothers. Routine monitoring activities should track these key populations over time so as to ensure the intervention remains appropriately targeted and inclusive.

1 Introduction

1.1 Background to Project

1.1.1 Project Context

Tiphunzire's design stems from the belief that gender and educational norms, poverty and poor sexual and reproductive health are significant barriers to girls' retention, achievement and learning in primary schools in rural Malawi. Through improved training of outstanding female Agent of Change (AoC) teachers to create girl-friendly learning environments and the promotion of girls' awareness of SRH and their rights, and through greater parental and community support and engagement, the project will improve girls' sexual and reproductive health, confidence and participation at school. This will lead to gains in retention, achievement and learning in school. The project aims to address the following barriers that are preventing girls from accessing quality education in Malawi:

- In Malawi, traditional gender norms mean that there is increased pressure on girls to remain at home, rather than attend school. 33% of girls who dropped out in 2010 did so due to family responsibilities, which are particularly acute in areas where there is high HIV and AIDS, high numbers of Orphans and Vulnerable Children (OVCs) and child-headed households. Our midline study found that girls who have difficulty completing homework due to house chores perform worse on both EGRA and EGMA[17].

- A key barrier for accessing school is poverty. Whilst primary school is free, uniform and school books must be purchased, and parents tend to prefer to invest in the education of their sons rather than their daughters. At midline, analysis of variance show that girls from households which have more difficulty to fulfil their basic needs without charity perform worse on EGRA.

- Pedagogy tends to be teacher-centred and didactic, and the quality of learning in primary schools is poor, particularly around SRH, which many teachers feel uncomfortable about teaching. There are many more male teachers than female, and incidents of sexual abuse of girls by male teachers are frequent. In this environment, the personal and social needs of girls are often neglected and many children, particularly girls, struggle to learn effectively. Through Pearson correlations, we find a positive correlation between girls' ratings of gender fair teaching and their EGRA performance[18].

- Attitudes of education authorities and resource allocation are not supportive of the SRH needs of girls. The project's needs assessment suggests that lack of appropriate sanitation facilities in schools for girls during menstruation can contribute to significant absenteeism. In Malawi learners are often not allowed to attend school whilst pregnant or following the birth of a child, and thus pregnancy either stops or severely interrupts learning. Dropping-out or missing school results in lower completion rates for girls compared to boys in Malawi, and this is often due to early pregnancy or early marriage[19]. A study on the effect of sexual and reproductive health (SRH) choices and educational trajectories of youth in Malawi show that girls who miss one or more school terms due to pregnancy are less likely to return to school than their counterparts who dropped out for other reasons[20].

[17] Navarrete, A., et al (2015) Midline Study for the Tiphunzire Project. Available at: www.tfacafrica.com/wp-content/uploads/2016/06/Final-GEC-Midline-Report.pdf

[18] *Ibid*, 17.
[19] *Ibid*, 17.
[20] Satvika Chalasani, Christine A. Kelly, Barbara S. Mensch, Erica Soler-Hampejsek (2012). *Adolescent pregnancy and education trajectories in Malawi.*

1.1.1 Project theory of change and assumptions

The Tiphunzire project assumes that by improving marginalised girls' sexual and reproductive health[21], girls will be empowered to make better life decisions, remain or enrol in school and seek to improve their own learning and skills. By supporting schools to adopt child protection policies and practices the project also aims to make schools safer places where girls who fear abuse or have been victims of abuse are as likely to attend[22].

At the impact level, the project aims to improve the life chances of marginalized girls by supporting girls participating in the project to enrol and stay in school throughout the lifecycle of the project and to improve their learning outcomes; more specifically, literacy and numeracy. Additionally, the project aims to secure additional funding through the life cycle of the project and establish mechanisms to ensure girls are enabled to complete a full cycle of education.

Through a partnership with the Malawian Ministry of Education, Science and Technology (MoEST), TfaC trained over 360 female teachers in innovative teaching practices that aim develop the autonomy and efficacy of marginalized girls. TfaC has provided training and financial support to AoCs throughout project implementation.

TfaC's intervention is delivered in schools of rural Malawi in the forms of Girls' Clubs. Girls' Clubs are organised once a week as an extracurricular activity offered by the AoC and are attended by roughly forty in-school (IS) and out-of-school girls (OS) in the entire school. The girls' club curriculum incorporates interactive group activities to build self-confidence, role-playing games to address real life situations, and exercises to train literacy and numeracy skills.

At schools, TfaC-supported teachers are known as "Agents of Change" (AoCs). AoCs are pre-service teachers trained in TfaC's unique method to promote behaviour change, which uses aspects of participatory learning and interactive drama[23]. Once deployed in schools, AoCs:

- Organize and facilitate weekly Girls' Clubs including both in- and out-of-school girls;
- Promote girls' education and school enrolment among parents and the wider community through the organization of Open Days, Home Visits and monthly Community Listening Clubs;
- Mobilize school- and community-level authorities to identify and support marginalized girls and, in so doing, support their school in its attainment of Model School status;
- Engage school authorities and fellow staff in the adoption of Child Protection Policies (CPP), and child-friendly and gender-sensitive teaching practices, and;
- Provide monitoring data so as to improve programming and project delivery.

Tiphunzire was implemented in two phases. During Phase 1 AoCs were deployed in 36 schools across 6 districts (Balaka, Salima, Dedza, Nkhotakota, Chikwawa and Lilongwe Rural West) in Southern and Central Malawi. During Phase 2 the project scaled-up and AoCs were deployed to an additional 189 schools also covering 4 new districts (Mchinji, Blantyre, Lilongwe Rural East, and Ntcheu). Tiphunzire operates in 10 of the 28 districts of Malawi.

According to Tiphuzire's Theory of Change, the project aims to enable marginalised girls to complete a full cycle of education and demonstrate enhanced learning. This aim will be achieved through four key outputs:

1. Teachers receive training and demonstrate the ability to teach literacy and numeracy in participatory and interactive ways, delivering girl-friendly education across Malawi.
2. Marginalised girls at risk of dropping out of school demonstrate increased participation and confidence at school. Out-of-school girls enrol in school as a result of project activities.

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[21] Theatre for a Change (2013): Theory of Change (internal document). Furthermore, Cultural norms promote early marriage, often also leading to early pregnancy and subsequent dropout of school. The UN Foundation (2012) found that "50% percent of all girls in Malawi are married by age 18 and 25% of all adolescent girls already have a child" . Almost 9% of girls who dropped out of school in 2010 did so because of early marriage and pregnancy, citing embarrassment around menstruation as a reason for missing school (see M&E Framework)

[22] Abuse in Malawi schools has been well documented. See Rancourt (2012) *Ending School Related Gender Based Violence in Nsanje (Baseline, Concern Worldwide).*

[23] Theatre for a Change (2016): Theatre for a Change Methodology Overview [Unpublished].

3. Parents and communities have a more supportive attitude towards girls attending school, have increased knowledge around and confidence to discuss SRH and gender rights with their girls, as a result of community meetings and listening clubs.
4. Schools are safer for girls as a result of the institutionalization of child protection policies, leading to increased participation of girls in school.

The long-term goal of the project is to see improved life chances for marginalised girls. The project is also expected to have a positive impact on poverty reduction for marginalised girls and their households, as well as increase the opportunities and choices girls are able to access and make in their lives. Achieving these results will require changes at the learner-, school-, household-, community- and, policy-level.

In order to create a credible programme theory, the Baseline Study systematically reviewed each project outcome and developed distinct results chains from intervention activities. The results help to describe the logic of the programme in producing the target outcomes through implementation activities. Result chains also serve as a tool to discuss assumptions at different levels and signal possible implementation risk areas. To consult Tiphunzire result chains, see Annex 11.

According to a reconstruction of the programme theory exercise, we have identified a number of core underpinning Tiphunzire's theory of change:

1. **Girls will receive more tailored support from AoCs due to small group sizes and subsequently learn more effectively.** With an average national pupil/teacher ratio of 1:107[24] and class size of 94[25] it is difficult for learners who are falling behind to get individual support from teachers. TfaC believes the Girls' Clubs will provide a space to offer more tailored support to marginalised girls struggling to keep up with their peers in class. The Clubs will allow girls to ask questions about subjects they are struggling with and experience literacy, numeracy and life skills in highly participatory and engaging ways. A reduction in class sizes is one of the key recommendations for addressing poor numeracy skills in primary aged learners made in the country's National Early Grade Mathematics Assessment Baseline (2010).
2. **Through Girl Clubs, TfaC Malawi can provide targeted support through a highly participatory and empowering methodology**. Once the girl attends the club, she will be taught health knowledge (in particular in the domain of sexual reproductive health), life skills (empowerment) and academic skills (literacy and numeracy). Girls' Clubs are also a gender-sensitive and child-friendly space conducive to learning where participants are exposed to an empowered female role model embodied in the AoC. It is assumed that teaching in these three domains will improve her chances to participate fully in co-ed educational environments and refrain from risky sexual practices[26] which will increase the chance that she will stay in school. Moreover, self-efficacy beliefs influence academic motivation, learning, and achievement in the domains of both literacy[27] and numeracy[28].
3. **Building confidence and increasing participation of girls will positively impact on their attendance and learning**. As a result of TfaC's direct experience implementing projects with school-aged children in Malawi over the last eight years, TfaC works on the assumption that building confidence, assertiveness and interpersonal skills amongst girls will lead to increased attendance at school. TfaC concluded that girls in our target schools do not feel included or able to fully participate in the classroom and that building confidence will lead to girls' increased participation in the classroom. Ultimately, if girls enjoy school and have a positive attitude to attending school this will lead to improved learning outcomes due to higher engagement in lessons.

[24] UNICEF (2011) GER Malawi
[25] Op. Cit. UNESCO (2013)
[26] Bogale, G. W., Boer, H., & Seydel, E. R. (2010). Condom use among low-literate, rural females in Ethiopia: the role of vulnerability to HIV infection, condom attitude, and self-efficacy. *AIDS care*, *22*(7), 851-857.
[27] Pajares, F. (2003). Self-efficacy beliefs, motivation, and achievement in writing: A review of the literature. *Reading &Writing Quarterly*, *19*(2), 139-158.
[28] Pajares, F., & Kranzler, J. (1995). Self-efficacy beliefs and general mental ability in mathematical problem-solving. *Contemporary Educational Psychology, 20*, 426-443

4. **Since self-efficacy beliefs also enhance effort, persistence and resilience[29], more positive perceptions of self as well as increased levels of performance are likely to result in higher levels of school attendance.** Correspondingly, school retention reduces the risk that marginalized girls engage in risky sexual practices, leading to more positive health outcomes30

5. **Sexually active girls are able to avoid pregnancy and avoiding pregnancy significantly contributes to school retention. Non-sexually active girls are able to delay sexual debut.** A significant barrier to education amongst marginalised girls is dropping out of school due to pregnancy. Ensuring that sexually active girls can avoid pregnancy will be key to keeping girls in school and will be addressed through specific workshops on teen pregnancy, contraception and family planning as well as discreet signposting of reproductive health services to girls by AoCs. For girls who are already mothers, schools will need to actively encourage re-enrolment and make provisions for breastfeeding where girls have babies. Malawi has a national policy for re-enrolment of young mothers so AoCs have worked with school management committees (SMCs) to ensure these are adhered to in target schools and introduced in schools lacking them.

6. **Out of school girls can return to school or enrol for the first time through targeted support in spite of poverty.** Poor or uninformed attitudes towards girls' education among parents affect the chances of a girl to return to school. Through Home Visits, AoCs are able to reach parents and develop a deeper contact between the school, the household and their community. When trust is built between the AoC and parents, the promotion of girls' education in the household changes parental attitudes and actively encourages parents to send their daughters to school.

7. **Increased attendance leads to higher grades**. There is a substantial body of evidence that shows that increased attendance at school is the first step to improving learning outcomes amongst children[31]. Although the quality of teaching in many rural Malawian schools is low, the additional contact time offered to TfaC's target girls by specially trained AoC teachers through the project will mean that increased attendance leads to more engagement with quality literacy, numeracy and life skills sessions, ultimately resulting in higher marks in annual school tests.

8. **Girls face additional barriers to girls' education when compared to their male peers.** Girls' attendance at the clubs may only result in enhanced school attendance rates if practical limitations that keep marginalised girls from attending school are overcome, especially those limitations that occur during menstruation (e.g., access to soap or sanitary pads). Their attendance to the clubs or school also presupposes that their caregivers support the girls' attendance and free her from external responsibilities such as house chores, child care, and income generating activities.

9. **Parents of marginalised girls (and particularly out-of-school girls) feel alienated by the physical school environment which leads to lack of support for girls' education.** Getting parents of out-of-schools girls to 'cross the threshold' and come into schools for Open Days was an important step in engaging parents in their girls' education and aims to remove the fear parents may associate with school as a result of their own experiences as children or their lack of engagement with education in general. AoCs start the process of familiarising parents with schools during home visits to out-of-school and newly enrolled girls' homes to discuss some of the benefits of girls enrolling and staying in school.

10. **Parents, guardians and schools allow teaching on SRH and family planning and pregnancy in school.** In relation to the assumption that sexually active girls will need access to information and

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[29] Bandura, A. (1997). Self-efficacy: The exercise of control. New York: Freeman; Pajares, F., & Schunk, D. (2001). The development of academic self-efficacy. *Development of achievement motivation. United States*, *7*.

[30] Hallfors, D., Cho, H., Rusakaniko, S., Iritani, B., Mapfumo, J., & Halpern, C. (2011). Supporting adolescent orphan girls to stay in school as HIV risk prevention: evidence from a randomized controlled trial in Zimbabwe. *American journal of public health*, *101*(6), 1082-1088.

[31] Newman Ford, L., Fitsgibbon, K., Lloyd, S. & Thomas, S. (2008). A large scale investigation into the relationship between attendance and attainment: a study using innovative, electronic attendance monitoring system. Studies in Higher Education, 33, 6: 699-717

Attendance Works (2014). Research brief: Attendance in the Early Grades: Why it Matters for Reading. Available at: http://www.attendanceworks.org/wordpress/wp-content/uploads/2014/03/Attendance-in-the-Early-Grades.pdf

Roby, DE 2004, 'Research on school attendance and student achievement: a study of Ohio schools', Educational Research Quarterly, vol. 28, no. 1, pp. 3–14.

Daraganova, Mullan, & Edwards (2014). Occasional Paper No. 51. Attendance in primary school: factors and consequences. Commonwealth Australia.

services to avoid pregnancy, parents and schools will also need to agree to allow teaching on SRH, family planning and pregnancy in Girls' Clubs. TfaC has mitigated the risk of schools not allowing these topics by including a clear outline of what the project will entail in the agreement the school signs to agree to take part in the project. Parents have also consented to their daughters being allowed to take part in Clubs covering SRH, family planning and pregnancy when they agree for their daughters to be part of the programme.

11. **Parents and guardians allow girls to cut down time spent on chores and income generating activities.** In many rural community's girls are involved in household chores (e.g. cleaning or taking care of younger siblings) and income generating activities that provide an essential source of income for families. In order for girls in employment to return to school, their families will need to be able to see the long-term benefit of education, above short-term loss of household income. For girls already in school, it will be easier to negotiate for mothers, fathers and brothers to take on shares of household chores and income generating activities to allow the girls to attend more regularly and study outside of school. For families with out-of-school girls this will be a major challenge and was factored into AoC training in 2013 when TfaC held workshops on negotiation and communication with parents and guardians of marginalised girls, as well as influential community leaders who helped to convince families of the long-term gains in sending girls back to school.
12. **Girls who fear abuse/ are victims of abuse at school are less likely to attend.** TfaC also assumes that, by improving child protection and abuse reporting procedures at each target school through planned all-staff training, girls will feel safer at school and be more likely to attend regularly. However, strengthening child protection procedures within school will not necessarily mean there are adequate accountability mechanisms outside of school to prevent and respond to cases of violence against children. To address this possible barrier parents, influential community members and local religious leaders have been encouraged to join community listening clubs to listen to radio broadcasts focused on violence against children, which aim to raise awareness of children's rights and the steps to take when a person is suspected of abusing a child.

1.1.2 Summary of interventions

The results chain below outlines the key activities that have taken place according to each of the project's outputs.

1. **Teachers receive training and demonstrate the ability to teach literacy and numeracy in participatory and interactive ways, delivering girl-friendly education across Malawi.** Training has taken place with student teachers in 11 teacher training colleges (TTCs) since 2007. The training at this level is intended to have impact beyond the GEC project and strengthen ties with the MoEST by building the capacity of teachers to engage with marginalised girls and better involve children in the learning process once posted to rural primary schools as part of their teaching practice. AoCs will be recruited from the cohort of previously TfaC trained teachers, all of whom graduated with an Open College Network certificate in facilitation after a year of TfaC training at selected TTCs.
2. **Over the lifetime of the project a cohort of 8985 teachers have gained knowledge in SRH, gender rights, girls' education and child protection and use these skills when placed in rural primary schools.** Training in TTCs is funded by match funding from Christian Aid[32] and TfaC has amended their current TTC curriculum to include subject matters relevant to the GEC project, including additional modules on SRH, child protection, literacy, numeracy and working with marginalised girls. To reach target beneficiaries, teachers were trained to identify at risk girls, in school and in the community using the Orphans and Vulnerable Children register in each school. This enables them to successfully mobilize the school and surrounding communities in the promotion of girls' education as well as conduct after-school sessions with the girls known as Girls' Clubs.
3. **Marginalised girls at risk of dropping out of school demonstrate increased participation and confidence at school. Out-of-school girls enrol in school as a result of project activities.** Marginalised girls will take part in single-sex Girls' Clubs after school. The clubs will involve single sex sessions for marginalised girls (30 in-school girls and 10 out-of-school girls per school) in which girls will work to improve their literacy, numeracy, life skills, empowerment, confidence and self-efficacy. Out-of-school girls who re-enrol at school have also been supported with back-to-school packs consisting of

[32] For more information about Christian AID, please visit: http://www.christianaid.org.uk/

school uniform, exercise books, pens, pencils and a bag. Girls attending Girls' Clubs have been given reusable sanitary towels, which are being provided by project partners, IRISE[33] and AFRIPADS[34].

4. **Parents and communities have a more supportive attitude towards girls attending school, have increased knowledge around and confidence to discuss SRH and gender rights with their girls, as a result of community meetings and listening clubs.** AoC outreach activities aim to sensitize parents and guardians of the rights of girls to access school, and of the key role that SRH has in girls' social and educational development. Consent has also been established where appropriate for girls' inclusion in SRH education. Through community support, AoCs have also confidentially identified marginalised girls not in school. AoCs have also led Community Interactive Radio Drama Listening Clubs, for the promotion of gender equality, sexual and reproductive health and the benefit of investing in girls' education for families. These sessions take place once a month during term time and involve parents of club girls.
5. **Schools are safer for girls as a result of the institutionalization of child protection policies, leading to increased participation of girls in school.** The cross curricular extension of this learning was enabled by classroom management techniques that create participatory and empowering learning environments for girls where personal and social skills continue to be improved and spelling, reading and writing are developed in a range of different areas. School Health and Nutrition (SHN) Coordinators and AoC teachers, with the support of Head teachers, will extend this learning to other areas of the curriculum through In Service Training. In addition, AoCs provided child protection training for all teachers, focusing on identification and support for at-risk girls. Model School Awards will be given to schools demonstrating increased attendance, learning and improved child protection for marginalised girls.

1.1.2.1 Changes to Project's Design

Overall as a project, TfaC did not make any considerable changes to the project design and delivery method. Child Protection training was introduced as during the initial implementation it became clear that there was limited or no child protection or safe-guarding procedures at a national, district or school level. Additionally, the project provides schools with posters, procedures and record books and is currently working with the Ministry of Education to institutionalize Child Protection mechanisms throughout Malawi. To increase responsiveness and consistent engagement with the project, TfaC also conducted several district stakeholder meetings with head teachers and stakeholders responding to Midline findings. See annex 3 for further details.

1.2 M&E approach and research methods

1.2.1 Evaluation approach

Through a variety of approaches, the project seeks to synthesize from past learning and test assumptions affecting implementation to improve upon selected strategies and inform future programming. After three years of implementation, Tiphunzire wishes to obtain rigorous evidence to answer for itself and the public:

1. To what extent has the project reached and affected marginalised girls?
2. What impact has Tiphunzire had on marginalised girls' learning?
3. What impact has Tiphunzire had on enabling marginalised girls to be in school?
4. What has worked, why and with what effects?
5. How sustainable are any changes the project has led to?

Through a mixed-methods approach, this evaluation seeks also to study how the development of self-esteem and sexual and reproductive health (SRH) knowledge among girl participants influence their education and improve their chances in life through better decision making. The study aims to assess the project's contribution across outcome- and output-level outcomes using a cohort-tracking design.

[33] For more information about IRISE International, please visit: http://www.irise.org.uk/
[34] For more information about AFRIPADS, please visit: http://www.afripads.com/

This cohort-tracking design enables empirical observations on the changes in project outcomes, most notably in the changes in the levels of literacy, numeracy, attendance, and enrolment of marginalized girls. The data is analysed across all periods using three fixed effects regression models, otherwise known as the cross-sectional approach.

To distinguish between implementation cohorts, we refer to the original cohort of 36 schools as "the Year 1 cohort (Y1)" and the cohort in the 189 schools of the scale-up year as "year 2 cohort (Y2)". Participants in both cohorts participated in both quantitative and qualitative assessments and make up a total cross-sectional sample of 3,310 participants from baseline to endline.

Individual-level data for Year 1 learners and their households was gathered at baseline in 2013, at midline in May/June 2015, and at Endline in June and July 2016. For the year 2 cohort, data was gathered at baseline in 2014 and again at Endline in 2016. Given that the Y2 cohort was originally not intended to form part of the endline study, baseline household data was only gathered for a non-representative sample of 125 treatment households to obtain an idea of demographic information for Y2 implementation areas.

Standardized literacy and numeracy data was gathered using the Malawi Early Grade Reading Assessment (EGRA)[35] and the Early Grade Mathematics Assessment (EGMA)[36]. Attendance data was gathered at the individual-level from attendance registries made available to the data collection team at participating schools. Attendance registries were also periodically verified through three random spot-check visits to the schools to ensure the validity and reliability of the data and assess if attendance trends change throughout the year.

The evaluation also relied in the administration of primary research instruments to collect attitudinal and demographic data for intervention participants using the Girls' Semi-Structured Questionnaire, the Household Survey and ad-hoc questionnaires, key informant interviews and focus group discussions. This data was used to appraise project outcomes and provide realistic and implementable recommendations for future development interventions.

1.2.1.1 Quantitative Approach

The data was analysed through three fixed effects regression models using literacy, numeracy and attendance scores as dependent variables. By virtue of its cross-sectional nature, this approach follows a quantitative appraisal of the project's achievement on the levels, rather than changes, in education outcomes.

The model follows the general expression:

$$Yi = \beta + \gamma * (Ui * Ei) + \delta * Ei + \omega * Ui + vi$$

Where Yi are the levels in learning scores or attendance achievement for each girl (either originally sampled or replacement), β is an intercept, γ is the achievement, Ui is a treatment dummy variable taking value 0 for girls in the control group and taking value 1 for girls in the intervention group, Ei is a time dummy taking value 0 for midline observations and taking value 1 for endline observations, and vi is a standard residual term. By proving the significant presence of impact, this model aims to show that participatory pedagogies significantly affect the learning of marginalized girls.

To measure the project's additionality on Enrolment, we constructed a similar model using a logistic regression function to calculate the probability of a girl being classified as enrolled or not. Details of this model can be found in Annex 4.

Sampling

The primary population of interest are marginalized girls who attend school or not. Participants of the intervention are defined as girls who have enrolled in Girls' Clubs since the onset of the intervention. Marginalized girls have been identified by the AoCs and their school communities and invited to join depending on their marginalization status. On average, AoCs have selected 40 girls to participate in girls' clubs according to a set of observable marginalisation and vulnerability criteria. We may therefore assume that all beneficiaries are marginalized and may not rely on marginalization data to select participants for this study, except for control cases. We created a counterfactual by gathering outcome data on populations not exposed to any development

[35] 2011 EGRA
[36] 2010 EGMA

intervention (control sample) and comparing it to a (treatment) dataset gathered on Girls' Clubs participants at the aggregate level. As such, we rely on cross-sectional panel data in the analysis of the project's achievement[37].

Sampling Stratification Criteria

As a distinct group, marginalized girls were classified according to in-school and out-of-school status aiming for a 66.6% of in-school girls and 33.3% of out-of-school girls at Baseline in 2013. At endline, girls were selected from a list of participants obtained from previous baseline data and replaced using a one-for-one replacement rule[38]. At baseline, in-school Girls' Clubs' participants were selected through a standard-level criterion corresponding to the primary school years in the Malawian education system. This means Standard 5 and 6 at the baseline level and Standard 7 and 8 at endline for most of the cohort. We also included in-school girls who repeated the grade and out-of-school girls who re-enrolled in any standard level. Cohort membership is defined by their original enrolment status (and grade level) at baseline in October 2013. Primary school education in Malawi is made up of eight years (referred to as Standard 1 to Standard 8).

Household Sampling

In addition to the total cohort of marginalized girls, we have sampled the heads of their households and the caregivers of Girl participants. For the Year 1 cohort, a large portion of households were tracked since baseline. Households from the Year 2 cohort were sampled only at Endline as the baseline for Year 2 had originally sampled a non-representative sample of 125 unmatched households. Household sampling enabled the collection of relevant socio-economic and attitudinal data from guardians of the participant girls, as well as the confirmation of consent for participation in the study for the girls under their care.

Data Collection

Data was gathered at baseline in 2013, at midline in May/June 2015 and at Endline in June 2016 using the Malawi Early Grade Reading Assessment (EGRA) and the Early Grade Mathematics Assessment (EGMA) for a cohort of 827 marginalised girls across 72 primary schools in rural and peril-urban Malawi. Attendance data was gathered from attendance registries made available to the data collection team at participating schools. Table 1 below contains the sample sizes for the literacy and numeracy regression models. It includes sample sizes disaggregated by treatment status, cohort-type (Y1 and Y2), and evaluation period.

Table 1. Midline & Endline Sample Sizes

Year 1 Cohort EGRA	**Treatment**			**Control**		
	Baseline	*Midline*	*Endline*	*Baseline*	*Midline*	*Endline*
Standard 5 at Baseline	277	171	172	193	139	109
Standard 6 at Baseline	172	265	165	153	198	144
Out-of-school	187	23	65	187	45	58
Sub-Total	636	459	402	533	382	369
Total Treatment/Control (All Periods)		1497			1284	
Midline Total Students	**841**					
Endline Total Students	**771**					
Total Sample (Midline and Endline)	**1612**					
Total Y1 Sample (all periods)	**2781**					
Year 2 Cohort EGRA	Treatment			Control		
		Baseline Y2	*Endline*		*Baseline Y2*	*Endline*
Standard 5 at Baseline		118	175		76	62
Standard 6 at Baseline		23	152		31	60
Out-of-school		0	95		0	42

[37] See note 30 on DiD implementation challenges.

[38] UK AID (2016) GEC Tracking Cohorts Endline Guidance GEC. *Girls Education Challenge Fund Endline Pack for Innovation Window Projects* (unpublished).

Sub-Total		141	422		107	164
Total Treatment/Control (All Periods)		1199			804	
Baseline Y2 Total Students	**248**					
Endline Total Students	**586**					
Total Sample (Baseline Y2 and Endline)	**834**					
Total Y2 Sample (all periods)	**834**					
Year 1 Cohort EGMA		Treatment			Control	
		Baseline	*Midline*	*Endline*	*Baseline*	*Midline*	*Endline*
Standard 5 at Baseline		277	135	137	193	167	89
Standard 6 at Baseline		172	210	146	153	108	101
Out-of-school		187	13	62	187	35	56
Sub-Total		636	358	345	533	310	246
Total Treatment/Control (All Periods)		1339			1086	
Midline Total Students	**668**					
Endline Total Students	**591**					
Total Sample (Midline and Endline)	**1259**					
Total Y1 Sample (all periods)	**2425**					
Year 2 Cohort EGMA		Treatment			Control	
		Baseline Y2	*Endline*		*Baseline Y2*	*Endline*
Standard 5 at Baseline		127	158		11	34
Standard 6 at Baseline		29	117		51	54
Out-of-school		0	80		0	54
Sub-Total		156	355		62	142
Total Treatment/Control (All Periods)		511			204	
Baseline Y2 Total Students	**218**					
Endline Total Students	**497**					
Total Sample (Midline and Endline)	**715**					
Total Y2 Sample (all periods)	**715**					

Replacement Cases

In total, the team achieved a total sample size at Endline of 1,410 cases (55% Treatment and 45% control). After replacing lost girls and randomly resampled new ones, we sampled 870 new endline cases. With, 1,403 cases at midline (Y1 and Y2 Cohorts), bringing our total sample size to 2,813 vertically-merged cases. This places the sampling attrition rate to about 21% from the minimum target of 790 cases for a 0.8 power (c.f. the TfaC's M&E framework).

Attrition occurred when the midline girl is not present in school at the day of the survey, has dropped out of the school, or cannot be identified anymore. This was the case for 76% of the lost girl cases.

Replacement cases selected following a *one-for-one* replacement procedure to substitute for girls who have dropped out of the survey. This means that the replacement girl was to the extent possible from the same school, have the same age, and ideally attend the same grade and class as the initial midline girl. After drawing an initial list of suitable replacements, the replacement girl is selected at random.

Table 2 and Table 3 below show the quality of the sampling procedure. The table shows that both original girls and groups were similar in composition across key demographic and psychometric variables during the Midline

for the Y1 cohort. Only the number of orphans differs at significant levels according to chi-square tests. At endline, the evaluation team strived to sample more OOS given their low representation in the Midline sample and the groups differ significantly in the number of mothers and pregnant girls included, with significantly more mothers and pregnant girls resampled at Endline.

Aside from these small differences, results suggest that seemingly no biases were introduced by cross-sectional sampling.

See below:

Table 2. Comparability of Original Girls and Re-contacted (Midline)

	Control					Treatment				
	Original		Re-contacted			Original		Re-contacted		
	Mean	Column N %	Mean	Column N %	Sig.	Mean	Column N %	Mean	Column N %	Sig.
Number of Children per Adult in HH	1.55		1.71		p>.05	1.93		1.73		p>.05
Level of Hardship	1.93		1.84		p>.05	1.77		1.90		p>.05
Mother (given birth)		10.3%		8.3%	p>.05		7.5%		7.3%	p>.05
Been Pregnant		13.2%		10.2%	p>.05		8.5%		8.8%	p>.05
Orphans		30.5%		15.5%	p<.05		34.1%	X`	19.0%	p<.05
Self-Esteem	3.19		3.25		p>.05	3.10		3.20		p>.05
Academic Self-Efficacy	4.38		4.09		p>.05	4.07		4.23		p>.05

Table 3. Comparability of Original Girls and Re-contacted (Endline)

	Control					Treatment				
	Original		Re-contacted			Original		Re-contacted		
	Mean	Column N %	Mean	Column N %	Sig.	Mean	Column N %	Mean	Column N %	Sig.
Number of Children per Adult in HH	1.12		1.36		p>.05	1.34		1.50		p>.05
Level of Hardship	2.00		2.03		p>.05	1.99		2.04		p>.05
Mother (given birth)		3.1%		6.6%	p<.05		2.6%		7.1%	p<.05
Been Pregnant		5.8%		10.6%	p>.05		3.3%		8.5%	p<.05
Orphans		4.4%		3.7%	p>.05		2.4%		3.0%	p>.05
Self-Esteem	3.53		3.51		p>.05	3.60		3.55		p>.05
Academic Self-Efficacy	4.01		3.78		p>.05	4.14		4.08		p>.05

Sample Attrition

In total, the team achieved a total sample size at Endline of 1,299 cases (55% Treatment and 45% control). After replacing lost girls and randomly resampled new ones, we sampled 870 new endline cases. With, 1,403 cases at midline (Y1 and Y2 Cohorts), bringing our total sample size to 2,141 vertically-merged cases. This places the sampling attrition rate to about 21% from the minimum target of 790 horizontally-merged cases for a 0.8 power (c.f. the TfaC's M&E framework).

Attrition occurred when the midline girl is not present in school during three school visits, has dropped out of the school, or cannot be located anymore. This was the case for 76% of the lost girl cases, who were not found after

efforts to locate them with our Field Manager and Head Teachers. Whenever girls were not found and the enumerator could not locate her, the enumerator contacts the Field Manager and head teacher to support locating the girl.

In rural Malawi, these locations can at times be up to 3h from the catchment school making it impossible for either the enumerator or the family to meet each other. Our enumerator team visited 10 districts and a different rural location every day. Due to the long distances and road conditions, local travel was impossible to arrange outside the catchment area.

Based on feedback from the enumerator team, the primary reason for high attrition was lack of household data from previous evaluation periods. The household survey provides an additional means to locate the girl through information on the location of the household and the name and contact details of the head of the household. However, the evaluation design required a non-representative sample of households for the year 2 groups and a sample size lower than that required for learning assessments for the year 1 group. In practice, this resulted in girls with household data being easier to track at Endline than girls without household data from previous periods. The main point of contact for girls without household data was the school. Schools do not always have reliable information on the name of students in their school and this often varies greatly from school to school. This information is meant to be held by the head teacher in the school register, however in some cases it is the class teacher who has a more updated version of the list. In order to schedule visits with schools field assistants on average had to make 3-4 calls to the school to verify participant information and availability. This was much more difficult than for girls with household data where one could use the head of household name or his/her contact information.

1.2.1.2 Qualitative research approach

To triangulate with quantitative findings and explored key qualitative dimensions organised the following activities with selected groups or individual staff:

1. **Document and Literature Reviews.** Prior to the evaluation and throughout the appraisal of results the evaluation team has made use of key project documents and the relevant literature on the issues being discussed.
2. **Focus Group Discussions (FGDs).** FGDs were held with a diverse range of marginalized girls, parents of in-school and out-of-school girls, AoCs and community members. Discussions focused on identifying project effects, causal mechanisms and implementation.
3. **Key Informant Interviews (KIIs).** KIIs were held with project staff and district officials to discuss project design and implementation in relation achievement of outcomes and learning. KIIS were also held with a number of school stakeholders including head teachers, AoCs, and out-of-school girls. These discussions focused on individual experiences of the projects and its effects.
4. **Structured Observations of Holiday Clubs**. Structured observations of holiday clubs allowed us to see TfaC's methodology in practice and document how literacy and numeracy is being taught.

These methods were chosen to complement quantitative outcome level attendance or learning data; provide output level data (possibly alongside quantitative data); and provide contextual data to help explain the broader theory of change. Qualitative data was available for the Midline and Endline periods and was collected by the external evaluator.

Primary research instruments were created based on the questions posed by the endline template and according to the guidance provided in the Webinar series (see qualitative dimensions' checklist in Webinar Endline 2).

Sampling and Analysis

Qualitative researchers were offered a 3-day training exercise on the three methods to gather data from key populations. Researchers were also offered all interview scripts, session debriefing forms and session summary forms to organize and manage the collection of data.

Research populations were selected by purposive sampling with support from AoCs and Head Teachers. The composition of focus groups was decided once the qualitative research scope was well defined and relevant populations were identified. Research populations included marginalized girls (and sub-groups), parents, community members, teachers, traditional authorities, AoCs, and public officials.

A summary of all qualitative sessions carried out can be seen in the table below:

Table 4. Summary of Qualitative Sessions

District	Interviews	FGDs	Observations
Dedza	In-depth Interviews with AoCs or Pairs of AoCs (4) KII with District Education Manager (DEM) (1) KII with Social, Health and Nutrition Coordinator (SHN) (1)	• FGD with Drop Out Girls • FGD with Re-enrolled Girls • FGD with AoCs on Girls' Clubs and Sustainability • FGD with AoCs on Outreach Activities & Targeting • FGD with Community Listening Club Members and Non-Members • FGD with Marginalized Girls on Girls' Clubs and Barriers and Drivers to Learning (include OS and IS). • FGD with Parents and Caregivers of Girls from the Girls' Club on SRH and Girls Education. (1)	Holiday Clubs (2)
Nkhotakota	In-depth Interviews with AoCs or Pairs of AoCs (4) KII with District Education Manager (DEM) (1) KII with Social, Health and Nutrition Coordinator (SHN) (1)	• FGD with Drop Out Girls (1) • FGD with Re-enrolled Girls (1) • FGD with AoCs on Girls' Clubs and Sustainability (1) • FGD with AoCs on Outreach Activities & Targeting (1) • FGD with Community Listening Club Members and Non-Members (1) • FGD with Marginalized Girls on Girls' Clubs and Barriers and Drivers to Learning (include OS and IS) (1) • FGD with Marginalized Girls on Sexual and Reproductive Health (encourage a mix sexually active and non-sexually active girls) (Ages 14-16) (1) • FGD with Parents and Caregivers of Girls from the Girls' Club on SRH and Girls Education (1)	Holiday Clubs (2)
Balaka, Ntcheu and Salima	In-depth Interviews with AoCs or Pairs of AoCs (4) KII with District Education Manager (DEM) (1) KII with Social, Health and Nutrition Coordinator (SHN) (1)	• FGD with Drop Out Girls (1) • FGD with Re-Enrolled Girls (1) • FGD with AoCs on Girls' Clubs and Sustainability (1) • FGD with AoCs on Outreach Activities & Targeting (1) • FGD with Community Listening Club Members and Non-Members (1) • FGD with Marginalized Girls on Girls' Clubs and Barriers and Drivers to Learning (include OS and IS) (1) • FGD with Marginalized Girls on School attendance and Sexual and Reproductive Health (mix of sexually active and non-sexually active girls) (Ages 14-16) (1) • FGD with Parents and Caregivers of Girls from the Girls' Club on SRH and Girls Education (1)	Holiday Clubs (2)

To analyse the data, we coded for individual quotes along categorical dimensions using a thematic approach. We strived to code all related quotes within a single category and reported on most salient themes. Qualitative researches were tasked to submit debriefing forms at the end of the data collection to suggest possible instances of data saturation, which were followed up with additional questions.

For more details about the qualitative methodology and a discussion of data collection challenges, see Annex 4.

1.2.2 Limitations of the Evaluation Approach

This study has encountered and addressed a few limitations. First, intervention schools are located in predominantly rural sites, which may not represent the overall population of Malawi.

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

Third, One South joins this evaluation at its Midline and relies on a pre-existing dataset without traceable individual level information about participants. This has made it impossible to track the same participants since the baseline period and disqualifies individual-level analytical approaches such as difference-in-differences techniques. Whilst the project originally intended to employ such designs, poor practices on behalf of the previous external evaluator inhibited our ability to identify the tracked cohort at the individual level. We have by now

collected comprehensive cohort tracking information matched to individual codes to enable future individual level comparisons.

Fourth, participants of the study were drawn from Girls' Clubs, rather than randomly from the entire school population. This is because Tiphunzire's participants were selected according to marginalization criteria and are exposed to the intervention so long as they participate in Girls' Clubs. As such, readers should bear in mind that findings may only be generalized to the restricted sample it represents.

Fifth, given the aggregate nature of the sampling approach, there is the possibility of sampling bias for baseline participants who could have dropped out from both Girls' Clubs and their school. As such, out-of-school girls who left the intervention could be an underrepresented group in the present sample.

Finally, our literacy measure to compare baseline-to-midline changes is non-standardized as it was made of a composite measure of EGRA subtasks rather than the more widely-used Oral Reading Fluency (ORF). This is because the inherited baseline dataset did not include ORF scores. We have relied on the guidance of other GEC projects in the calculation of a composite EGRA score based on available baseline data, details of which are specified in Annex 4[39]. For midline-to-endline comparisons, we collected the right data used the standard Words Per Minute measure of ORF.

The Baseline Y2 and Midline study faced significant challenges in sampling out of school girls. Enumerators had difficulty identifying OS girls at Baseline Y2 and Midline. This was partially due to the fact that in Year 2 treatment schools, the project had not begun to identify OS girls in surrounding communities. As sampling during these periods was conducted at the school level, OS girls are under-represented in these evaluation points. In Control schools enumerators faced difficulties relying on school authorities to support in the identification of OS girls.

Key Findings

2.1 To what extent has the GEC reached and affected marginalised girls?

2.1.1 Who did the project target?

The intervention targets marginalised girls based on a comprehensive checklist which includes: single orphans, double orphans, married girls, sexually active girls, and out of school girls. AoCs selected participants in intervention schools based on their scores on this checklist. The primary cohorts comprising the target population are girls who were in Standard 5 at Baseline, girls who were in Standard 6 at Baseline and out-of-school girls.

Table 5 summarizes the key populations, based on the marginalized girls' checklist, sampled by the evaluation across time. Based on these findings 20.7% of the target population at Endline were out-of-school girls, 14.3% were in poverty, 1.7% were married, 13.3% were sexually active, and 4.9% were mothers.

Table 5. Sample Proportions for Marginalized Sub-Groups

	Control				Treatment			
	Baseline Y2 / Midline Y1		Endline		Baseline Y2 / Midline Y1		Endline	
	n	%	n	%	n	%	n	%
Household in Hardship	31	11.4%	19	15.0%	35	11.8%	24	14.3%
Three or more children per adult	16	6.1%	6	4.7%	27	7.7%	22	13.3%
IS/OS Status OS	45	10.1%	116	23.2%	24	3.8%	178	20.7%

[39] See Annex 3 for the weighting of the various subtasks.

IS	399	89.9%	383	76.8%	601	96.2%	681	79.3%
Married or living with a man as if married	27	7.1%	26	5.2%	37	8.0%	15	1.7%
Sexually Active	66	11.9%	84	16.8%	63	6.3%	114	13.3%
Mother (given birth)	35	6.3%	25	5.0%	38	3.8%	42	4.9%
Been Pregnant	41	10.7%	42	8.4%	40	8.7%	51	5.9%
Orphans	54	18.5%	20	4.0%	84	24.9%	23	2.7%

Figure 2, shows the composition of the Girls' Club based on statements made by AoCs during key informant interviews and focus group discussions. All key groups outlined in the table above were mentioned by AoCs.

Although the percentage of OS girls increased within the sample between Baseline Y2/Midline and Endline in both the treatment and control group, this does not indicate that girls dropped out between these periods. OS status is based on a girl's historical enrolment status at Baseline and does not reflect the percentage of girls out of school at Endline. Furthermore, as the Endline study adopted a cross-sectional approach girls were not tracked between periods. To ensure that the sample was representative of the population targeted by the intervention, the Endline aimed to achieve an OS composition of 30%, the same percentage of OS girls (at Baseline) represented in Girls' Clubs.

2.1.2 How well were target groups reached?

Based on the composition of the sample across time periods, the project was successfully able to reach all of its key targeted populations. However, the percentage proportion of orphans, married girls, mothers and girls who have been pregnant decreased between Midline and Endline. Whilst this may be due to sampling, the project should consider monitoring the composition of the beneficiary population through these subgroups in routine monitoring activities so as to ensure no subgroup disengages with club activities during the intervention.

AoCs were responsible for recruiting club participants in target schools. AoCs applied the marginalized girls' checklist to identify girls, who were married, orphans, sexually active, or out of school. Girls were then invited to join the Girls' Club. AoCs mentioned that they also identified girls "who were just repeating the same class," or "who were pointed out by their class teacher to have some [learning] problems". An AoC explained, "We explained to the teachers that we are looking for marginalized girls; this term includes orphans, those who are likely to stop school, who have low performance in class, and who are sexually active".

AoCs mentioned that they faced some difficulties getting out of school girls to attend the club in the beginning of the project. One AoC summarized, "We approach some girls in the village who are out of school but they don't come". A number of AoCs agreed that there were many girls around their schools who should come but they didn't' have space in the club for. AoCs exhibited some confusion as to the maximum number of spaces in the club. Some AoCs believed that the club was capped at a given number and they had to turn girls away, whilst others believed that this was not the case. This may have resulted in some differences between clubs depending on the overall number of participants and the depth of contact with the AoC.

A key strategy which also promoted club attendance among girls was home visits. As one AoC stated, "when we visit them in their homes when they haven't' becoming to the club [they start coming]". A number of AoCs agreed with this approach, also seeking out parents in such cases and discussing the importance of girls' education with them.

AoCs also mentioned that inviting a girl's parent to the listening club enabled them to better accept discussions they would have with girls in the Girls' Club. A parent supported this view, stating, "When our girls started attending she told me she had joined the TFAC group and that she would be coming home late, I told her it was ok and then one day when she came home she told me that I was required to be attending the meeting, I then went and that day we listened to the radio, after that we were asked questions and were told that they had invited us so that we know what's going on at school and that our children might be coming home late, since that day we have been following TFAC and discovered its relevance".

2.2 What impact has the project had on marginalised girls' learning?

2.2.1 What impact has the project had on literacy outcomes?

i) Methodology and design

In order to assess project impact on literacy, the study administered the Malawi Early Grade Reading Assessment, at Baseline, Midline and Endline.

The Malawi 2010 EGRA instrument, administered at Baseline, and the Malawi 2011 EGRA instrument, administered at Midline, were both developed by RTI in consultation with stakeholders from the MoEST and specialists on the Malawian educational curriculum. The Malawian EGRA is administered in Chichewa and is used by the MoEST in the national assessment of literacy. At Endline, TfaC Malawi developed, piloted, and recalibrated an EGRA assessment following GEC guidance and advice from colleagues at RTI International.

The EGRA assessment contains eight sub-tasks, namely (1) Letter name knowledge; (2) Phonemic awareness; (3) Letter sound knowledge; (4) Familiar word reading: (5) Unfamiliar word reading; (6) Oral reading fluency with comprehension; (7) Listening comprehension; and (8) Dictation.

For Midline-to-Endline comparisons, the chosen dependent variable for analysis is Oral Reading Fluency (ORF) as measured in Words per Minute (WPM). The scoring of ORF is depicted by the following formula:

$$WPM = \frac{Number\ of\ Words\ Read\ Correctly}{Seconds\ required\ to\ read\ (time\ taken)} \text{ x } 60 \text{ seconds}$$

Oral reading fluency (ORF) provides a well-documented measure of 'overall reading competence'[40]. In the context of EGRA, ORF is understood as 'the ability to translate letters into sounds, unify sounds into words, process connections, relate text to meaning, and make inferences to fill in missing information'[41].

ii) Findings

Table 6: Summary of Project Performance on Literacy Outcomes

Result	Details	Comments
Literacy result (Baseline to Midline)	**Beta** [estimated change in literacy score as result of intervention from regression or outcomes spreadsheet]: **4.077** **p-value** [estimated statistical significance value from regression]: **p<.05 (0.037)**	According to a cross-sectional approach and for a sample of 1090 participants, the regression model found that the Tiphunzire project had an impact at the p<.05 significant level on literacy outcomes (p=.037) as measured through an overall EGRA score. Tiphunzire accounts for 4.1 points of EGRA[42] improvements made by the treatment group across time. The model was able to explain 18.1% of the variance in the data, which is a good predictive power according to Cohen's criteria.

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

[41] RTI International. Early Grade Reading Assessment Toolkit, 2009

[42] EGRA Overall Score (weighted- see EGRA Annex 3 and Annex 7)

Literacy result (Midline to Endline) **Cross-sectional**	**Beta** [estimated change in literacy score as result of intervention from regression or outcomes spreadsheet]: **2.475** **p-value** [estimated statistical significance value from regression]**: p = 0.166**	The regression was insignificant and the project subsequently had no impact on literacy. However, a cross-sectional regression on only the Y1 cohort found impact with an estimated attributable impact of 7 words per minute.

Baseline to Midline Results

Literacy was measured at Baseline using the EGRA 2010, and at Midline using the EGRA 2011. The EGRA incorporates eight subtasks, including letter-naming fluency, initial sound awareness, syllable segmentation, syllable reading fluency, familiar word fluency, nonsense word reading fluency, oral reading fluency, reading comprehension, and listening comprehension. Due to the absence of oral reading fluency data from Baseline, the comparison at Midline relied on an overall EGRA measure which is a composite score from 1 to 68 calculated using all subtasks except oral reading fluency[43]. To measure impact, the project relied on a cross-sectional approach on a sample of 1090 cases.

- For a sample of 1090 participants the regression model found that the Tiphunzire project had an impact at the p<.05 significant level on literacy (p=.037) by Midline.
- Tiphunzire accounts for 4.1 points of EGRA[44] improvements made by the treatment group by the time of the Midline Evaluation. The model was able to explain 18.1% of variance in the data, which is a good predictive power according to Cohen's criteria.
- For the treatment group, out-of-school girls saw an improvement of 13.0 pts on the EGRA test. In-school girls who were in Standard 5 at baseline improved by 14.1 pts and Standard 6 girls improved by 15.3 pts in the EGRA test.

Midline to Endline results

Summary Results

Table 7 summarizes the aggregate results for oral reading fluency (wpm) for treatment and control cases over time. The largest change over time is exhibited in the Year 1 Treatment Group. Girls in Standard 5 at Baseline, in year 1 schools, increased by an average of 19.9 words per minute by Endline, compared to an average change of 13 words per minute in the control group. Out of school girls in the year 1 treatment group increased an average of 34 words per minute compared to an average of increase 19.5 words per minute in the control group. As demonstrated by impact level findings, the control group outperformed in the treatment group in literacy for all Y2 cohorts.

Table 7. Literacy: Oral Reading Fluency (wpm)

Cohort Member-ship	**Midline Period**								**Endline Period**								**Performance Overtime**	
	Year 1 Cohort				*Year 2 Cohort*				*Year 1 Cohort*				*Year 2 Cohort*				*Improvement Over and Above Control*	
	Control		*Treatment*		*Control*		*Treatment*		*Control*		*Treatment*		*Control*		*Treatment*		*Year 1*	*Year 2*
	WPM	*Std. Dev*	*WPM*	*Std. Dev*	*WPM*	*Std. Dev*	*WPM*	*Std. Dev*	*WPM*	*Std. Dev*	*WPM*	*Std. Dev*	*WPM*	*Std. Dev*	*WPM*	*Std. Dev*	*WPM*	*WPM*
OS	32.7	27.2	27	26.4	-	-	-	-	52.2	18.3	61.1	19.4	44.4	17.7	52.5	18.8	**+14.6**	**-**

[43] Oral reading fluency was not collected at Baseline by the previous external evaluator, preventing subsequent comparisons at Midline.
[44] EGRA Overall Score (weighted- see EGRA Annex 3 and Annex 7)

Standard 5 at Baseline	42.4	26.6	38.3	25	48.3	18.7	48.6	13.9	56.1	19.1	58.2	21.5	54.6	15.2	52.9	17.6	**+4.2**	**-1.7**
Standard 6 at Baseline	49.2	21.3	41.8	26.7	41.8	13.3	46.9	18.4	57.4	23.9	58.3	21.2	50.1	22.2	49.1	23.6	**+7.3**	**-6.1**

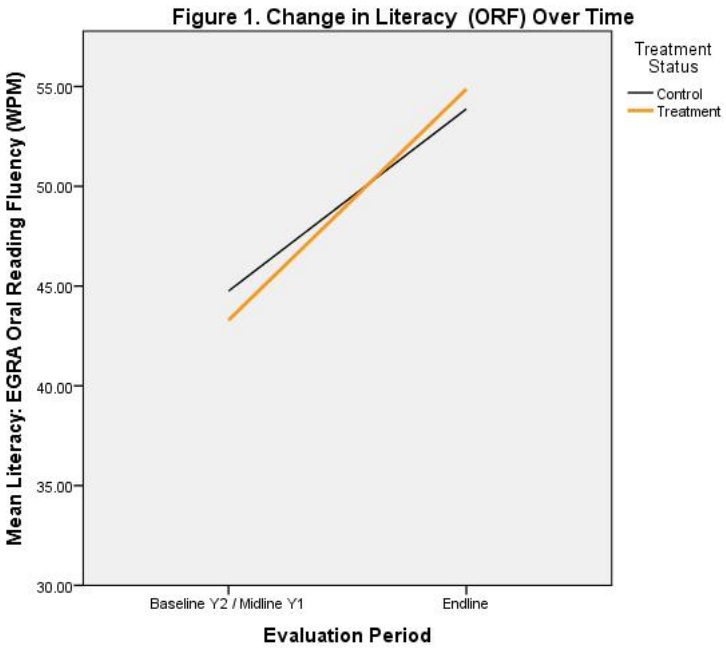
Project Achievement in Literacy

The statistical model created through *difference in difference* was not able to predict Oral Reading Fluency (r^2=0.010 F=3.320 (1, 326) p<0.069). However, this could also be due to high attrition and subsequently a low sample size in the DiD model.

The cross-sectional analysis similarly yielded no visible impact on literacy as measured through oral reading fluency. The interaction effect did not significantly predict oral reading fluency scores (r^2=0.057 F=52.086 (3, 2587) p = 0.169).

Trend Analysis of Literacy Scores

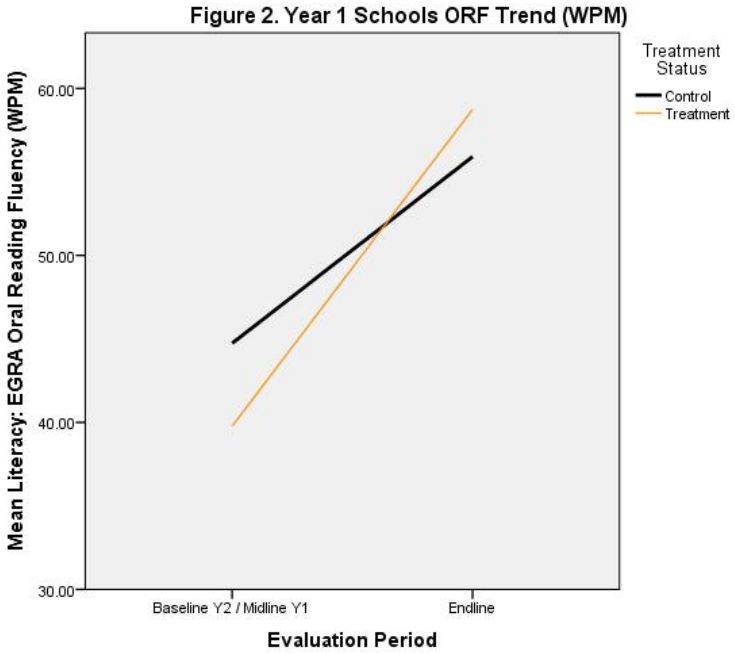
The trend on oral reading fluency between treatment and control across time periods is depicted in *Figure 1.* Although the treatment group visibly overtook the control group despite starting with lower average levels of literacy, the regression did not find the interaction effect to be statistically significant.



Cohort Y1 and Y2 Compared

In order to assess whether the intervention had an impact within one of the two cohorts of schools, we conducted two additional regressions with only Y1 and Y2 schools selected. Interaction was a statistically significant predictor of literacy scores within the Y1 group intervention (r^2=0.102 F=55.423 (3. 1466) p<0.05). An additional 7.9 words per minute can be attributed to the intervention in the Y1 group. This may be due to the fact that the intervention has been working in year 1 schools for a year longer than in year 2 schools.

Figure 2 depicts the mean trend in year 1 school oral reading fluency across evaluation periods. On average, gains in the treatment group overtook gains made in the control group; despite the fact the treatment group had lower average words per minute scores at Baseline Y2/Midline.



Other Predictors of Literacy

AoCs provide literacy instruction in Girls' Clubs and Holiday Clubs, in order to improve literacy outcomes. Literacy instruction takes place in parallel with other project activities, including those related to creating girl friendly learning environments, and improving girls' self-efficacy, self-confidence, and sexual and reproductive health. By providing supplementary literacy instruction to in-class teaching, AoCs are able to reteach core content necessary for comprehensive literacy acquisition.

In order to better explain changes in literacy outcomes within the treatment group, we ran three time-fixed effects regression models with various predictors. Summary results of these regressions are shown in Table 8.

The first model explores the effect of poverty as seen by the level of hardship experienced by families[45] and the number of children per adult living in the household. The second takes the best predictors from the first model and controls for other predictors including attendance, self-esteem, and reading affinity. The third model takes the best predictors from the second but also looks at the effect of being married, sexually active, a young mother or having been pregnant at least once in a life time.

Based on these regression findings the key predictors of literacy outcomes in the treatment group are hardship score, attendance, reading affinity, self-esteem, and early marriage.

[45] Hardship is defined as the frequency at which a family goes without food to eat, without cash or income, without medical care when needed, and without clean water for home use.

Table 8. Explaining Impact on Literacy (Treatment Cases)

	Oral Reading Fluency (wpm)		
	Unstandardized Beta (Std. Error)		
	(Model 1)	(Model 2)	(Model 3)
(Constant)	23.673 (2.849)**	-27.145 (11.367)***	65.989 (2.979)***
Total Children Per Adult Living in Household	-0.703 (1.076)		
Hardship Score (frequency of going without food, cash, clean water or medicines).	-4.954 (1.73)**		
Attendance: Average Proportion of Days Attended in a School Calendar Month (%),		0.155 (0.07)*	
Reading Affinity mean across 4 items (2 reverse coded)		7.187 (2.124)***	
Mean Self-esteem across all 10 Rosenberg items (negatively phrased items reverse coded)		6.852 (2.124)***	
Early Marriage			-33.779 (9.979)**
Sexually Active			-7.799 (7.032)
Young Mother			-5.805 (15.992)
Ever been pregnant			6.699 (18.402)
R^2	.04	0.11	0.173
F	4.313 (3, 316)**	11.104 (4, 1231)***	9.321 (8, 364)
N (valid-list wise)	313	1229	364

** Denotes Sig Test Result at the p<.05 level*
*** Denotes Sig Test Result at the p<.01 level*
**** Denotes Sig Test Result at the p<.001 level*

Findings on the relationships between reading affinity, self-esteem, attendance, and literacy outcomes strongly support a number of project assumptions.

Reading affinity can be understood as a collection of attitudes and personal experiences relating to ones' relationship to reading. For the purposes of this study, reading affinity is scale measures established through agree-disagree responses to five items about reading:

- I enjoy reading;
- I find reading difficult[46];
- I think it is important to read;
- I get nervous when I have to read in front of others[47];
- I read to learn about new things.

Findings from all time periods, indicate that reading affinity is a strong predictor of literacy achievement as measured through oral reading fluency (r^2=0.038 F=81.725 (1, 2055) p<0.05).

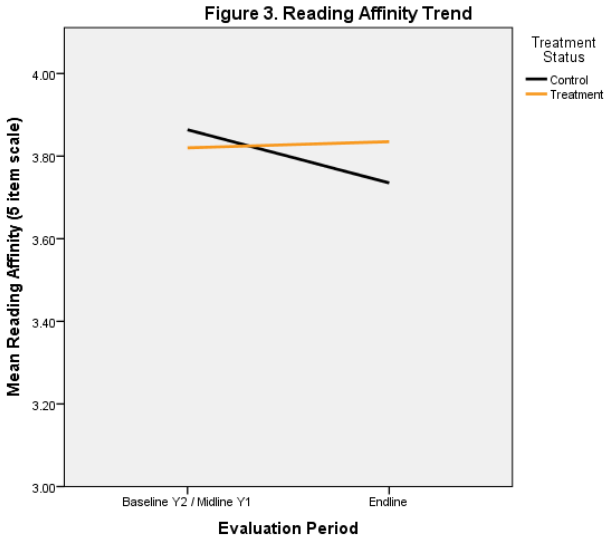
For TfaC, promoting a culture of reading within club settings is important and essential for sustained literacy improvements. Many AoCs cite books provided by TfaC to club participants as having a role in encouraging girls to

[46] Reverse coded in analysis

[47] Reverse coded in analysis

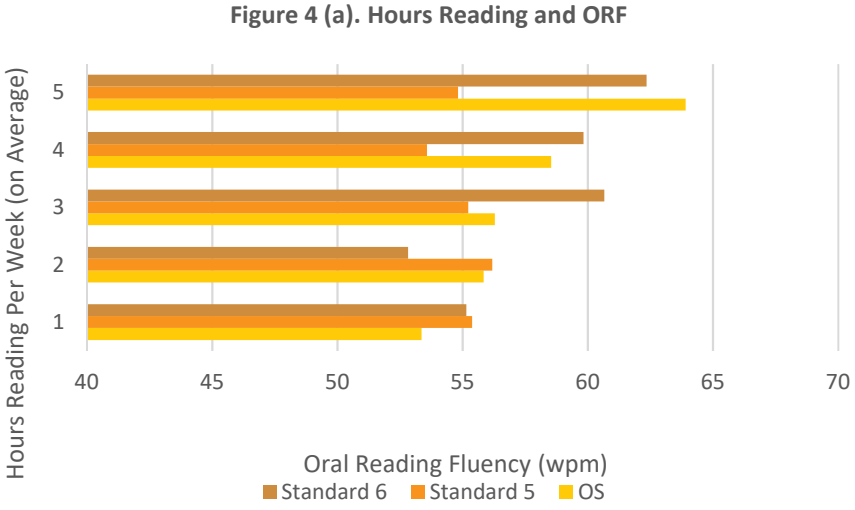
read. One AoC explained, "Many girls like to read these days because of the books we receive from TfaC. This has helped them to do better in class"[48].

A cross-sectional regression using time, treatment, and interaction as a predictor further determines that the intervention has had a positive and attributable impact on reading affinity despite the lack of impact on literacy. The trend of changes in reading affinity across evaluation periods is shown in *Figure 3*. Whereas reading affinity decreased in the control group over time, reading affinity increased slightly in the treatment group.



The relationship between reading affinity and literacy level can also be understood through the amount of time a girl spends reading. Girls with higher reading affinity, on average spend more time reading than their peers. In turn, girls who spend a higher number of hours per week reading have higher oral reading fluency.

Figure 4 (a) displays this relationship for each cohort targeted by the intervention. A linear regression found the relationship between hours spent reading per week and oral reading fluency to be statistically significant (r^2=0.069 F=5.35 (1, 1104) p<0.05).



Self-esteem, as demonstrated by model 2, is an effective predictor of oral reading fluency in the treatment group. Higher self-esteem in the treatment group therefore leads to higher literacy, as measured by oral reading fluency.

[48] FGDs with AoCs on Girls' Clubs and Sustainability in Dedza; June, 2016

TfaC's approach argues that improved self-esteem leads to improved engagement in school and learning. Literature on the relationship between self-esteem and oral reading fluency suggests that girls who are "confident" readers, afforded the opportunity to practice repeatedly, are more likely to improve their oral reading fluency. Other findings on self-esteem suggest that girls with low self-esteem are more likely to exhibit disruptive behavioural difficulties in class[49]. There is an additional wealth of findings that relate self-esteem to independence, responsibility taking, toleration of frustration, resistance to peer pressure, willingness to attempt new tasks and challenges, and willingness to offer assistance for others; all characteristics necessary and desirable in an educational setting[50].

Through an inclusive and participatory approach Girls' Clubs' aim to nurture girls' self-esteem so as to improve learning. One key element of this approach is providing participants with a girl-friendly space through which they can practice literacy skills, where it is safe to fail and re-try.

Research on Oral Repeated Reading (ORR) highlights that reading meaningful texts repeatedly and out loud, as done in Girls' Clubs, can build confidence and strengthen learners' perceptions of themselves as readers simply by giving them the opportunity to repeat the exercise[51].

AoCs corroborated this by arguing that giving learners the opportunity to practice reading and writing has had an effect on motivating girls to read. One AoC stated, "They are happy about it… we have competition from learners because they want to show us that they can read"[52]. Another AoC, explained, "the time we started Girls' Club, the girls were not able to read in front of everyone, for example reading stories but now they are able to read out loud". When girls where asked if they would have learnt to read without the AoC, girls report that the club was often more effective to learn how to read than in-school instruction. A Girls' Club participant in an FGD explained that this was "because in class you do an activity once but at the club we repeat an activity until everybody understands"[53].

The Club's inclusive approach aims to nurture self-esteem amongst girls so as to ensure they are continually willing to practice, fail and learn. Whilst the project has not demonstrated a visible impact on literacy outcomes overall, self-esteem in the treatment group remains a strong predictor of oral reading fluency. This is important to highlight, particularly because the project had a statistically significant positive impact on self-esteem as demonstrated through a cross-sectional regression model (see *2.3.1: Other Predictors of Attendance)*.

Early Marriage in the treatment group is a statistically significant predictor of oral reading fluency in the treatment group. Marriage or living with a man as if married has a negative effect on a girl's oral reading fluency. This finding supports the argument that early marriage is a barrier to girls' education and is in line with the project's focus on sexual reproductive health.

iii) Sub-group analysis

The intervention targets marginalised girls based on a comprehensive checklist which includes: single orphans, double orphans, married girls, sexually active girls, and out of school girls. Table 9 summarizes literacy outcomes at Endline, as measured in words per minute, for each of the key sub-groups targeted by the intervention.

[49] Ambe, 2007; Fuchs et al., 2001

[50] United States Department of Health and Human Services (n.d.) Building Self-Esteem in Children. [Online]. Available at: http://mentalhealth.samhsa.gov/publications/allpubs/Ca-0048/default.asp [accessed 2 January 2008]

[51] Greenberg, Buggey, and Bond (2002)

[52] FGDs with AoCs on Girls' Clubs and Sustainability in Balaka; June, 2016

[53] *Ibid, 52.*

Table 9: Literacy by Sub-Group at Endline (Words Per Minute)

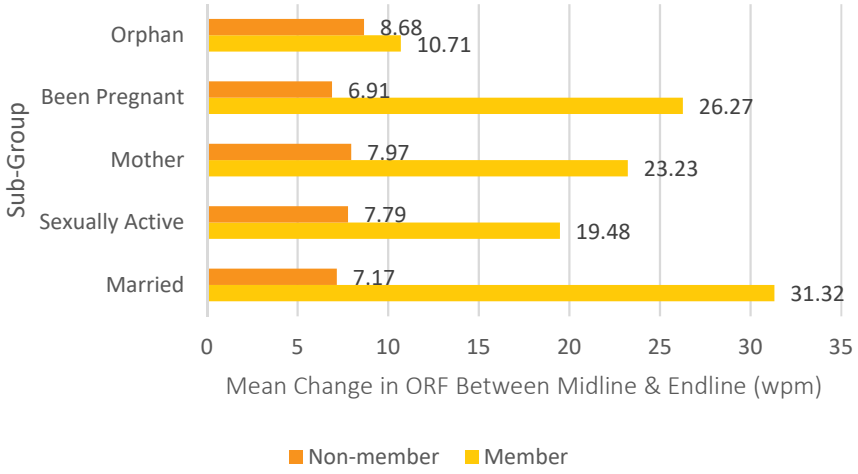
		Treatment		Control		Treatment Difference (over and above control
		Baseline Y2 / Midline Y1	Endline	Baseline Y2 / Midline Y1	Endline	
		Mean (wpm)	Mean (wpm)	Mean (wpm)	Mean (wpm)	Mean (wpm)
Marital Status	Not married or living with a man as if married	43.21	55.02	47.33	54.50	**+4.64**
	Married or living with a man as if married	2.14	46.79	11.56	42.88	**+13.33**
Sexually Active	Not Sexually Active	45.01	56.20	46.77	54.56	**+3.4**
	Sexually Active	20.50	46.30	30.83	50.31	**+6.32**
Mother	Not Mothers	44.66	55.31	46.17	54.14	**+2.68**
	Mother	13.71	46.53	25.74	48.97	**+25.91**
Ever been pregnant	Never been pregnant	42.2	55.36	47.30	54.21	**+6.25**
	Been Pregnant	19.04	46.97	24.02	50.29	**+1.66**
Orphans	Both Parents Alive	37.59	54.88	45.18	53.86	**+8.61**
	Orphaned by at least One Parent	25.58	54.79	43.49	54.20	**+18.5**
In-School vs. Out-of-School Cohorts at Baseline	In School	42.44	55.29	32.69	54.60	**-9.06**
	Out of School	27	48.94	46.50	55.95	**+12.49**

The largest change experienced for both treatment and control between Midline and Endline within these subgroups was experienced by married girls. On average married girls in the treatment group increased their oral reading fluency by 31.32 words per minute between Midline and Endline. This change was an average of 13.3 words more than what was experienced by married girls in the control group.

Girls who have been pregnant, also in the treatment group, increased their oral reading fluency by an average of 26.27 words per minute, while girls who are sexually active increased their oral reading fluency by an average of 19.48 words per minute. All of SRH related subgroups in the treatment group outperformed changes experienced in the control group over time.

These findings suggest the intervention is well targeted and achieves its strongest changes in literacy amongst its key populations. Figure 4 (b) displays literacy changes in the treatment group for the key sub-groups across time and compares them to non-subgroup members.

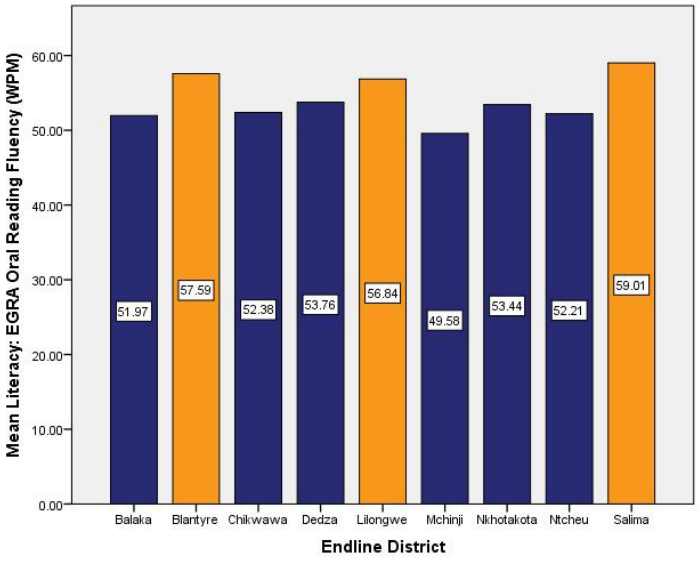
Figure 4 (b). Literacy Changes in Treatment Sub-Groups



iv) Literacy results in the Context of the Local, Regional and National Environments

District comparisons determine that, within the treatment group, girls in Blantyre, Lilongwe, and Salima have the highest average literacy levels. The lowest performing districts were Mchinji, Balaka, and Ntcheu. Although district differences are minimal, there is a notable trend in that more urban districts such as Lilongwe, Blantyre and Salima have on average higher literacy. The Malawi National EGRA Baseline (2010) found similar findings, with urban schools performing better than rural schools in all test areas[54].

Figure 5. Literacy Levels Between Districts (Treatment)



[54] Op Cit., 8. p. 9.

2.2.2 What impact has the GEC had on numeracy outcomes?

i) Methodology and design

The EGMA assessment tested girls on eight components including (1) oral counting; (2) Rational counting; (3) Number recognition; (3) Quantity discrimination; (4) Pattern completion; (5) Word Problems; (6) Addition Questions (level 1 and 2); (7) Subtraction Questions (level 1 and 2); and (8) Written Exercise.

As the first two subtasks of the Malawi EGMA, oral counting and one-to-one correspondence (rational counting) do not result in a total correct score, they are excluded from the calculation of Overall Score. For additional information please see the Malawi EGMA Baseline Study (2010)[55].

For each subtask, the total number of correct answers is divided by the total number of possible correct answers. To calculate the EGMA overall percentage, scores from subtasks 3 to 9 are averaged and multiplied by 100 to obtain an overall percentage.

ii) Findings

Table 10: Summary Project Performance on Numeracy Outcomes

Result	Details	Comments
Numeracy result (Baseline to Midline)	**Beta** [estimated change in numeracy score as result of intervention from regression or outcomes spreadsheet]: **0.020** **p-value** [estimated statistical significance value from regression]**:** **0.245**	Visual appreciation of trends of numeracy outcomes from baseline to midline shows no performance over and above control groups. The cross-sectional model was significant though of low predictive power as demonstrated by a low R-square of 4% F=19.781 (3,1326) p<.001. Of the independent variables, the constant variable was high, explaining 75% of variance. This means numeracy outcomes is rather largely explained by unaccounted factors. It was also found that both groups are comparable in terms of demographic variables except to the degree they experience hardship and that attrition affected OOS non-randomly. Endline cohort comparisons will demonstrate whether this bias existed at endline after resampling new cases. This can mean other factors can account for changes in numeracy outcomes. Ceiling effects demonstrated during midline, demanding correction. This was corrected by introducing a task with higher complexity called the written exercise. The intervention reviews its curriculum to stay relevant and delivers active numeracy teaching in Holiday Clubs and Girl Clubs.
Numeracy result (Midline to Endline) using Cross-sectional Approach	**Beta** [estimated change in numeracy score as result of intervention from regression or outcomes spreadsheet]: **4.4%** **p-value** [estimated statistical significance value from regression]**:** **p<.000 (p=.000)**	According to the cross-sectional approach and for a sample of 2323 participants, the regression model found that the Tiphunzire project had an impact at the p<.001 significant level on numeracy outcomes (p=.000) as measured through an overall EGMA percentage. Tiphunzire accounts for 4.4% points of EGMA improvements made over and above the control group across time. The constant of the model was quite high (81.7%) suggesting that other factors also contribute to better numeracy. The model was able to explain 1.2% of the variance in the data at significant levels [r-square = .012; p<.001; F (3, 2326)= 9.382].

[55] Malawi EGMA (USAID) 2010: "The EGMA instrument used in this study consisted of a number of subtests. The first two subtests, oral counting and one-to-one correspondence (rational counting), do not produce a correct/incorrect response but rather a measure of the extent to which a child can count in each of these ways. Although these subtests are important and the findings discussed later in the report, performance on these subtests cannot be included in the calculation of an overall result. The overall result for each child is based on the performance by children on subtests 3 to 8 with each subtest being equally weighted; henceforth, this will be referred to as the overall test result."

Baseline to Midline results

Numeracy was measured through the EGMA 2010 at Baseline and at Midline. The Malawi EGMA test is comprised of eight subtasks which include oral counting, rational counting, number identification, number discrimination, pattern completion, word problems, addition problems, and subtraction problems. The overall score for the EGMA test is the average percentage of correct responses from subtests 3 to 8 and impact was measured using a cross-sectional approach.

- For a sample of 1329 participants the regression model found no visible impact at significant levels as measured through the EGMA test (p=.243).
- Visual appreciation of trends of numeracy outcomes from baseline to midline shows no performance over and above control groups. The cross-sectional model was significant though of low predictive power as demonstrated by a low R-square of 4% F=19.781 (3,1326) p<.001. Of the independent variables, the constant variable was high, explaining 75% of variance. This means numeracy outcomes is rather largely explained by unaccounted factors. It was also found that both groups are comparable in terms of demographic variables except to the degree they experience hardship and that attrition affected OOS non-randomly. Endline cohort comparisons will demonstrate whether this bias existed at endline after resampling new cases. This can mean other factors can account for changes in numeracy outcomes. Ceiling effects demonstrated during midline, demanding correction. This was corrected by introducing a task with higher complexity called the written exercise. The intervention reviews its curriculum to stay relevant and delivers active numeracy teaching in Holiday Clubs and Girl Clubs.
- For the treatment group, out-of-school saw an improvement of 9% on the EGMA test. At midline, in-school girls who were in Standard 5 at baseline improved by 2% and Standard 6 girls improved by 5% in the EGMA test.

Midline to Endline results

Summary Results

Table 11 summarizes the aggregate results for EGMA percentage scores for treatment and control cases over time.

At Midline, control cases outperformed treatment cases for in-school girls by 2% in the Year 1 Cohort. This is expected given that the project did not find impact in numeracy at midline in significant levels. For the Year 2 cohort, control cases had significantly higher literacy than treatment cases for the Standard 6 cohort.

At Endline, however, treatment cases outperformed control for across all years and in both cohorts. Out of school girls outperformed their peers in control schools by as much as 6.5% in the Year 1 Group and 7% in the Year 2 group. Girls in the original Standard 5 cohort fared better in treatment schools than control by 3% in the both Year groups and Standard 6 by 2% in both year groups.

Table 11. Mean EGMA Percentage Score for Treatment and Control (Std. Dev)

Cohort Membership	Numeracy: EGMA Overall Percentage (%)															
	Midline Period								Endline Period							
	Year 1 Cohort				Year 2 Cohort				Year 1 Cohort				Year 2 Cohort			
	Control		Treatment		Control		Treatment		Control		Treatment		Control		Treatment	
	%	Std. Dev	%	Std. Dev	%	Std. Dev	%	Std. Dev	%	Std. Dev	%	Std. Dev	%	Std. Dev	%	Std. Dev
OS	71.2	21.2	78.9	10.0	69.5	11.0	68.2	12.0	76.8	11.5	83.3	11.8	74.0	11.6	81.0	11.3
Standard 5 at Baseline	83.4	12.7	81.9	15.4	79.3	12.9	79.1	11.0	80.4	11.3	83.6	10.7	78.6	11.1	81.8	11.4
Standard 6 at Baseline	85.5	9.7	83.6	12.6	85.2	7.7	77.6	14.1	83.3	12.1	85.7	9.4	82.7	8.8	85.0	8.5

Project's Achievement

According to DID, the model finds a significant impact over and above the control group in the changes of numeracy at the p<.05 level. An additional 6% of changes in numeracy outcomes can be accounted to the Tiphunzire project (F=7.123 (1, 335)).

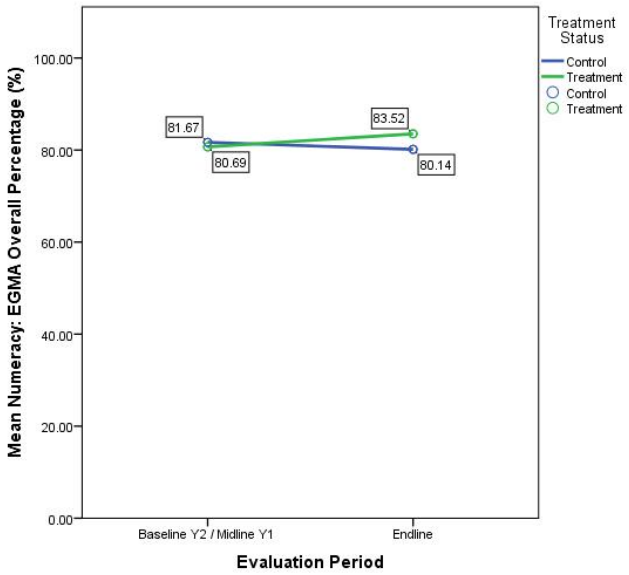
Similar results were found using the cross-sectional approach. For a sample of 2323 participants, the regression model found that the Tiphunzire project had an impact at the p<.001 significant level on numeracy outcomes (p=.000) as measured through an overall EGMA percentage. Tiphunzire accounts for 4.4% of EGMA improvements made over and above the control group across time.

The interaction variable explained a small portion of the variance in numeracy scores at significant levels [R = .012; F (3, 2326) = 9.382, p<.001] suggesting that other individual or social factors predict the largest portion of a girls' numeracy.

Trend Analysis of Numeracy Scores

Figure 6 depicts the trajectories of outcome changes. The steeper green line in Figure 6 shows a larger improvement in the level of numeracy for the treatment than control cases. From the visual it is possible to see the treatment group's performance over and above the control group between these two periods:

Figure 6. Trend in Numeracy Changes for Treatment and Control



School Attendance as a Predictor of Numeracy

A simple regression shows that attendance, measured as the Average Proportion of Days Attended in a School Calendar Month (%), is a significant predictor of Numeracy *b = .092, t (0.16) = 5.733, p<.001.* This means that for every extra day a girl goes to school in a given month, her numeracy score will be prone to increase by 1%. In Malawi, mathematics is taught from Standard 1 all the way until the end of secondary school[56].

However, attendance level explained only a small portion of the variance in numeracy scores $R^2 = 0.018$, *F (1,1765)= 32.866, p<.001.* This means that whilst promoting school access can remain a core aspect of education programming, a girls' numeracy can also be enhanced through other important means.

Other Predictors of Numeracy

Whilst the school is an important contributor to the girls' numeracy, the presence of impact in numeracy over and the control group is expected, given the incorporation of active numeracy skills teaching in the design of the Girl and Holiday Clubs' curricula.

[56] US Embassy: Education System of Malawi

From the teacher side, AoCs shared that peer-to-peer learning and core numeracy skill teachings were especially effective ways to teach numeracy.

TfaC employs a variety of methods in the teaching of numeracy, many of which are recognized as useful by AoCs including number patters and mental sums, which "helps learners to be fast thinkers". "At the holiday club we discussed ways of teaching mathematics, when we followed these ways we noted that the girls became sharp in mind. We even used these ways in our regular classes."[57] Many of these methods involve games and seek active participation, thus keeping girls motivated "…naturally kids like to play when you teach them… if you're playing then they will not forget that easily"[58].

Given the broad range of numeracy skills that girls have when they join the club for the first time, AoCs also make use of peer-to-peer teaching as a way to provide a more individualized learning experience and keep students motivated. When asked what works best to teach numeracy, AoCs answered: "we divide them according to groups so that they should be helped by their friends… those who understand the topic are able to help others… the lesson can then go at multiple paces and remain interesting"[59].

From the side of the students, barriers to numeracy are both social and individual and are mostly sourced at the school. According to AoCs, prior to the project "many girls looked down on themselves because they believed that mathematics is a subject of boys yet that's not the case". In a FGD with Girls on Girls' Clubs and Learning and participation, girls mentioned that they do not feel shy about doing mathematics in front of others at the girls' club but did feel shy in class: "we feel shy at in class because of the boys look at us in an abusive way"[60] As such, in a normal classroom, gender dynamics and self-esteem seem also to play an important role in preventing class participation in mathematics.

For these reasons, Tiphunzire girls perceive Girl Clubs and Holiday Clubs to be safe environments where participation is safe and key to learning: "The teacher writes the maths on the board and calls for one to go and solve, when you solve it they ask you how you did it. When you explain the other girls listen and when you have got it wrong at the Girls' Club, the teacher corrects you but in class they just laugh at you."

To motivate learning in mathematics, girls will be motivated when they know they are able to demonstrate progress and succeed in exams. In this case, motivation finds its source in a performance expectation, occurring when the individual feels capable of succeeding. At endline, girls mentioned to like math "because we know that two plus two the answer is four. So we are sure that we will pass exams for we know how to go about solving problems." When girls do not think they will succeed, or think they cannot succeed, they will be less prone to pursue learning in mathematics. Academic self-efficacy may therefore be an important predictor of a girls' numeracy in intervention contexts.

In addition to performing well in exams, learning mathematics is related to future aspirations and dealing with day-to-day life. When asked if they were happy about learning numeracy skills at the Clubs, girls mentioned that "we are happy because if you do well in mathematics you can someday work in a bank", "because when we are sent to buy soap which costs K100 and we are given K500 then we need to get K400 back" and many simply "want to know how to count money and not get tricked".

To check these findings against the quantitative data, we created three multiple regressions models to study the effect of poverty, motivational and SRH factors on the literacy of marginalized girls that are part of the intervention.

The first model explores the effect of poverty as seen by the level of hardship experienced by families[61] and the number of children per adult living in the household. The second, takes the best predictors from the first model and controls for other predictors including attendance, self-esteem, self-efficacy and mathematics affinity (a predisposition to enjoy mathematics). The third model takes the best predictors from the second but also looks at the effect of being married, sexually active, a young mother or having been pregnant at least once in a life time.

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[57] FGDs with AoCs on Girls' Clubs and Sustainability in Dedza; June, 2016

[58] FGDs with AoCs on Girls' Clubs and Sustainability in Dedza; June, 2016

[59] KII with AoC in Dedza; June, 2016

[60] FGD with Girls on Learning and Participation at Dedza GC; June, 2016.

[61] Hardship is defined as the frequency at which a family goes without food to eat, without cash or income, without medical care when needed, and without clean water for home use.

Results show that poverty-related variables had no individual effect on numeracy at significant levels (model 1). In the second model, attendance and academic self-efficacy were both significant predictors suggesting that motivation is driven by expectations of performance. In the third model, self-esteem becomes an important predictor of numeracy, as well as being sexually active or married. Being a mother or ever given birth before does not affect numeracy scores. These results are outlined in Table 12 below:

Table 12. Explaining Impact on Numeracy (Treatment Cases)

	Overall EGMA Score (%)		
	Unstandardized Beta (Std. Error)		
	(Model 1)	(Model 2)	(Model 3)
(Constant)	81.249 (1.686)*	62.289 (2.948)***	65.989 (2.979)***
Total Children Per Adult Living in Household	.130 (.499)		
Hardship Score (frequency of going without food, cash, clean water or medicines).	.478 (.714)		
Attendance: Average Proportion of Days Attended in a School Calendar Month (%),		.088 (.017)***	0.073 (.018)***
Mathematics Affinity mean across 4 items (2 reverse coded)		.898 (.499)	
Mean of Self-Esteem across all 10 Rosenberg items (negatively phrased items reverse coded)		.855 (.680)	1.284 (.641)*
Mean of Academic Self-Efficacy across 3 items		1.521 (.564)**	1.443 (.556)**
Early Marriage			-8.628 (3.177)**
Sexually Active			-3.276 (1.246)**
Young Mother			-2.793 (3.853)
Ever been pregnant			3.899 (3.851)
R^2	.001	.036	.046
F	.239 (2, 566)***	13.932 (4, 1511)***	10.360 (7, 1508)***
N (valid-list wise)	568	1515	1515

** Denotes Sig Test Result at the p<.05 level*
*** Denotes Sig Test Result at the p<.01 level*
**** Denotes Sig Test Result at the p<.001 level*

iii) Sub-group analysis

Table 13 below lets us enquire into whether numeracy scores have changed in different ways for different sub-groups. To understand how the project has improved numeracy outcomes for different sub-groups, we measured the changes over and above control group in the numeracy scores of the treatment group.

The table shows that project has made the biggest difference for girls who are married or living with a man as if married (36% numeracy improvements over and above control), for mothers (10% numeracy improvements over and above control), and girls who have been pregnant (11.59% numeracy improvements over and above control group). See the table following:

Table 13. Numeracy Performances by Relevant Sub-Groups (Midline and Endline)

		Numeracy: EGMA Overall Percentage (%)								
		Baseline Y2 / Midline Y1				Endline				Improvement
		Control		Treatment		Control		Treatment		Over and Above Control Group
		Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	
Married Girls	*Not married or living with a man as if married*	83.23	13.16	83.07	12.93	80.41	11.26	83.61	10.51	**3.36**
	Married or living with a man as if married	78.33	17.01	44.72	40.11	76.15	14.77	78.44	11.77	**35.9**
Girls who are Sexually Active	*Sexually Inactive*	82.06	12.82	80.89	12.47	80.32	11.30	84.35	10.21	**5.2**
	Sexually Active	77.76	14.80	75.33	19.53	79.24	12.69	78.11	11.13	**1.3**
Mothers	*Never given Birth*	81.83	12.91	80.83	12.55	80.33	11.24	83.82	10.53	**4.49**
	Mothers (given birth)	77.78	16.15	69.08	25.85	76.32	16.37	77.50	8.98	**9.88**
Girls who have been Pregnant	*Never been Pregnant*	83.36	13.01	83.20	12.82	80.20	11.33	83.85	10.48	**3.81**
	Been Pregnant	80.00	15.95	67.00	28.31	79.44	13.77	78.03	10.20	**11.59**
Orphans	*Both Parents Alive*	84.01	13.22	82.13	14.55	80.18	11.35	83.56	10.59	**5.26**
	At least one parent dead	80.72	14.37	82.07	12.30	79.29	15.09	82.04	8.89	**1.4**
In-School vs. Out-of-School Cohorts at Baseline	*Out-of-School*	71.19	21.18	78.91	9.97	75.78	11.54	81.97	11.57	**-1.53**
	In-School	83.87	11.35	81.61	13.27	81.46	11.21	83.92	10.24	**4.72**

2.3 What impact has the GEC had on enabling marginalised girls to be in school?

2.3.1 What effects has the GEC had on attendance?

i) Methodology and design

Registry Data

Attendance was measured using historical attendance data made available by school authorities through school registries and attendance records. Attendance was measured as the percentage proportion of days present in a school calendar month. For the midline the study used historical attendance records for the months of February 2015 as proxy of the attendance level. For the endline, we used the month of February 2016[62].

Using the following expression, the level of attendance was calculated for each participant of the study:

[62] We selected these months as these are outside the harvest or raining seasons and these factors are known to significantly affect attendance. The records were found in school registers or attendance books that were made available by head teachers in all midline schools.

$$Attendance\ Level = \frac{DaysPresentperSchoolCalendarMonth(s)}{TotalDaysperSchoolCalendarMonth(s)} x100$$

Spot Checks

We sampled 50% of all intervention schools (117) and all control schools (36) to gather attendance data. For intervention schools, we included both Year 1 and 2 schools in the analysis. Through this data, we were able to calculate two statistics, whose results are subtracted from each other to obtain a discrepancy score. The less discrepancy between measures, the more reliable is the registry data.

Percentage attendance by Headcount:

$$Percentage\ attending\ (Headcount) = \frac{Total\ \#\ of\ female\ students\ as\ counted\ by\ Field\ Worker}{Total\ \#\ of\ female\ students\ enrolled\ according\ to\ Student\ Registry} x100$$

Percentage Attendance by Registry:

$$Percentage\ attending\ (Registry) = \frac{Total\ \#\ of\ female\ students\ listed\ as\ \text{Present}\ in\ today's\ registry}{Total\ \#\ of\ female\ students\ enrolled\ according\ to\ Student\ Registry} x100$$

ii) Findings

Table 14: Summary of Project Performance on Attendance Outcomes

Result	Details	Comments
Attendance result (Baseline to Midline)	**Beta** [estimated change in literacy score as result of intervention from regression or outcomes spreadsheet]: **0.087** **p-value** [estimated statistical significance value from regression]**: p<.05 (0.014)**	The cross-sectional model was able to explain 14.6% of the total variance at p.<001 for 1069 cases. However, the impact of the intervention on the attendance level was not visibly significant (p=.912).
Attendance result (Midline to Endline) **Cross-sectional regression**	**Beta** [estimated change in literacy score as result of intervention from regression or outcomes spreadsheet]: **-1.113** **p-value** [estimated statistical significance value from regression]**: p=0.379**	The cross-sectional analysis similarly yielded no visible impact on attendance (r^2=0.029 F=18.135 (3, 1831) p=0.979.

Baseline to Midline results

Attendance was measured at the individual level as the percentage proportion of days an in-school girl is present in a school calendar month. As such, the regression incorporates only girls who were in-school at the time of the baseline.

- In-school girls who at baseline were in Standard 5 improved their attendance to school by 8.6% and those who were in Standard 6 by 13.1%.
- The model was able to explain 14.6% of the total variance at p.<001 for 1069 cases. However, the impact of the intervention on the attendance level was not visibly significant (p=.912).

Midline to Endline results

Summary Results

Table 15 summarizes the aggregate results for attendance for treatment and control cases over time. The largest change over time was exhibited by OS girls (enrolled) in the treatment group between Midline and Endline. OS

girls in this group improved their attendance by an average of 21.8%. This was compared to a change of only 16% in OS girls (enrolled) in the control group between Midline and Endline.

Table 15. Attendance (Average % Days Attending in a Calendar Month)

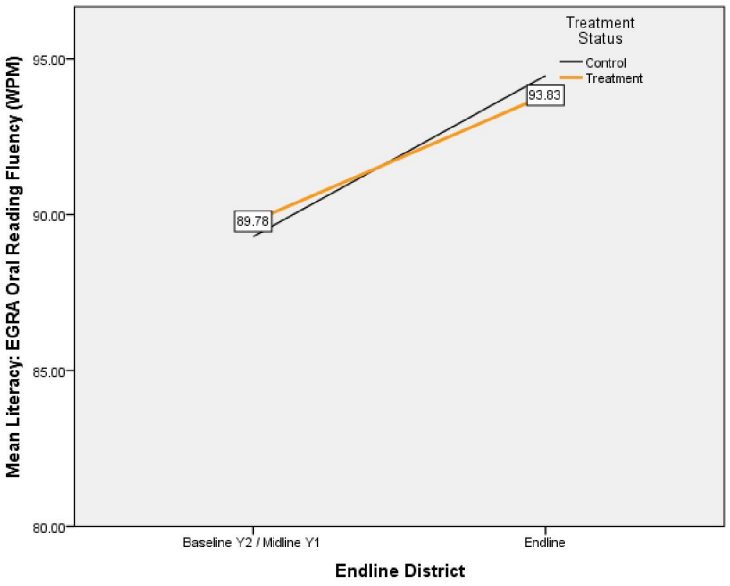
	Midline Period								Endline Period								Performance Over Time	
	Year 1 Cohort				*Year 2 Cohort*				*Year 1 Cohort*				*Year 2 Cohort*				*Difference Above Control*	
	Control		*Treatment*		*Control*		*Treatment*		*Control*		*Treatment*		*Control*		*Treatment*		*Y1*	*Y2*
	%	*Std. Dev*	*%*	*Std. Dev*	*%*	*Std. Dev*	*%*	*Std. Dev*	*%*	*Std. Dev*	*%*	*Std. Dev*	*%*	*Std. Dev*	*%*	*Std. Dev*	*%*	*%*
OS at Baseline (enrolled)	77.5	39.7	71.3	37.4	--	--	-	-	93.42	4.9	93.06	12.9	91.1	8.2	91.7	7.7	**+5.8%**	-
Standard 5 at Baseline	89.5	18.9	89.5	19.9	88	5.9	85.4	13.6	94.9	6.1	92.9	11.4	93.8	7.1	94.4	6.0	**-2%**	**+3.2%**
Standard 6 at Baseline	89.6	14.8	93.2	11.7	88	5.1	86.6	13.7	94.5	9.7	94.1	11.3	93.8	6.5	94.8	7.0	**-3.6%**	**+2.4%**

Project Achievement in Attendance

The statistical model created through difference in difference was not able to predict attendance ($r2<.000$ $F=0.109$ $(1, 249)$ $p<0.069$). At a, insignificant R-square, the statistical DID model created cannot predict attendance level as measured by changes in individual attendance over time.

The cross-sectional analysis similarly yielded no visible impact on attendance ($r^2=0.029$ $F=18.135$ $(3, 1831)$ $p=0.979$). *Figure 7* depicts the average change in attendance over time for the treatment and control group. As evidenced by the graph, there was minimal difference between treatment and control attendance at both Baseline Y2/Midline and Endline.

Figure 7. Trends in Attendance



Other Predictors of Attendance

In order to determine predictors of attendance we built a series of time fixed-effects regression models. The first model explores the effect of poverty as seen by the level of hardship experienced by families and the number of children per adult living in the household. The second model takes the best predictors and adds self-esteem and academic self-efficacy as predictors. The final model includes the effect of being married, a young mother or having been pregnant at least once. Summary results from these regressions are shown in Table 16.

Table 16. Explaining Impact on Literacy (Treatment Cases)

	Oral Reading Fluency (wpm)		
	Unstandardized Beta (Std. Error)		
	(Model 1)	(Model 2)	(Model 3)
(Constant)	93.61 (2.556)	86.210 (2.721)*	
Total Children Per Adult Living in Household	0.414 (0.686)		
Hardship Score (frequency of going without food, cash, clean water or medicines).	-1.191 (1.091)		
Mean Self-esteem across all 10 Rosenberg items (negatively phrased items reverse coded)		1.910 (0.775)*	
Early Marriage			-0.672 (4.073)
Sexually Active			-0.537 (1.574)
Young Mother			26.647 (0.308)***
Ever been pregnant			-32.286 (6.271)***
R^2	0.005	0.006	0.42
F	0.857	6.073	9.398
N (valid-list wise)	331	1087	1087

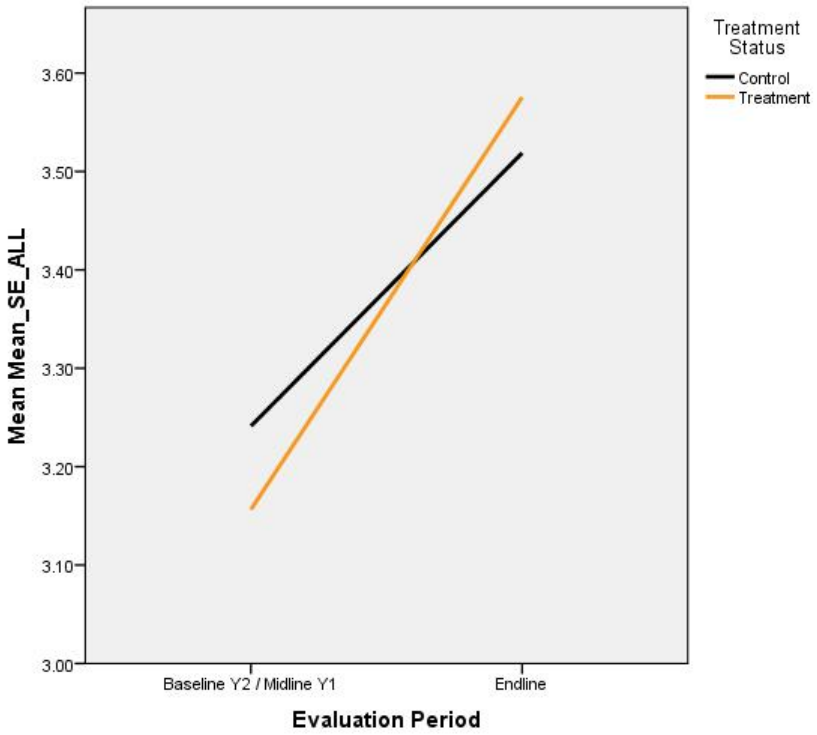
** Denotes Sig Test Result at the p<.05 level*
*** Denotes Sig Test Result at the p<.01 level*
**** Denotes Sig Test Result at the p<.001 level*

Based on these models the best predictors for a girls' attendance in the treatment group are a girl's self-esteem and whether she has ever been pregnant or has given birth.

Self-Esteem, was found to be a statistically significant predictor of attendance level through model 2. This is in line with the project's theory of change, which argues that improved self-esteem is expected to result in improved confidence and engagement with school amongst girls.

Although, the intervention had no visible impact on attendance, a time-fixed effects regression model determines that the intervention did have a statistically significant impact on self-esteem (r2=0.111 F=91.453 (3, 2194) p<0.005). The model was able to explain 11% of variance in self-esteem at highly statistically significant levels. Figure 8 depicts trend changes in self-esteem between the control and treatment group.

Figure 8. Project Impact on Self-Esteem



If a girl has ever been pregnant**,** affects her attendance with girls who have been pregnant exhibiting on average lower attendance levels. This finding is somewhat challenging to explain especially as being a young mother was a statistically significant predictor of attendance but in the opposite direction, with mothers having higher attendance levels. It could be that AoCs have been successful at establishing care-groups to support young mothers to attend school.

iii) Sub-group analysis

The intervention targets marginalised girls based on a comprehensive checklist which includes: single orphans, double orphans, married girls, sexually active girls, and out of school girls. Table 17 summarizes attendance outcomes at Endline for each of the key sub-groups targeted by the intervention.

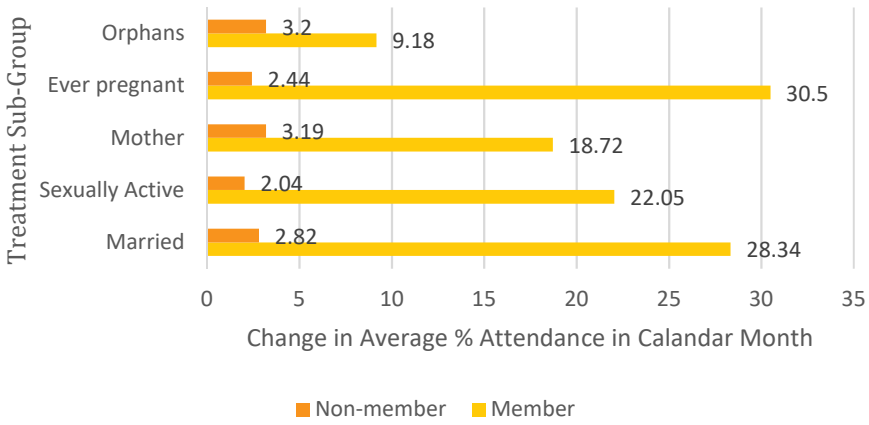
Table 17: Attendance by Sub-Group

		Attendance (Average % Attend per Calendar Month)				
		Treatment		Control		
		Baseline Y2 / Midline Y1	Endline	Baseline Y2 / Midline Y1	Endline	Treatment Difference (over and above control
		Mean (%)	Mean (%)	Mean (%)	Mean (%)	Mean (%)
Marital Status	Not married or living with a man as if married	90.80	93.62	82.55	94.31	**-8.9**
	Married or living with a man as if married	66.15	94.49	53.33	95.28	**-13.6**
Sexually Active	Not Sexually Active	91.67	93.71	86.39	94.37	**-5.9**
	Sexually Active	70.85	92.90	50.96	93.80	**-20.8**
Mother	Not Mothers	90.63	93.82	85.53	94.27	**-5.6**
	Mother	69.17	87.89	26.27	96.03	**-51**
Ever been pregnant	Never been pregnant	91.37	93.81	85.51	94.26	**-6.3**
	Been Pregnant	58.12	88.62	38.77	96.06	**-26.8**
Orphans	Both Parents Alive	90.39	93.59	80.22	94.35	**-10.9**
	Orphaned by at least One Parent	85.52	94.70	76.41	93.64	**-8**

Within the treatment group the sub-group that exhibited the greatest change from midline to endline was married girls. Married girls on average increased their attendance by 28.34%. However, in all sub-groups, control group changes over time outperformed treatment group changes over time. This disaggregation is in line with the lack of impact found for attendance at Endline.

Figure 9 depicts the change in sub-groups of the treatment group over time. All sub-groups outperformed non-sub-group members in the treatment group.

Figure 9: Changes in Attendance for Treatment Sub-Groups



Spot Checks

Spot check findings can be seen on the table below. Data is collected for two classes in each school and includes data for girls that may not be part of the TfaC Girls' Clubs.

Findings indicate a general drop in attendance for the month of march 2016 with strong discrepancies between headcount and registry data. By head count, there are more girls that by registry suggesting an influx of enrolment that was not yet captured in attendance or enrolment registries. By the last period, only small discrepancies exist between registry and head count data suggesting that registry books were updated at last. In Malawi, March correspond to the harvest season, which could explain lower attendance in this period throughout treatment and control schools.

Table 18. Spot check Findings

Period	Cohort	No. of Schools		Attendance By Headcount		Attendance by Registry		Discrepancy	
		T	C	T	C	T	C	T	C
06/15	5	14	6	85.0%	82.2%	85.0%	82.1%	0	0
	6	14	6	86.2%	83.4%	86.3%	83.4%	0	0
03/16	5	128	26	66.8%	76.1%	38.0%	52.9%	-29	-23
	6	128	26	70.1%	70.7%	40.6%	48.6%	-30	-22
06/16	5	128	26	91.3%	89.1%	89.2%	86.6%	-2	-3
	6	128	26	90.5%	88.7%	87.3%	88.6%	-3	0

T = Treatment
C = Control

2.3.2 What effects has the GEC had on enrolment?

i) Methodology and design

Enrolment is measured at the individual level using a cross sectional approach. To estimate the project's additionality, we calculate the probability of being classified as "enrolled" or "not enrolled" in school using a logistic regression function[63] of three predictors, namely (1) time (midline-to-endline), (2) treatment status and (3) an interaction variable between (1) and (2). The significance of the predictor is calculated using a Wald statistic.

Enrolment is measured through the Girls SSQ "are you currently attending school?". We triangulate findings with the HHS question "Is [GIRL] currently enrolled in school?", though HHS data is not available for all cases in the logistic regression.

Readers should bear in mind that only girls who take part in Girl Clubs receive the full intervention and thus only girls who participate in Girls' Clubs take part on this study. As such, findings are representative of the treatment group, composed of a selected group of marginalized girls at a given school. Girl Clubs are attended by in-school girls and out-of-school girls alike. To replace out of school girls lost due to attrition, we followed one-for-one replacement rules and sought to match replacement cases to lost cases in enrolment status whenever possible.

Given this characteristic of the intervention, we opted to measure enrolment at the individual rather than at the aggregate school-level.

[63] Details of the Logistic Regression Function see Annex 2.

ii) Findings

Table 19. Summary Enrolment Findings

Result	Details	Comments
Enrolment results (Baseline to Midline)	**Beta** [estimated change in literacy score as result of intervention from regression or outcomes spreadsheet]**: 1.833** **Odds Ratio** [change in odds of being classified as enrolled if belonging to the treatment group at endline]: **6.250 (CI: 2.1 -18.7)** **p -value** [estimated statistical significance value from regression]**: p<.01 (0.001)**	The likelihood of being classified in the enrolled group (odds ratio) increases by 6.2% [CI (95%): 2.1 - 18.7] when the girl has progressed from baseline to midline in the treatment group. In other words, the predictor 'interaction' was able to predict a girls' enrolment 6.2 times better than chance at significant levels [B=1.833; Wald (1) = 10.7, p.<001]. The overall logistic regression model was significant [Chi-square (3) = 206.4; p<.001] and 19% of variance can be associated with the predictors according to Nagelkerke R-square tests. This means that the model correctly predicts enrolment classifications.
Enrolment results (Midline to Endline) **Cross-sectional regression**	**Beta** [estimated change in literacy score as result of intervention from regression or outcomes spreadsheet]**: -1.191** **p -value** [estimated statistical significance value from regression]**: p=0.535**	From Midline-to-Endline, the predictor 'interaction' was not able to predict a girls' enrolment better than chance at significant levels [B=-1.91; Wald (1) = .034, p=0.535]. However, the overall logistic regression model was significant [Chi-square (3) = 73.737.4; p<.001] and less than 1% of variance can be associated with the predictors according to Nagelkerke R-square tests. This means that the model correctly predicts enrolment classifications, though a limited power. Given that the study samples from Girl Clubs, we estimate that enrolment changes are not visible in midline to endline comparisons due to the fact that most OS had re-enrolled back to school at endline.

Baseline to Midline Results

To measure changes in enrolment at midline (excluding the Y2 cohort), we constructed a dummy variable for girls defined as out-of-school at baseline who reported to have been attending school at midline and for whom attendance data was available. From the original cohort of 'out-of-school' girls, we considered a girl to be re-enrolled if she was attending more than 50% of school days per calendar month. We considered cases for whom attendance data was not available and who reported not to be attending school as not re-enrolled.

Readers should bear in mind that all girls participating in the study are sampled from within Girls' Clubs, rather than randomly from the entire school population.

Findings show that 92% of out-school girls in treatment schools have re-enrolled, compared to only 52% of out-of-school girls in control schools. According to Chi-square tests, these differences were significant at the p<.001 suggesting that an out-of-school girl's re-enrolment is highly associated with treatment status. These results confirm the significant effect of the intervention in encouraging out-of-school girls to re-enrol in school.

According to the logistic regression (which includes the Year 2 cohort), the likelihood of being classified in the enrolled group (odds ratio) increases by 6.2% [CI (95%): 2.1 - 18.7] when the girl has progressed from baseline to midline in the treatment group according to the interaction variable. In other words, a girl is 6.2 times more likely to be enrolled when attending the Girls' Club at significant levels, when compared to their peers in control schools [B=1.833; Wald (1) = 10.7, p.<001].

The overall logistic regression model was significant [Chi-square (3) = 206.4; p<.001] and 19% of variance can be associated with the predictors according to Nagelkerke R-square tests. This means that the model correctly predicts enrolment classifications.

Midline to Endline Results

Summary Findings

Results at endline show that enrolment rates have increased in both treatment and control schools overtime. At endline there are 7% more enrolled girls in treatment schools than in control schools. Since baseline, the intervention has seen an increase in enrolment of 21%. See table below:

Table 20. Enrolment Rates Baseline to Endline

	Baseline Y1				Baseline Y2				Midline				Endline			
	Control		Treatment		Control		Treatment		Control		Treatment		Control		Treatment	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Not-Enrolled	99	36%	105	32 %	6	8%	23	9%	29	8%	4	1%	90	18%	96	11%
Enrolled	179	64%	220	68%	69	92%	233	91%	353	92%	456	99%	410	82%	763	89%

Project's Achievement

From Midline-to-Endline, the predictor 'interaction' was not able to predict a girls' enrolment better than chance at significant levels [B=-1.91; Wald (1) = .034, p=0.535]. While significant impact was found from baseline to midline, no visible impact on enrolment was found for the intervention group.

Notwithstanding, the overall logistic regression model was significant [Chi-square (3) = 73.737.4; p<.001] and less than 1% of variance can be associated with the predictors according to Nagelkerke R-square tests. This means that the model correctly predicts enrolment classifications, though a limited power.

Given that the study samples from Girl Clubs, we estimate that enrolment changes are not visible in midline to endline comparisons due to the fact that most OS had re-enrolled back to school by the time of this study.

Predicting Enrolment

To check these findings against the quantitative data, we created three logistic regressions models to study the effect of poverty, motivational and SRH factors on the enrolment of marginalized girls that are part of the intervention.

The first model explores the effect of poverty as seen by the level of hardship experienced by families[64], the number of children per adult living in the household and the hours spend doing chores.

The second model, takes the best predictors from the first and controls for other predictors including, self-esteem and academic self-efficacy. This follows the assumption that girls go to school when they are empowered to belief they can succeed and when they understand that school is valuable.

The third model takes the best predictors from the second but also looks at the effect of being married, sexually active, a young mother or having been pregnant at least once in a life time. These are barriers that are known to significantly affect the chances a girl is enrolled in school and are actively targeted by Tiphunzire.

Results show that poverty-related variables had no individual effect on enrolment at significant levels (model 1). The model is itself not significant, according to the significance of the chi-square test for the logistic regression.

In the second model, academic self-efficacy and self-esteem are very significant predictors suggesting that enrolment is driven by expectations of value of school and the personal belief that one can succeed in school. Perceived power to make decisions, may not affect the chances of whether a girl finds herself in school or not. For girls, going to school is related to becoming a strong individual "As for me I want to get educated and be like the Head teacher since she is also a woman"

[64] Hardship is defined as the frequency at which a family goes without food to eat, without cash or income, without medical care when needed, and without clean water for home use.

Perceptions of school safety also affect enrolment, as girls who perceive schools to be safer are more likely to be enrolled. Only a small portion of the variance in probability scores is explained by the model according to Nagelkerke R-square tests.

In the third model, academic self-efficacy becomes the most important predictor of enrolment status, as well as being sexually active, having ever been pregnant and perceiving the school to be a safe place. Being a mother no longer affects the chances of a girl being enrolled in school when compared to other SRH variables. Contrary to findings, when many girls complained about menstruation management (predominantly due to lack of bathrooms), menstruation? was also not significant.

The third model's constant is not significant, suggesting that SRH variables are the most important predictors of the odds that a girl is enrolled or not. This model was able to explain a significant portion of variance in the probability of enrolment status (24%) at a significant level of p.<001.

These results are outlined in Table 21.

Table 21. Explaining Impact on Enrolment (Treatment Cases)

	Enrolled or Not Enrolled		
	B (Std. Error)		
	(Model 1)	(Model 2)	(Model 3)
(Constant)	2.898 (.981)**	-5.008 (.735)***	-1.943 (1.09)
Total Children Per Adult Living in Household	.167 (.266)		
Hardship Score (frequency of going without food, cash, clean water or medicines).	.074 (.362)		
Hours Spent Doing House Chores	-.038 (.158)		
Perceived School Safety		.461 (.141)***	.407 (.160)*
Perceived Fairness of Non-AoC Teachers		-.110 (.151)	
Mean of Self-Esteem across all 10 Rosenberg items (negatively phrased items reverse coded)		0.692 (.204)***	-.100 (.279)
Mean of Academic Self-Efficacy across 3 items		1.030 (.272)***	.843 (.215)***
Mean Decision Making Power		-.185 (.190)	
Early Marriage			.764 (.570)
Sexually Active			-.828 (.386)*
Young Mother			.150 (.717)
Ever been pregnant			-2.549 (.777)***
Finds it Difficult to Attend During Menstruation			.664 (.351)
Nagelkerke R^2	.005	.143	.284
Chi-square	.504 (3)	63.854 (5)***	132.99 (8)***
N (valid-list wise)	851	856	951

** Denotes Sig Test Result at the p<.05 level*
*** Denotes Sig Test Result at the p<.01 level*
**** Denotes Sig Test Result at the p<.001 level*

iii) Sub-group analysis

According to sub-group analysis, the intervention made significant improvements over and above the control group for those girls who live in households with three or more children, out of school girls and sexually active girls. The intervention did not perform above control group for orphaned children, households in hardship, girls who have been pregnant or married girls. While the intervention devotes significant efforts to encourage the re-enrolment of girls from these subgroups, it can also explore ways to target them more effectively.

These results are highlighted in the table following.

Table 22. Improvement Over and Above Control in Enrolment for Relevant Sub-Groups

		Control				Treatment			
	Improvement Over and Above Control (% Enrolled)	Baseline Y2 / Midline		Endline		Baseline Y2 / Midline		Endline	
		Unenrolled	Enrolled	Unenrolled	Enrolled	Unenrolled	Enrolled	Unenrolled	Enrolled
Household in Hardship	-2%	16%	11%	21%	14%	0%	12%	24%	13%
More than 3 Children Per Adult	10%	0%	7%	12%	3%	0%	8%	6%	14%
OS	3%	91%	4%	80%	11%	40%	4%	72%	14%
Married or living with a man as if married	-1%	21%	6%	28%	0%	50%	8%	12%	1%
Sexually Active	3%	54%	10%	59%	8%	11%	8%	45%	9%
Mother (given birth)	0%	40%	5%	20%	2%	7%	5%	28%	2%
Been Pregnant	-1%	52%	7%	36%	2%	75%	8%	35%	2%
Orphaned	-8%	25%	18%	4.4%	4%	33%	25%	1%	3%

2.4 What has worked, why and with what effects?

2.4.1 How has the project performed against its target outputs in the logframe and did the project successfully overcome barriers to girls' education

This section assesses whether project activities were able to successfully overcome barriers to education or not, and whether this change was sufficient to lead to project outcomes of learning, attendance and enrolment.

This section is structured by the project's outputs and output indicators. Table 23 below summarises the project's performance against baseline values as set out in Tiphunzire's log-frame. The endline targets referred to in this table relate to the latest cumulative targets at the time of the project's endline evaluation. The colour of the cell represents whether endline targets have been met (green) or whether they have not (red).

Table 23: Project Performance against Endline Targets in Logframe Outputs

Output and Output indicators	Activities	Baseline	Midline	Endline	Endline Target	Perfor-mance	Source
Output 1: Agents of Change run inclusive workshops (AoC training; Girls' Clubs; Listening Clubs; Holiday Clubs)							
	Summary of activities to lead to output achievement	*Baseline*	*Midline*	*Endline*	*Endline Target*	*Improvement since Baseline*	*Summary of source(s) (HHS, FGDs, observation tools etc.)*
1.1 Percentage of AoCs who demonstrate ability to teach literacy, numeracy and life skills in participatory and interactive ways	*Teacher training, refresher courses, financial and remote support*	**0%**	**83%**	**72%**	**95%**	**+72%**	Monitoring Data; Percentage of AoCs scoring 75% or higher on 7 scorecard items (maximum 5 points each) from Girls' Club Observations. Items measured facilitation skills of AoCs including organizational skills and use of participatory and interactive methods.
1.2 Percentage of AoC with correct basic sexual and reproductive health (SRH) knowledge	*Teacher training, refresher courses, and provision of guidance materials*	**86%**	**72%**	**75%**	**94%**	**-11%**	Monitoring Data; 10 knowledge questions from SRH monitoring Survey. AoCs answering at least 80% of questions correctly are considered to have "correct basic" SRH knowledge.
1.3 Percentage of AoC with knowledge of girls' gender and sexual and reproductive health rights	*Teacher training, refresher courses, and provision of guidance materials*	**65%**	**85%**	**90%**	**91%**	**25%**	Monitoring Data; 9 SRHR and gender rights knowledge questions from SRH monitoring survey; AoCs answering at least 75% of questions correct considered to have "knowledge" of girls' gender and SRHR
1.4 Percentage attendance at AoC Girls 'Clubs/ Holiday Clubs	*Teacher training, and provision of tools to gather attendance data*	**0%**	**74%**	**83%**	**70%**	**+83%**	Monitoring Data; average percentage of club attendance per month over 8-month period (December 2015 – July 2016)
1.5 Percentage of girls who show improved self-confidence and self-efficacy	*Teacher training, provision of guidance materials, Girls' Clubs*	**0%**	**83%**	**72%**	**80%**	**+72%**	Percentage proportion of girls who scored ≥3.00 in a composite scale made from the Rosenberg Self Esteem Scale and Academic Self-Efficacy items.
Output 2: Marginalised girls increase participation in co-educational environments (Girls' Clubs; Listening Clubs; Holiday Clubs)							
2.1 Percentage of club girls with awareness of their gender, sexual and reproductive health rights	*Girls' Clubs*	**N/A**	**80%**	**80%**	**80%**	**0%**	Percentage proportion of girls who are able to say no to unwanted sex and are able to use contraception if sexually active.
2.2 Percentage of club girls who believe they have the power to make decision in their own lives	*Girls' Clubs, Listening Clubs and Home Visits*	**55%**	**82%**	**86%**	**55%**	**+31%**	Percentage proportion of girls who scored ≥3.00 for the item "I have the power to make decisions for myself"
2.3 Percentage of club girls demonstrating the ability to confidently interact with boys in co-ed learning environments	*Girls' Clubs, Holiday Clubs, School Listening Clubs, Peer-to-peer teacher training.*	**57%**	**58%**	**66%**	**85%**	**+9%**	Percentage proportion of girls who score ≥3.00 in Participating and interacting in class in co-ed environments.

Output and Output indicators	Activities	Baseline	Midline	Endline	Endline Target	Perfor-mance	Source
2.4 Percentage of club girls able to attend school during menstruation	*Girls' Clubs & provision of sanitary pads and pain killers*	**62%**	**64%**	**83%**	**75%**	**+21%**	Percentage proportion of girls who have begun menstruating and feel that menstruation does not represent a problem when attending to school.
2.5 Percentage of club girls who report that they enjoy school	*Girls' Clubs & Holiday Clubs*	**87%**	**89%**	**96%**	**90%**	**+9%**	Percentage proportion of girls who scored ≥3.00 for the School Belonging Scale.
Output 3: Parents actively support girls' education (Community mobilisation and sensitisation; Open Days; Community Listening Clubs; AoC/ team home visits)							
3.1 Percentage of girls' club parents/ guardians who feel that it is equally valuable to invest in a daughter's education than a son's when funds are limited	*Community Radio Listening Clubs, Home Visits, and Open Days.*	**82%**	**79%**	**97%**	**87%**	**+15%**	Percentage proportion of guardians who scored ≥3.00 in a composite scale made from Items Q64, Q65 and Q68 of the HHS.
3.2 Percentage of Listening Clubs attended by at least 30 community members every month	*Community Radio Listening Clubs, Home Visits, and Open Days*	**N/A**	**14%**	**57%**	**70%**	**+56%**	Monitoring Data; Monthly average percentage club attendance
3.3 Percentage of girls' club parents / guardians with knowledge of girls' gender and sexual and reproductive health rights	*Community Radio Listening Clubs*	**0%**	**27%**	**39%**	**80%**	**+39%**	Percentage proportion of guardians who scored ≥4.00 in a composite scale made of 5 items (Q163-Q169) in the Endline HHS (same items for other evaluation periods).
3.4 Percentage of girls' club parents/guardians who feel that their daughter is as likely as their son to make use of her education after school	*Community Radio Listening Clubs, Home Visits, and Open Days*	**31%**	**46%**	**76%**	**70%**	**+45%**	Percentage proportion of guardians who scored ≥4.00 in a composite scale made from Items Q66, Q67, Q68 and Q69 of the HHS.
3.5 Percentage of girls' club parents/ guardians who report feeling comfortable discussing SRH issues with their daughters	*Community Radio Listening Clubs*	**43%**	**45%**	**62%**	**55%**	**+19%**	Percentage proportion of guardians who scored ≥4.00 in a composite scale made from item Q162 of the HHS and similar items from other periods.
Output 4: Project schools are more safe and inclusive (CPP policy put in place; AoC training of teachers in inclusive learning environments and CPP)							
4.1 Percentage of AoC teachers with comprehensive knowledge of child abuse reporting mechanisms in school	*Teacher training and provision of guidance materials*	**-**	**67%**	**53%**	**90%**	**-**	AoC Child Protection Survey item asking about process of reporting abuse.
4.2 Percentage of non-AoC teachers at intervention schools with positive attitudes towards girls' participation in class	*Peer-to-peer teacher training*	**90%**	**92%**	**91%**	**75%**	**1%**	Percentage proportion of girls who scored teachers ≥3.00 for "teachers at this school treat student fairly" and "teachers at this school treat girls fairly".
4.3 Percentage of club girls who feel equal to boys in classrooms	*Girl Clubs, School Listening Clubs*	**74%**	**79%**	**89%**	**75%**	**+15%**	Percentage proportion of girls who scored ≥4.00 for equal participation items.
4.4 Percentage of club girls reporting they feel safe at school	*Establishment of CPP in schools, development of partnership with education and public authorities, training of CPP in schools*	**82%**	**94%**	**85%**	**80%**	**+3%**	Percentage proportion of girls who scored ≥4.00 for school safety items (at school, on the way to school and on the way back from school).

Output and Output indicators	Activities	Baseline	Midline	Endline	Endline Target	Perfor-mance	Source
4.5 Percentage of club girls able to identify a person in school that they could report abuse to	*Girls' Clubs, Community Listening Clubs and establishment of CPP in schools.*	**62%**	**47%**	**78%**	**75%**	**+16%**	Percentage proportion of girls who know they can report child abuse concerns and identified teachers, traditional or public authorities as reporting access points.

Output 1: Trained by TfaC Malawi, Agents of Change run inclusive workshops including Girls' Clubs, Listening Clubs and Holiday Clubs.

i) Activities, methodology and design

TfaC supports Agents of Change to deliver inclusive weekly Girls' Clubs with marginalised girls, monthly listening clubs with parents and community members, and holiday clubs with Girls' Club members to improve learning in literacy and numeracy.

AoCs were selected by TfaC from a cohort of teachers trained at 11 TTCs through match-funding from Christian Aid. All AoCs hold an Open College Network Certificate in Facilitation. AoCs were selected based on their past experience running an AIDs Toto Club[65] in a primary school, their active involvement in a 1-year training provided by TfaC at their TTC, their interest in girls' education, and their experience working in a rural school setting[66].

The teacher training provided at TTCs focused on equipping AoCs with facilitation skills and participatory and innovative approaches to promote gender equality and the knowledge, attitudes and practices necessary for improved sexual reproductive health of themselves and the boys and girls they teach.

TfaC provided additional training to AoCs prior to deployment in schools and this focused specifically on: the facilitation of girl friendly learning environments, role modelling for girls, participatory approaches to improving sexual and reproductive rights in a club setting[67], how to identify at risk girls, literacy and numeracy instruction, and how to conduct outreach activities in schools and communities. AoCs were provided with one refresher training during the course of the project.

These activities aimed to enable AoCs to create girl friendly learning environments, equip AoCs with the knowledge and skills to run high-quality participatory sessions, increase contact time between girls and trained female teachers, and improve supplementary literacy and numeracy instruction.

In order to assess the extent to which outputs were achieved we analysed output level indicators alongside relevant quantitative variables from the Girls SSQ and AoC Survey. Quantitative findings were triangulated with qualitative evidence, where possible.

ii) Findings

Output 1.1: 74.8% of AoCs demonstrate ability to teach literacy, numeracy and life skills in participatory and interactive ways.

This indicator aims to measure the extent to which AoCs are able to demonstrate their ability to teach literacy, numeracy and life skills in participatory and interactive ways. It is calculated using monitoring data from observations conducted on 120 Girls' Clubs during monitoring visits in 2016. AoCs were scored on their facilitation skills including the extent to which they utilized participatory and interactive methods, were organised, and general skills in moderating.

By Endline, 72% of AoCs were able to demonstrate the ability to teach literacy, numeracy and life skills in interactive ways based on club observations. This is a decrease from Midline where 82% of AoCs were able to

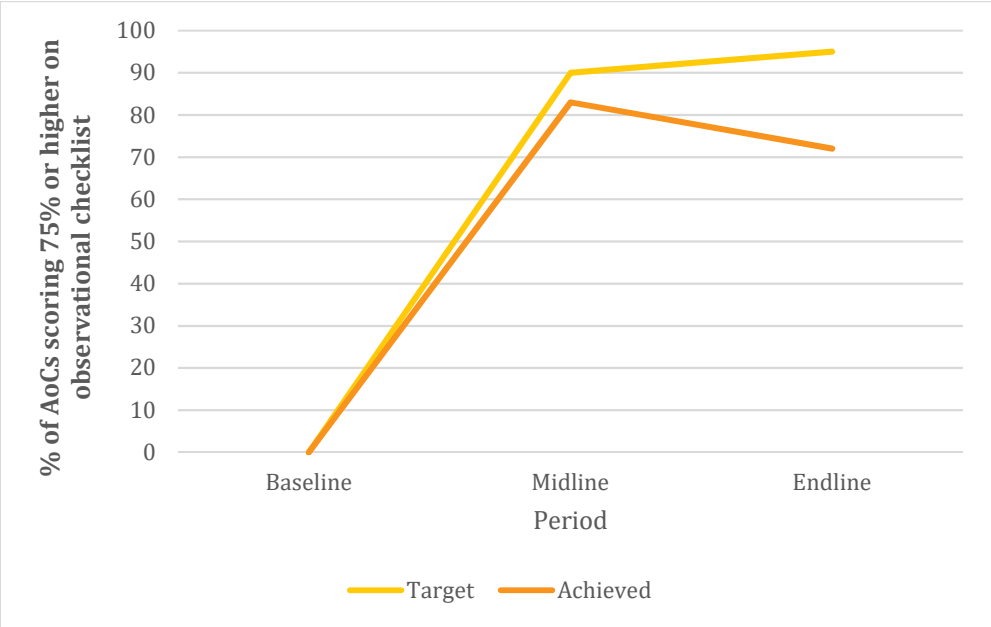
[65] See M&E Framework Annex 5 (tab 3) for full selection criteria

[66] *Ibid, 66.*

[67] Including topics on puberty, menstruation, managing social expectations, relationships, assertiveness in sex, contraception and life planning

demonstrate the ability to teach literacy, numeracy and life skills. This is also below the 95% target set by the project for Endline. The project should seek to provide additional training opportunities to AoCs to ensure they are able to consistently implement the club curriculum in an interactive and participatory way.

Figure 10. Percentage of AoCs who demonstrate ability to teach literacy, numeracy and life skills in participatory and interactive ways



Many AoCs spoke about the relevance and effectiveness of the training provided. An AoC in an FGD in Chilanga, stated, that the activities "which involve games, are natural to kids… [They] like to play if you teach them like you're playing then they will not forget that easily"[68]. Another participant mentioned, to which there was much agreement, that training "was helpful because we didn't know of many of these ways of teaching"[69].

AoCs also discussed that while they were chosen to be AoCs based on their previous experience and training at the TTC, "for things like EGRA we needed someone to teach us"[70]. By specifically incorporating additional training in literacy and numeracy instruction, AoCs were better equipped to train these faculties in Girls' Clubs.

A number of items from the Girls SSQ at Endline ask girls to describe how they experience Girls' Club. Girls were asked how far they agreed or disagreed with the statements summarized in Table 24. Most girls strongly agreed or agreed that it was easier to learn reading in Girls' Club than in school (79.1%), and that it was easier to learn mathematics in the Girls 'Club than in school (77.4%), Interestingly almost all girls (89%) felt as if the AoC was able to answer all their SRH related questions and that the skills learned in girls' clubs are usable in everyday life (94.6%). These last two findings, in particular, highlight the relevance of the intervention in improving the life skills of marginalized girls.

[68] FGDs with AoCs on Girls' Clubs and Sustainability in Chilanga; June, 2016

[69] *Ibid, 68.*

[70] *Ibid, 68.*

Table 24: Girls Opinions of the Girls' Club (Literacy Instruction, Numeracy Instruction, Life Skills)

Categorical Statement (n = 859)	Construct	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
"*It was easier to learn reading in the Girls' Clubs than in school*"	Literacy Instruction	**41.4%**	**37.7%**	14.4%	5%	1.4%
"It was easier to learn mathematics in the Girls' Club than in school"	Numeracy Instruction	**41.3%**	**36.1%**	16.1%	5.2%	1.3%
"*I feel that I can use the skills that you learned in Clubs in your everyday life?*"	Life Skills	**53.3%**	**41.3%**	3.7%	1.5%	0.1%
"The AoC was able to answer all my questions about SRH topics"	Life Skills	**47.3%**	**41.7%**	9.2	1.7	0.1%

When girls were asked what makes the club different to class they mentioned a number of common themes. These are summarized in Table 25. The main differences cited were that Girls' Clubs are more participatory and interactive, that they are girl-friendly, and that they provide the opportunity for difficult concepts to be retaught.

Table 25: What makes the Girls' Club different to class?

Construct	Girls' Responses
Participation & Interaction	*"In class you are just pointed out of many but at the club we do it together and we learn."*
	"We do practice reading through singing"
	"Because were open to talk with teacher there (at the club) than here sometimes the teacher might punish us by not teaching us for two days while that doesn't happen at the Girls' Club."
Girl-Friendly	*"At the Girls' Club we are more open than in class because it's only girls."*
	"In class the boys laugh when it's a topic talking about girls but at the Girls' Club we just learn."
	"At the class we feel shy"
	"We feel shy at in class because of the boys look at us in an abusive way."
	"Some of the boys want to have sexual relations with us so we feel shy to stand up and go in front."
	"In class we are not open because some boys want us so we feel shy while at the Girls' Club its only us girls there."
Re-teaching	*"Yes it would because in class you do an activity once but at the club we repeat an activity until everybody understands."*
	"When the teacher is teaching in class people make noise so you can't understand what is being said."
	"If you were to choose where you would like to learn mathematics where can you choose? Why? (all say at the Girls' Club)"

Output 1.2: 72.8% of AoCs with correct basic sexual and reproductive health knowledge

This indicator is calculated using monitoring data from a Sexual Reproductive Health Survey administered to AoCs. AoCs answer a range of 10 sexual and reproductive health knowledge questions. AoCs answering at least 80% of questions correctly are considered to have "correct basic" SRH knowledge.

72.8% of AoCs sampled by Endline scored 80% correct or higher on SRH knowledge items. The project did not achieve the target set out for Endline (94%). Based on Baseline data for this indicator the percentage of AoCs with basic sexual and reproductive health knowledge regressed by 11.2% between Baseline and Endline. Only one refresher training workshop was provided to AoCs which may explain this finding. Future project implementation should consider accounting for the fact that AoCs may lose knowledge over time and should be provided with additional refresher opportunities.

Summary results for Midline and Endline periods are shown in Table 26.

Table 26. AoC SRH Knowledge Summary % Correct

Item	Midline (% Correct) n = 293	Endline (% Correct) n = 133
"A person can reduce the risk of getting HIV by using a condom every time they have sex." (True/False)	93.5%	93.2%
"The risk of HIV transmission can be reduced by having sex with only one uninfected partner who has tested negative and has no other partners." (True/False)	91.5%	87.2%
"Some medical drugs will prolong the life of an HIV positive person." (True/False)	91.8%	97%
"Some medical drugs can prevent the transmission of HIV from mother to child." (True/False)	93.5%	94.7%
"A person can get HIV through witchcraft". (True/False)	95.6%	97.7%
"All people who have HIV look sick". (True/False)	99.7%	99.2%
"You can get HIV from a mosquito bite." (True/False)	99.3%	98.5%
"How accurate is HIV testing?"	87%	84.2%
"From this list, what is the lowest risk method of HIV transmission:" (correct: sharing a toothbrush).	31.7%	27.1%
"From this list what is the highest risk method of HIV transmission:" (correct: blood transfusion)"	5.8%	10.5%
Mean Percent Correct	**78.94%**	**78.95%**

Output 1.3: 90.2% of AoCs with knowledge of girls' gender and sexual and reproductive health rights.

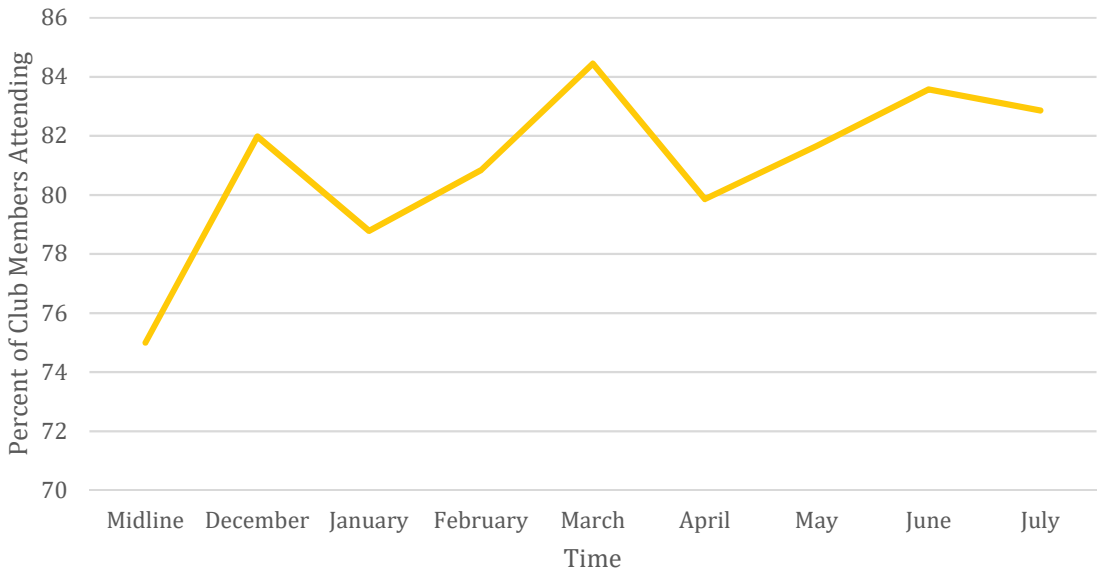
This indicator is calculated from a series of items assessing AoC's knowledge of SRHR and gender rights included in the SRH Survey. AoCs are asked to answer 9 knowledge questions on gender and sexual reproductive health rights. "Knowledge of girls' gender and sexual reproductive health rights" is understood as being able to answer at least 75% of questions correctly.

4.8% more AoCs demonstrated improved knowledge of girls' gender and SRH rights at Endline than at Midline. 90.2% of AoCs by Endline had knowledge of girls' gender and SRH rights compared to only 65% at Baseline. The project was close to achieving the target by Endline in this indicator (91%).

Output 1.4: 82.5% Percentage attendance at AoC Girls' Clubs/Holiday Clubs

This indicator is calculated by taking the average number of girls attending a club reported per month divided by the total number of expected girls for a full club session (40). Based on monthly attendance data from December 2015 – July 2016, average attendance at Girls' Clubs and Holiday Clubs was 82.5% by Endline. Attendance trends for this period are shown in Figure 11.

Figure 11. Percentage of Club Members attending Listening Clubs over total Registered (2016)



Output 1.5: 72% girls who show improved self-confidence and self-efficacy

As the key driving forces of behaviour change, TfaC directly targets the self-esteem and self-efficacy of girls. The mean levels of both self-esteem and self-efficacy have increased more for girls in treatment schools than in control schools. Moreover, both of these variables show important relationships with educational and SRH-related outputs.

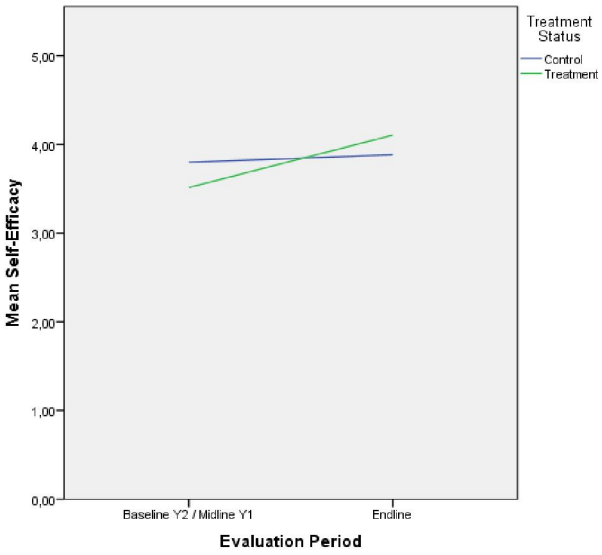
1.5.1 Academic self-efficacy and Self-esteem

Girls' Clubs are primarily designed to enhance the girls' levels of self-efficacy (i.e., to empower girls). The intervention had a significant impact on the academic self-efficacy of girls. Linear regression analyses revealed a significant interaction between time and treatment status ($t(3,2429) = 4.74$, $p < .001$). The girls in the treatment schools improved more than the girls in control schools and even score higher at Endline, even though their scores were lower at the start of the intervention.

Similarly, the project had an impact on the self-esteem of participants of the Y1 cohort ($t (3, 1571) = .182$, p.<001). In this group, girls experienced larger gains in self-esteem than those in control groups over time. However, impact on self-esteem for the Y2 group was non-significant.

Even though self-esteem does not formally show a significant increase for girls from both years, it plays an important role in school attendance. In line with TfaC's theory of change, this means that it is crucial to stimulate the development of a positive image of self, because by doing so, the chances that girls will continue to go to school, increases to a significant extent.

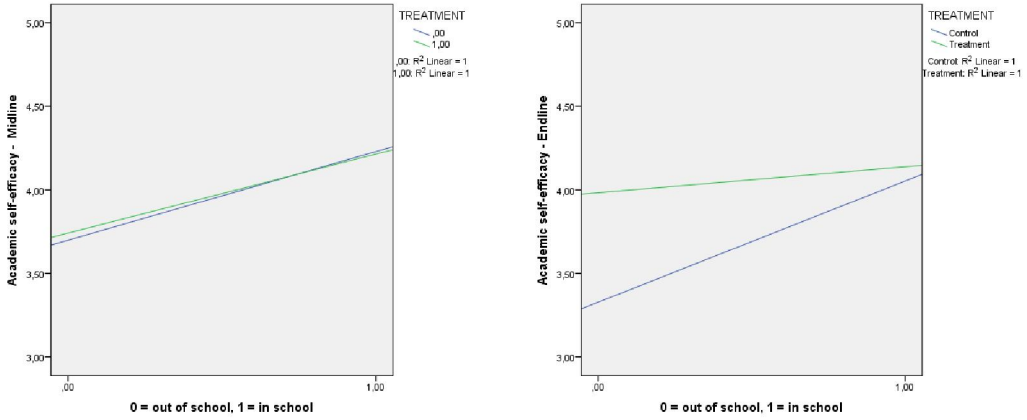
Figure 12. Trend in Academic Self-efficacy for Treatment and Control



1.5.2 The project decreases the difference in self-efficacy levels between in and out of school girls

Sub-group analyses (moderation analyses) reveal that at Endline, there is a smaller difference in the levels of self-efficacy of in and out of school girls at treatment schools, than there is at control schools (interaction: $F(1,1355) = 40.03$, $p < .001$, R2 change = .03). In other words, there is a big difference between the self-efficacy levels of out of school girls at treatment and control schools, with out of school girls at treatment schools scoring much higher (B = .66***). The difference between in school girls is smaller (B = .09*). This interaction did not occur yet at Midline, when out of school girls still scored similarly low on self-efficacy at both treatment and control schools (interaction: $F(1,838) = .16$, $p > .05$).

Figure 13. Difference in Academic Self-efficacy for IS vs. OS Girls and Treatment and Control. Midline (a), Ednline (b)

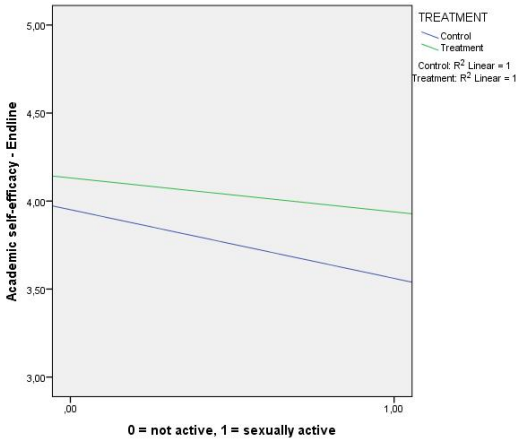


(a) **(b)**

A similar, yet only marginally significant interaction effect is found for sexually active girls ($F(1,1355) = 3.41$, $p = .07$). At treatment schools, there is only a small difference in experienced self-efficacy of girls at treatment schools. At control schools, this difference is somewhat larger.

Conducting the same analyses for married vs. unmarried girls did not reveal an interaction of the project.

Figure 13. Difference in Academic Self-efficacy for Sexually Active Girls (Edline)

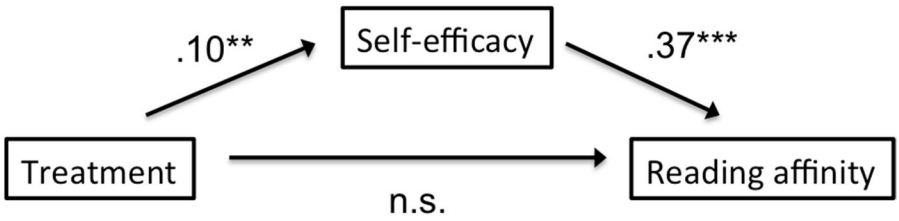


For self-esteem, no differences were found in the project effectiveness for in and out of school girls, married vs. unmarried girls or sexually active vs. non-sexually active girls.

1.5.3 Treatment girls are higher on reading affinity because the intervention increased their self-efficacy

Over and above the fact that the project increased the levels of self-efficacy of the Girls' Club members, self-efficacy plays an important mediating role in the achievement of other project outcomes. For example, the impact that the intervention has on reading affinity is explained by the fact that girls experience higher levels of self-efficacy through the project (indirect effect: B = .08, LLCI = .05, ULCI = .12). In other words, girls that have been exposed to the intervention express higher levels of self-efficacy and therefore like reading better. As shown above, reading affinity is an important predictor of literacy.

Figure 14. Mediation effect for self-efficacy on the effect of the project on reading affinity at Endline.



1.5.4 Self-efficacy and self-advocating SRH rights

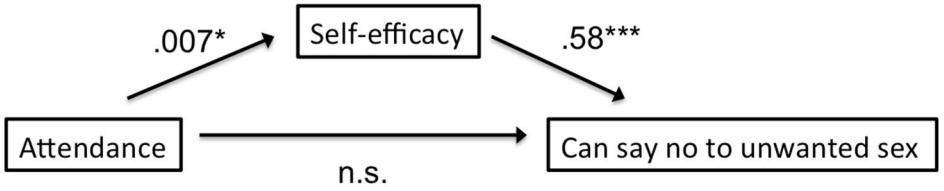
Even more interesting is the finding that self-efficacy plays a significant role in the relationship between attendance and the reported ability to say no to unwanted sex. In its theory of change, TfaC relates school attendance with lower levels of risky sexual behaviour. Mediation analyses[71] provide evidence in favour of this assumption, by revealing that school attendance increases the chances that girls say no to unwanted sex, because of the fact that school attendance is associated with higher levels of self-efficacy (indirect effect: B = .13 (LLCI = .02, ULCI = .25).

[71] Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach. By Andrew F. Hayes.

There is no direct effect of school attendance on the ability to say no to unwanted sex, but school attendance leads to a reduction in the chances that girls engage in risky sexual practice, because going to school enhances self-efficacy. In other words, girls that are able to go to school more frequently experience higher levels of efficacy. They are therefore more able to speak up for themselves in the domain of unwanted sex.

When reversing the position of self-efficacy and attendance, no significant effect is found. Although the found significant effect is small, it does speak in favour of the conclusion that attendance leads to self-efficacy, not the other way around. Theoretically, this finding is in line with TfaC's methodology as well as psychological theorizing (social cognitive theory) that one needs to experience the ability to enact a certain behaviour, before efficacy can be experienced.

Figure 15. Mediation effect for self-efficacy on the effect of attendance on the ability to resist sexual advances at Endline.



Output 2 - Marginalised girls increase participation in co-educational environments through their experience in Girls' Clubs, Listening Clubs and Holiday Clubs.

i) Activities, methodology and design

In order for marginalised girls to increase their participation in co-educational environments, AoCs have organised Girls' Clubs, Listening Clubs and Holiday Clubs. In the clubs, girls are taught health knowledge (in particular in the domain of sexual reproductive health), life skills (empowerment) and academic skills (literacy and numeracy). It is assumed that teaching in these three domains will improve the chances of girls to participate fully in co-ed educational environments and refrain from risky sexual practices. Young female teachers were selected as Agents of Change, not merely because they would be able to run Girls' Clubs in confidential settings, but also because they could function as a role model for the girls in their communities. A participant (in school girl) in a focus group provided support for the fact that this theoretically-based decision has worked well in practice by stating "At first we thought this was not important but we are now seeing female teachers, nurses enjoying themselves so we want to work hard and be like them."

If successful, project activities will lead to healthier SRH behaviours of girls. These behaviours in turn are expected to lead to higher rates of retention and attendance. This expected pattern of behaviours is based on TfaC's model of behaviour change theory, which is based on solid psychological theorizing (e.g., theory of reasoned action, social cognitive theory, health belief model). This model outlines that behaviour change is enabled through a six-step process[72]. Throughout this process, self-efficacy and self-esteem play a crucial role. In line with the academic literature, self-efficacy beliefs influence academic motivation, learning, and achievement in the domains of both literacy[73] and numeracy[74]. In other words, only if girls feel that they are able to engage in the new behaviour, will they be able to change it. In mathematics, this study found that when girls believe they can succeed in math, and find math useful, they are likely to be motivated to perform better, regardless of socioeconomic barriers.

TfaC maintains that practicing the behaviour in a safe space will result in higher levels of self-efficacy. For this reason, the Girls' Clubs provide a space for girls to obtain new experiences, explore new behaviours and practice

[72] See TfaC Theory of Change
[73] Pajares, F. (2003). Self-efficacy beliefs, motivation, and achievement in writing: A review of the literature. *Reading &Writing Quarterly*, *19*(2), 139-158.
[74] Pajares, F., & Kranzler, J. (1995). Self-efficacy beliefs and general mental ability in mathematical problem-solving. *Contemporary Educational Psychology, 20*, 426-443.

them. Since self-efficacy beliefs also enhance effort, persistence and resilience[75], more positive perceptions of self as well as increased levels of performance are also likely to result in higher levels of school attendance.

Correspondingly, school retention reduces the risk that marginalized girls engage in risky sexual practices, leading to more positive health outcomes[76]The girls attendance at the clubs may only result in enhanced school attendance rates if practical limitations that keep marginalised girls from attending school are overcome, especially those limitations that occur during menstruation (e.g., access to soap, cloth, pads or pain killers).

Girls are only able to attend school and stay in school, if their caregivers support the girls' attendance and free her from external responsibilities (e.g., chores, child care, income generating activities) in order to be able to do so. The Radio Listening Clubs and home visits are therefore targeted at the girls' parents and guardians and aim to bring about norm change through active promotion of girls' education. The importance of girls' education is discussed during these clubs, as well as safe SRH practices and taboos surrounding SRH communication between parents and children.

For this outcome, quantitative results were produced through regression-based approaches, including mediation and moderation analyses. Linkages between the output and outcomes been analysed quantitatively, where possible and inputs from qualitative data are provided in order to sketch the contextual factors that may have affected the results and to support them.

ii) Findings

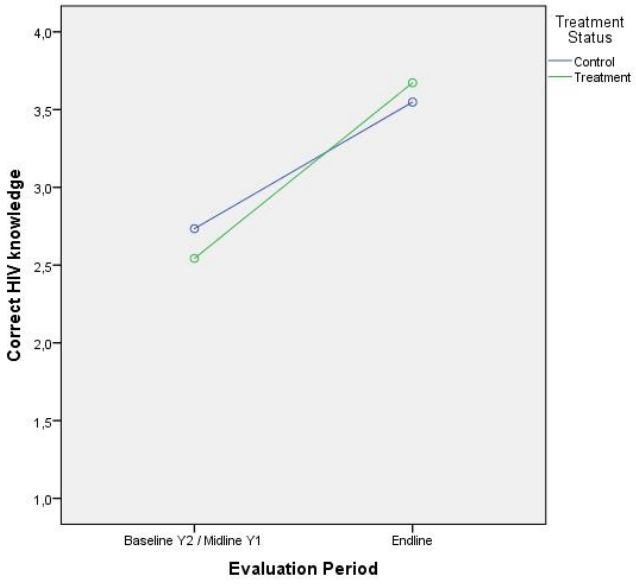
2.1 Percentage of club girls with awareness of their gender, sexual and reproductive health rights

The results for this output are mixed. Although the majority of girls at treatment schools report to be able to say no to unwanted sex and to insist on condom use, girls at control schools report comparable levels of being able to do so.

2.1.1 Correct HIV knowledge

Linear regression results for the amount of questions about HIV that girls answer correctly, do not show a strictly significant impact (t(3,2085) = -1.23, p = .22). Girls at both treatment and control schools answer more questions correctly at endline (t(3,2085) = 12.64, p < .001). See figure below:

Figure 16. Trend in Correct HIV knowledge Score from Midline to Endline



[75] Bandura, A. (1997). Self-efficacy: The exercise of control. New York: Freeman; Pajares, F., & Schunk, D. (2001). The development of academic self-efficacy. *Development of achievement motivation.*

[76] Hallfors, D., Cho, H., Rusakaniko, S., Iritani, B., Mapfumo, J., & Halpern, C. (2011). Supporting adolescent orphan girls to stay in school as HIV risk prevention: evidence from a randomized controlled trial in Zimbabwe. *American journal of public health*, *101*(6), 1082-1088.

2.1.2 Can say 'no' to unwanted sex & can ask for condom

The majority of girls that answered the question if they are able to say no to unwanted sex and if they could ask for a condom upon intercourse indicate that they are able to do so. This is however the case for girls at both treatment and control schools. In focus groups, girls who attended the Girls' Clubs, however, report that attending the Girls' Clubs has changed their ability to say no to unwanted sex (e.g., "Life was hard before Girls' Club, I now say no to boys when they are proposing something I wasn't able to do before.).

These results are reflected in the quantitative findings for power and self-efficacy. Moreover, girls reported to have been able to discuss issues in the Girls' Clubs, for example surrounding menstruation, that they would not have been able to discuss in a different type of educational setting: "Because there are no boys. we are free to say what's going on with our bodies. If there are boys, you can't say all that you do; they might end up laughing at you."

Table 27. Percentage of girls who report to be able to say no to unwanted sex and insist on condom use

	Percentage 'yes'		
	Baseline Y2	**Midline Y1**	**Endline**
Can say no to unwanted sex			
Treatment	N.A	N.A.	81%
Control	N.A.	N.A.	79%
Can ask for condom			
Treatment	N.A.	81%	80%
Control	N.A.	80%	82%

** N.A.: sample size too small (N < 30) to make valid comparison*

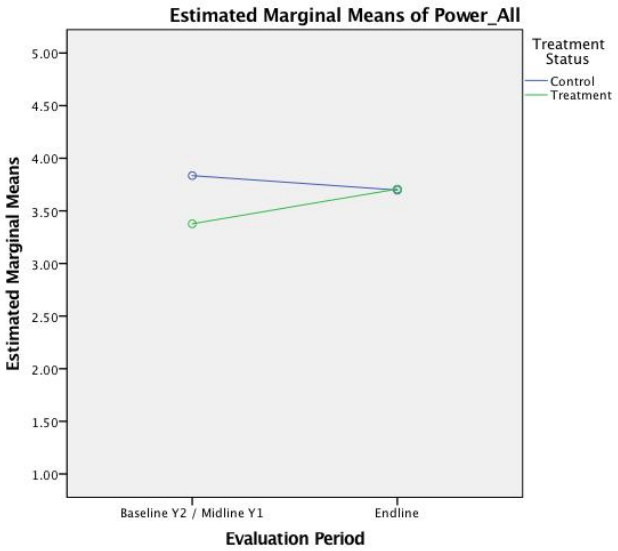
2.2 Percentage of club girls who believe they have the power to make decision in their own lives

2.2.1 Power to make own decisions

TfaC's methodology relies on the assumption that raising power levels by empowering an individual or a group with knowledge, attitudes and skills in communication and assertiveness, gives them control over how they express themselves.

The evaluation provides evidence in favour of the effectiveness of the intervention in achieving empowerment, since the project reaches a significant level of impact for the extent to which girls feel that they have the power to make their own life decisions (interaction: $F(1,2634)$ 22.2, $p < .001$). Over time, the girls in treatment schools report to have more power over their life decisions, whereas the girls in the control schools experience a decrease.

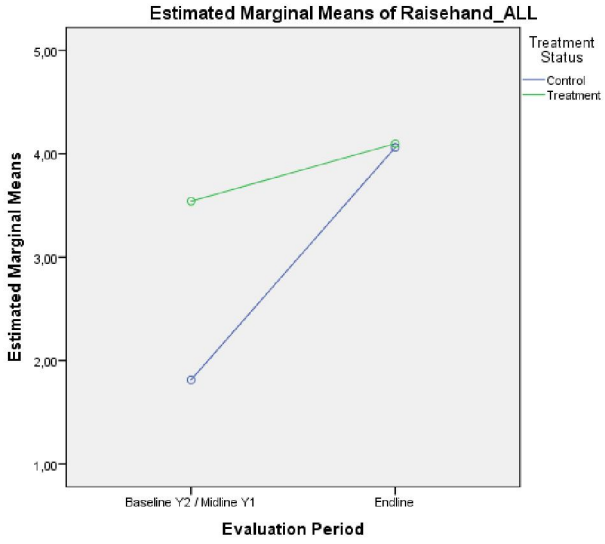
Figure 17. Trend in Power to Make Decisions Score from Midline to Endline



2.3 Percentage of club girls demonstrating the ability to confidently interact with boys in coed learning environments

At baseline Y2 / Midline Y1, girls in treatment schools already expressed that they were more able to raise their hand in class than the girls at control schools. This difference disappears at Endline and girls now express equal (yet higher than at Baseline) levels of being able to raise their hand in class (interaction: $t(3,2046) = -10.974$, $p < .001$). At Endline, girls at treatment schools also report an equal level of being comfortable to speak with boys ($M_{control} = 3.60$; $M_{Treatment} = 3.70$, range: 1 - 5).

Figure 18. Trend in School Participation Score from Midline to Endline



2.4 Percentage of club girls able to attend school during menstruation

Fewer girls report to find it difficult to attend school during menstruation at Endline (Chi-square, $p < .001$). This is however the case for girls at both treatment and control schools.

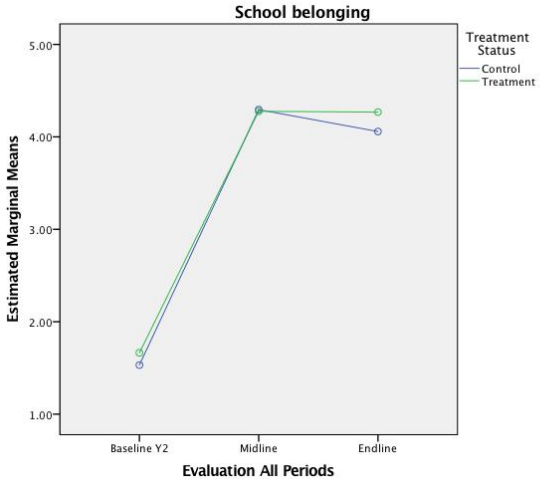
Table 28. Percentage of girls who indicate experiencing difficulty attending school during menstruation.

	Baseline	Midline	Endline
Treatment	59%	30%	17%
Control	64%	27%	17%

2.5 Percentage of club girls who report that they enjoy school

The project reached a significant level of impact on the degree to which girls enjoy school and feel part of the school community. A composite measure of the items 'I am happy to be at this school' and 'I feel like I am part of this school' shows a significant interaction effect in linear regression (interaction: $t(3,2428) = 5.90$, $p < .001$). As depicted in Figure 19, the girls in the treatment schools show a steeper increase in the extent to which they enjoy going to school.

Figure 19. Effect of the intervention on School belonging



Provision with material goods

TfaC has provided the Girls' Club participants with soap, sanitary pads, snacks, backpacks, painkillers and/or notebooks on occasion. Only 3% (N = 22) of girls reported to have never received any of these products.

Furthermore, receiving these material goods is not associated with higher levels of attendance, literacy, numeracy or any of the psychological outcomes, including motivation.

iii) Sustainability

In Focus groups and KIIs, AoCs reported that they are willing and able to continue to at least run the Girls' Clubs, with limited or no financial support from TfaC. They feel like they can rely on the skills that they have learned through the TfaC trainings in order to do so and are willing, since they have seen the change that the project has made. They realize though that motivating the girls to attend will be harder, if they are not able to provide school materials and if there are for example no books to practice reading. It would be advisable for TfaC to partner with organizations that could support the AoCs with such material in the future. Since the AoCs were primarily young female teachers who were newly placed at their schools at the start of the project, they have built a reputation in their communities over the past three years that they are a spokesperson for the issue of girl education, child protection and SRH rights and health of girls. As such, it is expected that they continue to fulfil this role in their communities in the future, although it cannot be guaranteed that the project activities (Radio Listening Clubs, etc.) will be sustained on a regular basis, when materials become unavailable and personal resources or motivation of the AoCs are depleted or needed elsewhere.

Output 3 - Parents actively support girls' education through community mobilisation and sensitisation, Open Days, Community Listening Clubs and home visits

i) Activities, methodology and design

Girls who are motivated to go and achieve in school typically count with social support at home. Through Output 3, TfaC Malawi aims to foster parent and community support for girls' education to enrol, stay and take advantage of school. Through the promotion of education for girls in communities and radio broadcasts, TfaC Malawi has been able to raise the profile of girls' education beyond the school and enlist the support of parents, guardians, and traditional authorities for girls' education (Indicators 3.1 and 3.4). Through outreach activities and dedicated home visits, AoCs have strived to build rapport and trust with parents, sensitizing them of a girl's right to access school and of the key role played by SRH in girls' social and educational development. By providing back-to-school packs to out-of-school girls, the intervention hopes to diminish the financial burden among the family of sending a girl to school and enhance their access to school.

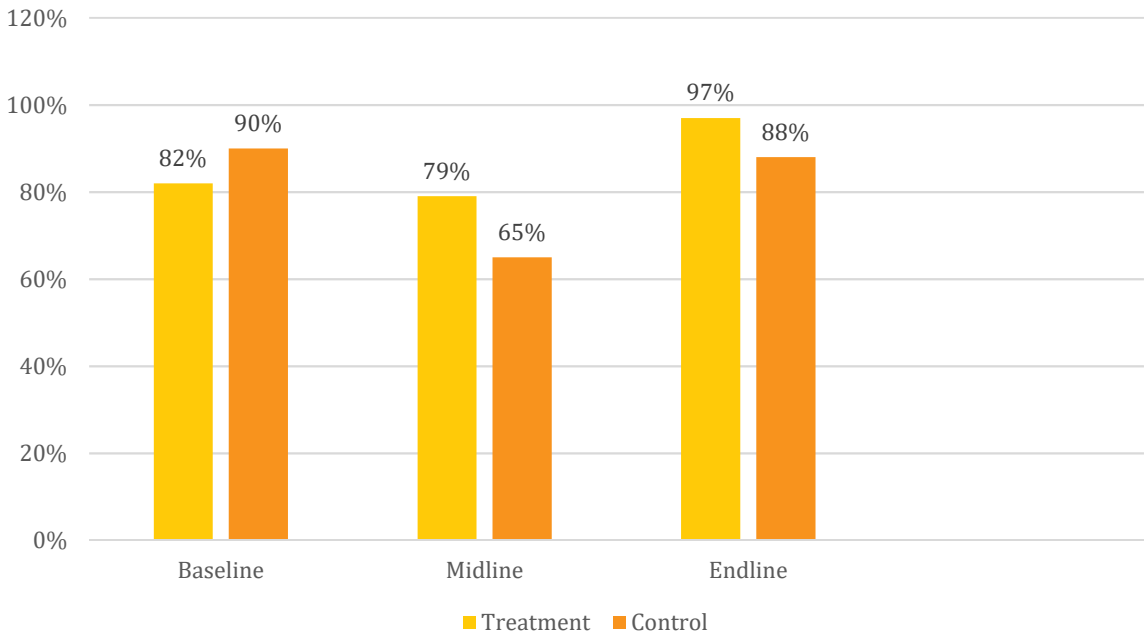
Once a month, TfaC Malawi organizes Community Listening Clubs for the promotion of gender equality, sexual and reproductive health and the benefit of investing in girls' education for families. During this time, the community gathers to listen to- and discuss Tisinthe (let's change!) a radio show that challenges social norms that restrict SRH rights, gender equality and education through interactive drama. TfaC also closely monitors the attendance and composition of audiences in Community Listening Clubs to understand how radio broadcasts are prioritized over activities within the community (Indicator 3.2).

Given, TfaC's core theory that sustainable behaviour requires a shift in knowledge, attitudes and practices, Tiphunzire aims to build parental knowledge of girls' gender, sexual and reproductive health rights (indicator 3.3) and encourage parents to speak frankly and openly about sexual and reproductive health with their daughters at home (indicator 3.5).

ii) Findings

3.1 Percentage of girls' club parents/ guardians who feel that it is equally valuable to invest in a daughter's education than a son's when funds are limited

Figure 20. Percentage of girls' club parents/ guardians who feel that it is equally valuable to invest in a daughter's education than a son's when funds are limited



In rural Malawi, lack of financial capacity to send a girl to school was commonly identified as the strongest barrier to maintaining girls in school, particularly when the household has too many children. The cost of school books and supplies are significant deterrent preventing households from investing in girls' education.

This is particularly the case when the number of children in the household increases, as more children compete for limited resources. When funds are limited, parents may be predisposed to sending the boy rather than the girl because of gendered expectations about future earnings, because social norms traditionally oblige women to take care household chores, or due to the belief that girls would "easily fall pregnant"[77].

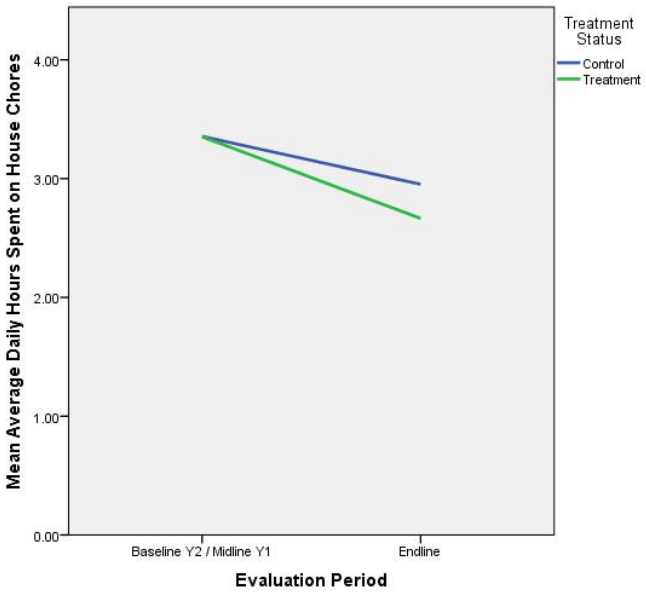
To measure the changes in the percentage of girls' club parents or guardians who feel that it is equally valuable to invest in a daughter's education than a son's when funds are limited, we created a composite score of three attitudinal items asked to parents of marginalized girls in treatment and control areas. Results show that the intervention has improved the attitudes of over 15% of the population since baseline, exceeding its endline target.

According to the cross sectional model, the intervention had a significant impact on this output. The interaction variable significantly predicted the extent to which guardians feel that it is equally valuable to invest in a daughter's education than a son's when funds are limited, $b = .243$, $t(123) = 1.794$, $p < .05$. The interaction variable also explained a small proportion of variance in this scale, $R^2 = .06$, $F(2, 705) = 2.091$, $p < .001$.

Through community sensitization activities, parents recognize that "…these days we are sending the girl to school but in the past we would not allow the child to go to school before cleaning plates"[78] and "…with the coming of TfaC we allow the children to go to the girls' club even if there are some household chores to do". This is part due to a first recognition of their role in their child's education, as the "[listening club] has helped us know that we have the responsibility to teach these kids… now we share the household chores equally to both girls and boys or we the parents do it."

Figure 21 shows a steeper decrease in the average number of daily hours' girls spend on house chores for treatment cases than control:

Figure 21. Trends in Average Daily Hours Spent on House Chores



The modality of interactive radio drama enables parents to touch on relevant topics through day-to-day situations they can easily relate to. In advocacy, this is important, since a general message can be tested out against the nuances of social reality. After attending the listening club on a frequent basis, parents mentioned that "…girl education is very important, like there was this other play where a family had two children a girl and a boy and

[77] FGDs with Parents of Out-of-School Girls on Girls' Clubs and Sustainability in Dedza; June, 2016

[78] FGD with Parents and Caregivers of Girls from the Girls' Club on SRH and Girls Education at Nsipe: June, 2016

[they] were both selected to secondary school at the same time, the parent opted to pay school fees for the boy citing girls easily fall pregnant but nowadays the world is saying educating a girl child is educating the nation".

"We came to listen to a certain play here where a certain father was saying 'I am putting on a shirt bought by my son who is a teacher, I can't educate a girl child" so we said with how the world is now its better to educate a girl child because a boy can still continue going to school even if he impregnates a girl but if we say a girl child should stay at home and educate a boy child then we are giving her all the reasons to get married… another topic was that when a girl is impregnated we shouldn't send him to the boys home but rather let her give birth and go back to school, that's what we have agreed'".

Many parents emphasized that education is valuable when children acquire good manners and become more obedient: "my children have changed since they started coming to TfaC, when ask them to do something they do it now, they have stopped moving around at night. That was when I knew that TfaC was good so I started coming. We would like this organization to continue they have taught our children good manners".

3.2 Percentage of Listening Clubs attended by at least 30 community members every month

Figure 22. Percentage of Listening Clubs attended by at least 30 community members every month

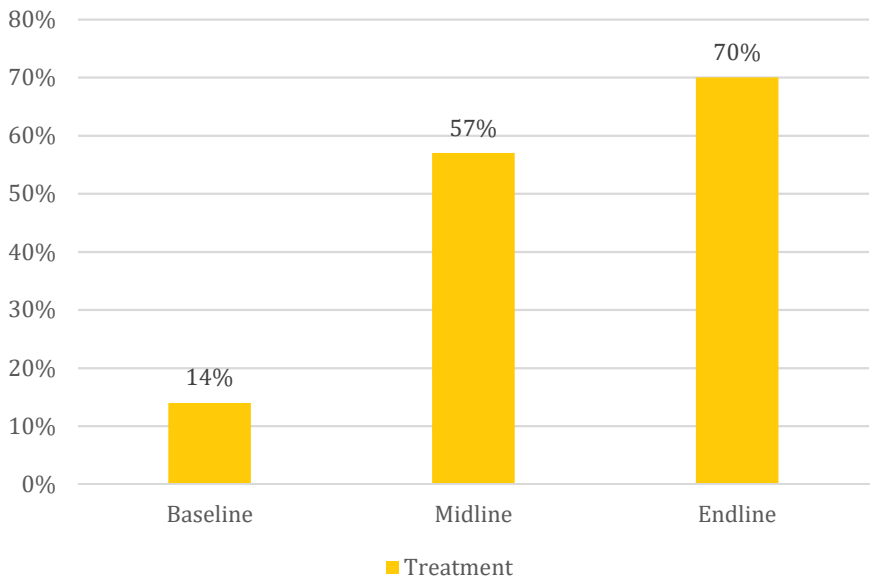


Figure 22 shows a steady increase in the listening clubs attended by at least thirty parents every month, starting at only 14% at baseline, through 57% at midline and at 70% at endline.

AoCs encouraged parents and guardians to attend during home visits. Participants vary though the listening club is widely attended by men, women, children, religious readers and chiefs alike[79]. According to many AoCs, "the participation of the chiefs has been very important because it shows to others that the community supports the project".

According to many parents, there is a close relationship between members of Girls' Club and the Listening Club, in that parents of girls who attend the Girls' Club are more likely to attend than those who do not. This is usually because the community is informed of the sessions by the AoC during home visits and the girls themselves encourage their guardians to attend: ""We were just staying at home and it's our children that told us that they had started attending these lessons and the teachers told them to that they will be needing us once a month so that we come and listen to the radio and we the parents accepted this. We do come and attend any date we are told to attend and we are changing with what we hear here."

[79] FGDs with AoCs on Girls' Clubs and Sustainability in Chilanga; June, 2016

Similarly, when girls drop out from the Girls' Club, parents are likely to stop coming to the listening club as well: "Like some women in my village used to come but have now stopped, there are also some women who say they can't come because there girls doesn't come to the club or have no girl child, we encourage these women to start coming as well because you don't need to have a girl child to attend the meetings".

When asked what difficulties prevented attendance, participants mentioned that their own time constraints, rather than organizational or technical issues prevented them from coming and only on occasion. "We mothers, it's because the message to come didn't reach us in good time maybe around one in the afternoon so we have plans to do other things for that day but if they say it in time we do come to attend."

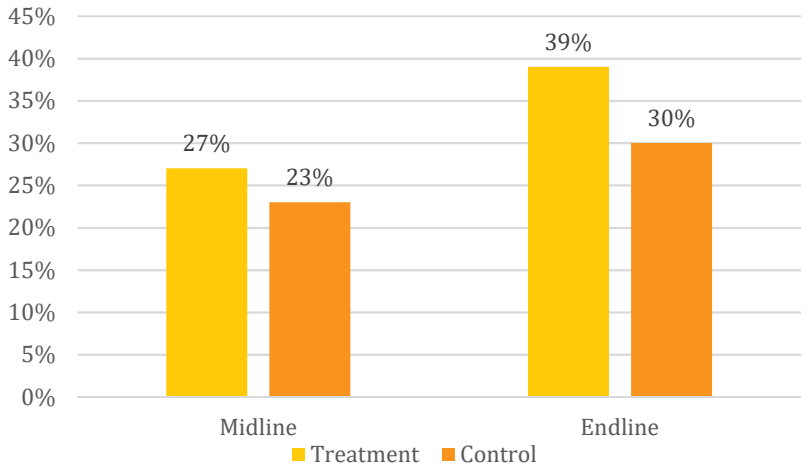
The listening club is both interactive and highly relatable, which motivates members to attend on a frequent basis: "We start at 2pm listening to the radio play, after that we are asked questions like what we have grasped in the play and we answer according to the play, sometimes what's in the play is what happens in our respective homes"; "…we are asked questions out of which we put our ideas… we listen to a drama where we get a lot of advice which we impart in our kids." [80]

3.3 Percentage of girls' club parents / guardians with knowledge of girls' gender and sexual and reproductive health rights

TfaC works towards raising awareness of the rights of the child and their sexual and reproductive health rights. This includes the right to say no to unwanted sex, the right to family and access to contraception, and the right of being free from physical, verbal or sexual abuse.

As such parents and guardians are in a principal position to reinforce the teachings of SRHR that girls received in the clubs and to demand their enforcement in the community. In many cases, lack of awareness of SRHR or poor SRH management generates attitudes that prevent a girls' access to school. As a parent exemplified in a FGD: "let's say a girl child has started menstruation during exams, like the play we listened to last week… it is better to give that child painkillers and let her go to school so that she is able to write her exams. Now that we know this, there is a great change because before we would have encouraged the child not to go school."

Figure 23. Percentage of girls' club parents / guardians with knowledge of girls' gender and sexual and reproductive health rights



After participating in listening clubs, parents increasingly understand the consequences of not supporting the SRHR of girls. "My child would have had two kids by now because I wasn't concerned and she would have just stopped school."; "After listening to TfaC programs we have realised that children have rights".

However, TfaC performs -32% below endline target (still 16% above control), revealing important shortcoming of the intervention in improving community attitudes towards the sexual and reproductive health rights of the girls. See Figure 23 above.

[80] FGD with Parents and Caregivers of Girls from the Girls' Club on SRH and Girls Education at Nsipe: June, 2016

Notwithstanding, the cross sectional model reveals that the intervention had a significant impact over and above the control group on this output. The interaction variable significantly predicted the extent to which guardians were knowledgeable of girls' gender and sexual and reproductive health rights, b = .210, t(050) = 4.178, p < .001. The interaction variable also explained a small proportion of variance in this scale, R^2 = .024, F(2, 705) = 10.049, p < .001.

Qualitative findings reveal that intervention areas have advanced in the recognition of certain SRHR, such as the right to say to unwanted sex, even within wedlock and the right to attend school during menstruation. However, when enquired about the promotion of contraception use, parents tended to agree that "it is wrong to bring condoms at schools". When asked whether girls have a right to know about contraceptives, parents answered across many FGDs that "…no, they don't. Because they are still young", "…no, because if they know then they will start bad behaviours" and because, "if we do let them know that, then we are encouraging them to start having sexual relations."

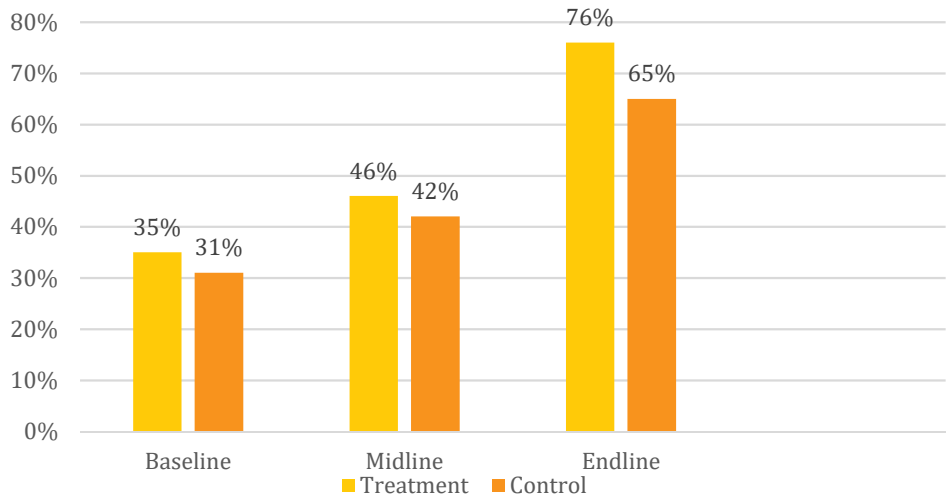
Given that 13% of the treatment population is sexually active, the project may do well in exploring a strategy to gain parental support to expand SRH education into teaching condom use and safe sex practices.

3.4 Percentage of girls' club parents/guardians who feel that their daughter is as likely as their son to make use of her education after school

TfaC Malawi believes that girls can make use of their education as much as boys, though girls face additional barriers to achieving economic empowerment. Aside from socioeconomic barriers affecting women more broadly, gendered expectations about future earnings shape parental attitudes towards the value of education, particularly when sending children to school represent a significant portion of household income.

Prior to the intervention, these attitudes translated in home environments that were not responsive to the challenges of girls' education. When asked members of the listening club whether boys can make better use of education, parents mentioned that "…in the past when parents see that the girl is not doing well in class they stopped paying fees and when you reach a certain age they are given out in marriage and they keep supporting the boys.".

Figure 24. Percentage of girls' club parents/guardians who feel that their daughter is as likely as their son to make use of her education after school



At baseline, marriage and pregnancy were common fates for many young women, leading many parents to believe that all investments into their education are lost when they become mothers. After listening clubs, parents have increasingly understood that girls who go to school are less likely to fall pregnant, and thus able to escape the self-fulfilling prophecy set out by poor attitudes towards girls' education: "…now the girls can't allow to get married because they are doing well in school. Now we all know that when you educate a girl then you educate the whole nation." When asked what changes they witnessed in their community after participating in listening clubs, parents now insist that "…even if the girl has a child we still force her to go to school that was not the case in the past."

Figure 25 shows the percentage of girls' club guardians who feel that their daughter is as likely as their son to make use of her education after school. From the figure, it is possible to see a steady increase in this portion of the population, demonstrating the project's influence on the outcome 7% above endline target.

Interestingly, parents learned also to see personal benefit from girls' education in that "It's better to send a girl to school because when she finishes school she will still help her parents unlike the boys who when they are married everything goes to the wife when they die" and "it's better send the girl child because when her parents are suffering she would help but a boy can forget about me."

3.5 Percentage of girls' club parents/ guardians who report feeling comfortable discussing SRH issues with their daughters

According to TfaC, parents should be open to their children about SRH and their rights within. Parents are often the preferred source for SRH information and, as such, represent an important channel to improve the knowledge base of girls and reinforce the SRH teachings of the club. Parents emphasized that "in the past it wasn't us talking to the girls but other counsellors, she could tell us that she has grown but since they started TfaC they say everything."

Figure 25. Percentage of girls' club parents/ guardians who report feeling comfortable discussing SRH issues with their daughters

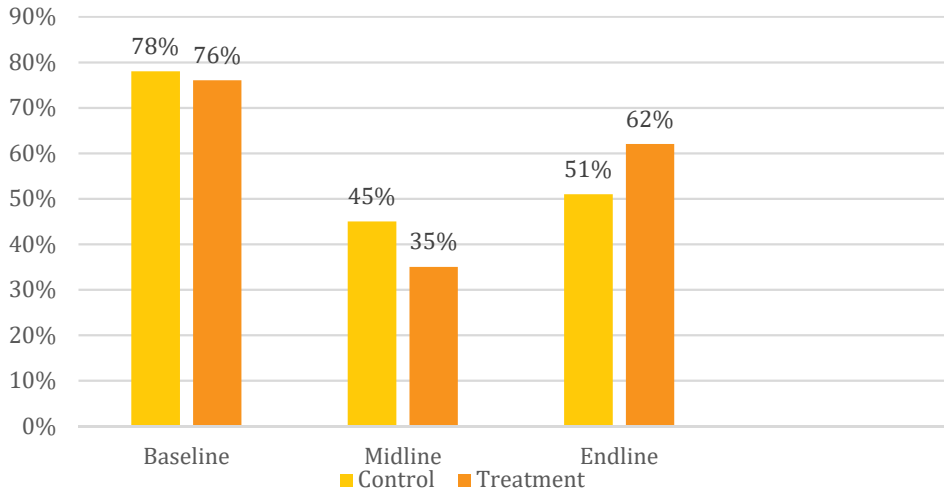


Figure 25 shows the percentage of girls' club guardians who report feeling comfortable discussing SRH issues with their daughters. The figures show a rather high proportion of parents feeling comfortable at baseline (78%), followed by a drop to 45% at midline and then increased to 62% at endline. Further research is needed to understand this pattern of responses across time.

Attending listening clubs make parents more open to discussing SRH issues with their children: "I tell her that these days it's easier for them to go to school than in the past so I encourage her to work hard at school instead of having sexual relations with the boys. I talk about this two times a week…", "…because of the listening club we now know how to talk to them. In the past we could not approach them for fear of what they might answer us."' "We have to talk to them if we don't then she might get pregnant or contact HIV/AIDS. We talk to both boys and girls. At first I didn't talk of this because I wasn't concerned."

Output 4 - Project schools are more safe and inclusive: A Child Protection Policy is put in place and AoCs train teachers in inclusive learning environments

i) Activities, methodology and design

In order to ensure schools are safe learning environments, AoCs have provided inclusive child protection training to all teachers at their schools, have supported their schools to establish and enforce a child protection policy, and act as authorities on child abuse reporting mechanisms within their school.

All AoCs were provided with comprehensive Child Protection training prior to deployment in target schools and during the refresher course.

ii) Findings

Output Indicator 4.1 Percentage of AoC teachers with comprehensive knowledge of child abuse reporting mechanisms in school

Only 53% of AoCs demonstrated knowledge of reporting mechanisms through the Child Protection Survey conducted at Endline. AoCs were asked to name the action necessary after a child reports a case of abuse. Only 53% of AoCs responded by stating they would report it to the head teacher or child protection officer. This was markedly below the project target of 90% by Endline.

However, in qualitative sessions a number of AoCs highlighted the importance of the child protection policy. One AoC stated "Child rights are well protected after putting some rules and regulations so teachers are able to observe the rules. Even during open day people demonstrate [the effect of] child abuse and [the importance of child] rights through drama and several activities".

Output Indicator 4.2 Percentage of non-AoC teachers at intervention schools with a positive attitude towards girl's participation in class

This indicator is measured by the percentage proportion of girls who agreed or agreed strongly that 'teachers at this school treat students fairly' and that 'teachers at this school treat girls fairly'. This indicator has gradually improved between Baseline, Midline and Endline with the final Endline value exceeding project targets by 16%.

These findings were supported through qualitative evidence. A number of AoCs agreed that the training provided changed the way non-AoC teachers engaged with learners. One AoC commented, "We have seen change, because we have teachers training where we teach them more of child protection. Many times we teachers do say abusive words to learners, so now teach our friends that that is bad and they have changed". Another AoC commented than a number of teachers had adopted a number of participatory activities to make their classrooms more inclusive and engaging. She commented "we have even taught them energizers which they use to start their lessons". Another AoC stated that the trainings were important because "we want them to apply these skills in class. There should not be a difference between girls and boys as they learn".

Output Indicator 4.3 Percentage of club girls who feel equal to boys in classrooms.

This indicator was calculated using a number of items from the Girls' SSQ which address the extent to which girls feel equal to boys in the classroom. Summary results for these indicators in the treatment group are shown in Table 29. A higher proportion of girls strongly agreed or agreed that girls are allowed to speak as much as the boys in their classroom and that they feel comfortable speaking their mind in front of boys. However, 37.6% of girls feel more comfortable talking to girls than talking to boys.

Overall, 89% of girls by Endline feel equal to boys in the classroom. The project exceeded its target in this indicator by 14%.

Table 29: Club Girls Equal to Boys

Item n = 859	Strongly Agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly Disagree (%)
"Generally; the girls are allowed to speak as much as the boys in my classroom"	12.7%	22%	3.9%	5.9%	1.7%
"I feel comfortable speaking my mind in front of the boys"	10.1%	22.1%	6%	5.9%	2.1%
"I feel more comfortable talking to girls than talking to boys"	17.7%	19.9%	4.6%	3.4%	0.6%

Girls corroborated these generally positive findings in focus group discussions. One girl summarized, "they don't put a difference between us". However, it a number of qualitative sessions highlighted that girls still do not feel

comfortable around boys generally. A participant commented, "We are put in groups with bad boys so we don't do well because they disturb us. It would be better for us girls to be put in our own groups and the boys in their own group". Another girl stated, "In class the boys laugh when it's a topic talking about girls but at the Girls' Club we just learn. "

Output Indicator 4.4 Percentage of club girls reporting they feel safe at school.

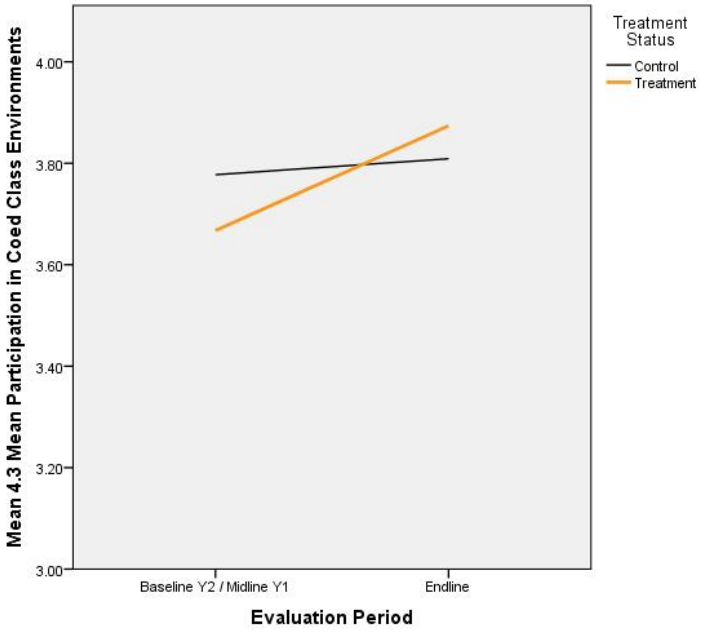
This indicator was calculated through a composite measure of two agree-disagree items and endline and four agree-disagree items at Midline. Results on these indicators are averaged out to create a composite perceived safety score out of 5. Girls who scored 4 or more on the perceived safety scale were included in this indicator. By Endline 85% of club girls feel safe at school. Results for the two indicators used at Endline are summarized in the table below.

Table 30: Club Girls Safety (Treatment)

Item n = 859	Strongly Agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly Disagree (%)
"I feel safe in my school"	12.7%	22%	3.9%	5.9%	1.7%
"Girls are safe in my school."	10.1%	22.1%	6%	5.9%	2.1%

A cross-sectional regression model finds that interaction is a statistically significant predictor of perceived safety, indicating that the project had a positive impact on perceived safety over time. Figure 26 depicts the change in perceived safety over time between both the treatment and control group. The project is able to account for 0.17 points on the perceived safety scale (measured out of 5).

Figure 26. Trends in Attitudes towards Participation in Co-ed Environments



When asked in qualitative sessions, many girls agreed that they felt safe. One girl explained, "Yes it's safe since we have a child protection officer". Another girl said that that to make school safer "cases should be resolved fast". In many cases the AoC also acts as the Child Protection Officer in a school. A number of girls mentioned that in the case of abuse they would approach their AoC. A participant commented "If someone is abusing we tell our TfaC teacher so she goes to advise them then the person changes".

4.5 Percentage of club girls able to identify a person in school that they could report abuse to.

This indicator is measured by the proportion of girls who know they can report child abuse concerns to identified teachers, child protection officers, or traditional or public authorities. Table 31 shows the change in this indicator across time.

Table 31: Knowledge of Where to Report Abuse

Item	Baseline (%)		Midline (%)		Endline (%)	
	Control	**Treatment**	**Control**	**Treatment**	**Control**	**Treatment**
If an adult tried to touch a girl that you know in her private parts, who would you tell about it? (Child Protection Officer, Identified Teacher, School Authority, Public/Traditional Authority)	59%	62.1%	23%	46.7%	61.6%	77.8%

AoCs sensitize girls on child protection and reporting mechanisms through Girls' Clubs. As one AoC put it "We tell them all the ways on how to handle issues of abuse". However qualitative sessions revealed that despite this knowledge very few cases have been reported and many AoCs state that there has never been a child protection issue at their school.

2.4.2 Findings: Contextual Factors & Unintended Effects

During the course of the project, Malawi has suffered numerous natural disasters including both periods of flood and drought and therefore currently nearly 7 million people are now requiring food aid to meet basic nutritional requirements. This greatly impacts on social behaviour change communication projects such as ours, particularly in terms of girls being able to attend school or concentrate due to hunger or the need for them to support family incomes in time of difficulty.

A lack of government infrastructure has hindered the project overall. The fractured nature of the district social welfare offices, that cannot in their current state reach those most in need; the lack of highly qualified teachers and occasionally the lack of money to pay them means that over-arching support from other structures is lacking and can often undermine the work which is being done in TfaC clubs.

One of the key challenges for the project and for the education system as a whole in Malawi is the constant transferring of teachers between schools within the district, often with little or no notice throughout the school year. This had a significant impact on the project despite our training of back-up AoCs to cover where possible; it often meant that clubs could be on pause for some time while a replacement AoC could be arranged.

Again, on the education system, the innovation relied on girls being able to learn in school if they were in regular attendance, with our work on literacy and numeracy designed only to boost current teaching. However, the current standard of teaching quality, class sizes and resources mean that children are unlikely to be receiving a full and comprehensive education despite enrolment and regular attendance.

During the project, AoCs would often go through extended periods without payment due to a lack of Government resources, this put extra pressure on their ability to teach, run clubs and find other income generating activities to support themselves.

The Endline Study was unable to identify any major unintended effects of project activities. However, school visits highlighted that by focusing on girls' many boys felt excluded from project activities. This feeling was echoed by many teachers in schools who often asked members of the evaluation team about why boys were excluded from activities, even though in some cases they were partially to blame for lack of motivation amongst girls, due to bullying for example. To prevent this from affecting future activities, the project should consider integrating boys into activities. This could be done by organizing several co-ed sessions of clubs with both sexes.

At Midline, while the project had positive impacts on enrolment, several AoCs[81] reported that the provision of 'back-to-school packs' for out-of-school girls has resulted in jealousy amongst in-school girls. These packs are given to incentivize out-of-school girls to return to school and to in-school girls on a case-by-case basis. During this FGD, AoCs provided anecdotal evidence that a few in-school girls had subsequently dropped out of school for

[81] Focus Group Discussion with AoCs in Lilongwe (Mtemambalane School, June 5th, 2015)

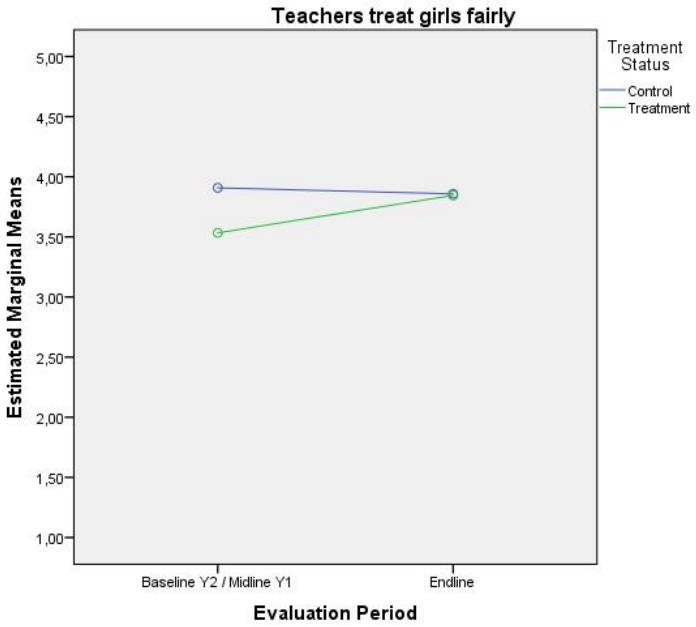
a brief period of time, in order to receive back to school packs. After this finding from Midline the project improved the criteria for the provision of packs to girls.

2.4.3 Findings: Gender equality

Gender equal classrooms

TfaC expects girls to attend school more, when teachers treat boys and girls fairly in the classroom. For this reason, AoC raise awareness among the teachers at their schools for gender equality. This effort was successful, because the project significantly improved the extent to which teachers treat girls fairly in their classrooms. Girls in treatment schools reported a greater increase over time on this dimension than girls at control schools (interaction: $t(3,2428) = 3.80$, $p < .001$).

Figure 27. Trends in Girls' Perceptions of the Quality of Their Treatment in School



Community attitudes

In focus group discussions, parents reported to not only enjoy the radio listening clubs, but that they also enable them to reflect on their parenting choices. The radio program has made them more aware of the value of educating their daughters. Moreover, they reported visible differences between the behaviour of their own daughters, since the start of TfaC's activities and those of their neighbours and friends, who do not attend. In addition to more knowledge and awareness of the issues of girls' education and the importance of teaching correct SRH knowledge, they report to feel more able to support their daughters.

Parents have become more supportive of girls' education

These qualitative reports are quantified by the answers that were provided by parents in response to the question which level of education they hope that their daughters will complete. Parents at both control and treatment schools report to desire higher levels of education for their girls. The number of parents who reported that they would like their daughter to complete primary school or any higher level increased from 73% to 99% at treatment schools and from 79% to 97% at control schools.

Parents' attitudes towards education have also become more gender equal since the start of the project. This is again true for parents at both control and treatment schools, with the attitudes of parents at control schools even showing a sharper than the attitudes of parents at treatment schools, ($t(3,942)$ -8.24, $p < .001$), but at Endline parents at treatment schools still score higher on gender equality than those at control schools. Qualitative input, provided by parents who attend the radio listening club regularly however suggest that these programs have made a significant impact on their own perceptions and attitudes towards girls education. One focus group participant for example remarked "We didn't think that the girls can learn just as the boys but with the coming of

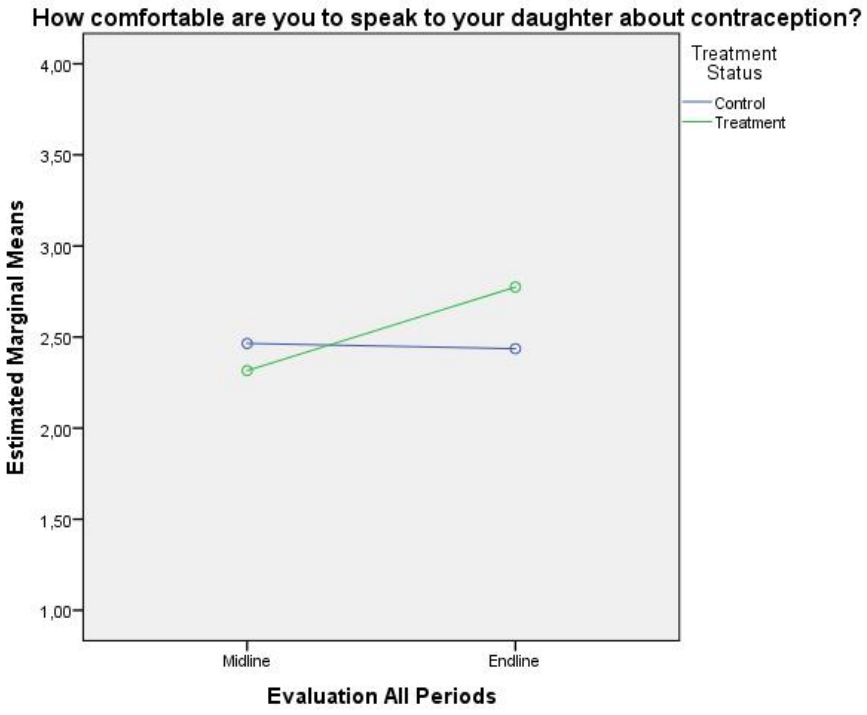
TfaC we have seen that many children who are doing well in class are coming from TfaC Girls' Club". And another "Now we all know that when you educate a girl then you educate the whole nation".

Parents' SRH attitudes show more gender equality

At control schools, parents indicate that the best age for a girl to get married is 23 and for a boy 26. There is a significant difference between these ages ($p < .001$). At Endline, this difference has disappeared for parents at treatment schools. The ideal ages that are named are older for both boys and girls though, with 44 named on average for boys and 36 for girls ($p = .13$).

Parents/guardians have become more comfortable to speak about contraception with their daughters. The interaction effect is significant ($t(3,942) = 2.60$, $p < .01$), which means that the increase in comfort to talk about this issue is higher at treatment schools. This finding was confirmed in qualitative reports as well, with parents for example reporting "its better you tell the girl about contraceptives and let them know the good and bad side of contraceptives." Despite the increasing levels of comfort, the question if one *should* speak about contraception with young girls is however still somewhat controversial as some parents in the focus groups also reported that "if we let them know that (contraceptives) then we are encouraging them to start having sexual relations."

Figure 28. Trends of Parental Attitudes towards Speaking about Contraception to Girls



In focus groups, parents reflected on the behaviour of their daughters as compared to the behaviour of their friends' and neighbours' daughters who do not participate in the project. Due to the attendance of the parents at the Radio Listening Clubs they feel more capable of explaining to their daughters why they should not be sexually active. Also, they report to be much more open to talk about such topics with their girls since their participation, since they are aware that these topics are discussed in the Girls' Clubs as well and that the girls are therefore sensitized for such talks.

There is no significant difference between the levels of correct HIV knowledge between parents at control ($M=3.6$) and treatment schools ($M = 3.7$).

No qualitative or quantitative evidence is found that suggests that the project has exacerbated gender inequalities and/or reinforced gendered norms or stereotypes. Yet, in focus groups, AoCs report difficulties in engaging some male teachers, head teachers and chiefs. In certain cases, the head teacher for example prohibited the AoC from directly approaching the chief about the project. In other cases, the support of the head teacher led to the AoC being able to address power holders in a meeting directly, when they visited the school. These examples indicate that young female teachers in some cases lack power and authority to address complicated and controversial societal challenges on their own. When this support is provided (as one AoC reported in response to the question

"Why is it important to have the chief present?" "It encourages us. His presence means that wherever he goes he will help spread the message". The support of the authority figures (primarily men) is crucial. Currently, the intervention relies too strongly on the change that young women are intended to make in their communities. The local power dynamics, in which men play a core role, should therefore be acknowledged and targeted directly in order to achieve sustainable results.

2.4.4 Findings: Innovation – Does improved sexual and reproductive health improve learning?

The Tiphunzire Project aimed to improve marginalised girls access, retention, and learning outcomes in primary school, through improved sexual reproductive health and self-confidence. In order to drive these improvements, clubs adopted a highly interactive and participatory behaviour change approach. The central innovation of the project was the explicit targeting of sexual and reproductive health to drive improvements in attendance, literacy and numeracy.

Clubs implemented through the project adopted a highly interactive and participatory methodology in order to change girls' sexual and reproductive health knowledge, attitudes and behaviours. TfaC's method of behaviour change is based largely on to Augusto Boal's Forum Theatre techniques, the educational theory of Paulo Freire and Robert Chambers's insights into Participatory Learning and Action. For TfaC behaviour change is a six step process[82] involving a transition from becoming aware of a needed change to asserting your behaviour change to a group.

Given the proven importance of SRH factors in predicting literacy, numeracy, attendance and enrolment, we considered evaluating how SRH sub-groups have changed in treatment and control areas over time.

When comparing the differences between treatment and control using chi-square tests, results suggest that girls have significantly improved their SRH after Tiphunzire. At Baseline in 2013, treatment and control schools had similar proportions of all relevant SRH groups. At Midline, there were significantly less sexually active girls the treatment group, a trend that was sustained by Endline. At Endline, there were significantly less married girls in the treatment group as a result of the intervention. The table below shows these results:

Table 32. Changes in SRH Subgroups overtime (Treatment vs. Control)

	Baseline		Sig.	Midline		Sig.	Endline		Sig.
	Control	Treatment		Control	Treatment		Control	Treatment	
Married or living with a man as if married	0.0%	0.0%	p>.05	7.1%	8.0%	p>.05	5.2%	1.7%	**p<.001**
Sexually Active	2.9%	1.5%	p>.05	16.0%	12.0%	**p<.05**	17.0%	13.3%	**p<.05**
Mother (given birth)	1.2%	0.7%	p>.05	8.6%	7.4%	p>.05	5.2%	4.9%	p>.05
Ever Been Pregnant	0.0%	0.0%	p>.05	10.7%	8.7%	p>.05	8.6%	5.9%	p>.05

In order to assess the extent to which improved sexual and reproductive health drove changes in attendance, literacy and numeracy, we must examine key SRH variables through qualitative and quantitative findings. Table 33 summarizes the quantitative linkages between key SRH variables and attendance, literacy, and numeracy.

Table 33. Linkages Between SRH Sub-groups and Attendance, Literacy and Numeracy

[82] Stage 1: Awareness of the behaviour, its consequences and the need to change., Stage 2: Motivation to make the change. Be clear about why you want to change and what result you want to see at the end. Stage 3: Intention to make the change. Make a commitment to changing, and tell someone in your group. Stage 4: What skills and resources will you need to make the change? Stage 5: Practicing the new behaviour. What happens when you try this new behaviour? Is there any else you could do differently? Stage 6: Tell an individual or your group about how your changed behaviour is going.

	Attendance			Literacy			Numeracy		
Sub-Group	**Predictor? (Treatment)**	**Predictor? (Control)**	**Mean treatment change over and above control**	**Predictor? (Treatment)**	**Predictor? (Control)**	**Mean treatment change over and above control**	**Predictor? (Treatment)**	**Predictor? (Control)**	**Mean treatment change over and above control**
Been Pregnant	Yes *** (r2 =0.05; B= -15.7)	Yes *** (r2 =0.13; B= - 34)	-6.3%	Yes *** (r2 =0.06; B= - 22.1)	Yes*** (r2 = 0.03; B = -14.1)	+1.6 wpm	Yes *** (r2 =0.02; B= - 7.9)	No	+11.6%
Mother	Yes *** (r2 =0.01; B= - 9.5)	Yes *** (r2 =0.15; B= -41.27)	-51%	Yes *** (r2 =0.03; B= - 19.5)	Yes*** (r2 = 0.02; B = -14.5)	+25.9 wpm	Yes *** (r2 =0.01; B= - 6.7)	No	+9.9%
Sexually Active	Yes *** (r2 =0.01; B= - 5.7)	Yes*** (r2 = 0.09; B = -21.3)	-20.8%	Yes *** (r2 =0.03; B= - 13.3)	Yes*** (r2 = 0.02; B = -9.1)	+6.32 wpm	Yes *** (r2 =0.01; B= - 5)	Yes* (r2 = .001; B = -2)	+1.3%
Married	Yes *** (r2 =0.03; B= -16.6)	Yes*** (r2 = 0.03; B = -25.3)	-13.6%	Yes *** (r2 =0.01; B= - 36.6)	Yes*** (r2 = 0.09; B = -25)	+13.3 wpm	Yes *** (r2 =0.01; B= - 11.7)	Yes* (r2 = 0.01; B = -5.1)	+35.9%
HIV Aids Knowledge (% Correct)	No	No	N/A	Yes *** (r2 =0.04; B= 3.8)	Yes*** (r2 = 0.04; B = 3.6)	N/A	No	No	N/A

Having Ever Been Pregnant

Whether a girl has been pregnant is a statistically significant predictor of a girl's attendance and literacy for both the treatment and control group. Ever been pregnant is a statistically significant predictor of girl's numeracy for the treatment group. In all cases, regressions found that the relationship was in the intuitive direction with girls who have been pregnant performing worse. These findings validate the project's assumption that early pregnancy can negatively impact attendance and learning.

Although for both the treatment and control group, ever been pregnant was a statistically significant predictor of attendance, the model for the treatment group only explained 5% of the variance in attendance data compared to the model for the control group which explained 13% of the variance in the data. This suggests that although having ever been pregnant has a negative effect on attendance for both groups, the effect is more visible in the control group. This is likely due to the fact that girls in treatment schools who have been pregnant received targeted treatment.

A Pearson Chi-square test finds an association between whether a girl has been pregnant and her treatment status across Midline and Endline data ($p<0.05$). Girls in the control group are more likely to have been pregnant than girls in the treatment group.

Mothers

Whether a girl is a mother is a statistically significant predictor of attendance and literacy for both the treatment and control group and a statistically significant predictor of numeracy for the treatment group.

Although marital status is a statistically significant predictor of attendance in both the treatment and control group, the model in the treatment group explains only 1% of the variance compared to 15% of variance explained in the control group. As with ever been pregnant, this is most likely due to the targeted support provided to mothers in treatment schools.

Sexual Activity

Sexual activity is a statically significant predictor of attendance, literacy, and numeracy for both the treatment and control group. In the case of attendance, the control group model is able to predict 9% of variance compared to just 1% of variance predicted by the treatment model.

A Chi-Square test determines that there is a strong statistically significant association ($p<0.001$) between treatment status and sexual activity with girls in the control group being nearly twice as likely to be sexually active.

Early Marriage

Marital status is a statistically significant predictor of attendance, literacy, and numeracy for both the treatment and control groups. Chi-Square tests find a statistically significant association between marital status and treatment status with girls in the control group more likely to be married ($p<0.05$).

Overall, these findings demonstrate that the intervention is relevant to the contextual barriers facing marginalized girls due to low sexual and reproductive health. However, key subpopulations targeted by the intervention, on average, were only able to outperform their non-treatment peers in literacy and numeracy and not in attendance. Whilst the intervention was able to demonstrate impact in literacy and attendance between Baseline and Midline, the Midline to Endline analysis could only identify impact in numeracy.

2.5 How sustainable are any changes the project has led to?

2.5.1 Has the project put in place mechanisms that allow changes to marginalised girls' attendance and learning to be sustained?

In line with the results there are core activities that will need to be sustained to continue to improve girls' educational outcomes;

1. AoCs and schools continue to run girl friendly SRH clubs with literacy and numeracy support
2. Child Protection and Safe-guarding improves at national, district and community levels
3. Parents of girls continue to support girls' education

During TfaC's sustainability and learning period, the core focus will be to ensure that these activities are supported and sustained.

AoCs and Schools Continue to Run Girl Friendly SRH Clubs with Literacy and Numeracy Support

Since the beginning of January 2016, communication and discussion around the end of the formal project has been a key part of all TfaC's interactions with AoCs. Discussions and on how the project can best be maintained in the absence of funding have taken place in all refresher trainings and have appeared in all social media platforms. Over the final six months of the project from August 2016, the team will be implementing a number initiatives designed to help AoCs to be motivated and supported to continue the work of their Girls' Club. Most AoCs agree that they will continue to conduct Girls' Clubs after the project ends: "we can see a lot of benefits from the Girls' Club so will continue to mentor these girls"; " To our side as AOCS and other stakeholders like head teachers, we think we can manage".

One hundred AoCs took part in TfaC's specific sustainability training in August. This training included supporting AoCs to be able to develop their own workshops, work with school and community structures to help support the club and a further focus on child safe guarding and protection. As part of the reflections, it was identified that a reduction in AoC workload would promote continuation of the existing programme. The programme is therefore moving to the requirement of only two Girls' Clubs in the month, rather than four. AoCs are free to conduct more sessions as their schedule allows. There are also no restrictions on the time or day the clubs should be conducted, all of which has helped to support the continuation of clubs.

To support schools, TfaC considers it important to have teacher involvement and commitment to the project continuation. Currently all districts are receiving a 1.5-day sustainability training for head teachers and AoCs together to ensure that both are working together and supporting the continuation of the club. This has so far been positively received and has given the project team the opportunity to present club achievements at a district level to galvanise support.

While it is not sustainable for AoCs to continue to receive incentives, TfaC will explore how it as an organisation can continue to support dedicated schools and AoCs. For AoCs TfaC will explore how to provide professional development opportunities and recognise the work done, as well as school prizes such as solar panels or school development fund support for those high performing clubs.

TfaC's dissemination of results and events including girls' workshops, radio clubs and stakeholder meetings will also provide key opportunities to promote the success of the GEC project and provide support for continuation. Anecdotally AoCs, teachers and communities have given positive feedback about the need for the project to continue, and these meetings can provide a space to galvanise and harness that support. The first month without incentives or support has been successful, with 241 clubs being run and 8021 girls attending clubs after the project's conclusion.

Finally, to support the continuation of the clubs, with feedback from the AoCs, TfaC is producing a 'best of manual' which includes all of the most important and successful workshops over the programme as well as guidance on facilitation and how to develop and present their own topics, which all AoCs will be provided with to allow them to continue with successful clubs.

Due to AoCs access to smart phones, TfaC is also able to keep in constant communication with their teachers to motivate and support them. TfaC hopes that the continuation of their Facebook and Whatsapp groups will provide an excellent platform to continue to support teachers and for them to support each other.

Another of TfaCs programmes is working in all government teacher training colleges (TTCs) to train new TfaC facilitators (100 women each year) who will be able to support the continuation of these clubs. Currently TfaC is also piloting the training of TTC lecturers with the view that eventually the MoEST could begin to take over the responsibility of comprehensive SRH education and training, which would ensure that TfaC's training is part of the training curriculum for all primary school teachers in Malawi.

Child Protection and Safe-Guarding Improves at National, District and Community Levels

Child protection and safeguarding is a continued focus for TfaC across all its programmes and TfaC will continue to support the promotion of child protection and safe-guarding in all the schools that TfaC currently works in.

At present, as part of Tiphunzire's sustainability plan, TfaC is running another 10 district trainings with head teachers and AoCs, where there is a half day Child Protection refresher training.

Additionally, in the second term, TfaC will also be running 10 child protection trainings with the District Social Welfare offices in Malawi, to support Traditional Authority Child Protection Officers to follow up cases and support GEC schools and other schools in the wide institutionalization of CPP.

To mitigate the challenge of students or families reporting without seeing an appropriate resolution, TfaC is partnering with the Malawi Humans Rights Commission to support cases where TfaC receives complaints.

Finally, TfaC is leading a consortium for the Ministry of Education to write and implement a child protection policy which can be applied across all schools in the country going forwards.

Parents of Girls Continue to Support Girls' Education

As highlighted above, improved parental attitudes have helped to support school retention. For sustainability and long term change, parents will continue to be a part of TfaC programming. Through funding from other TfaC programmes, the Community Listening Clubs for the Tisinthe's radio show will continue to be broadcast every two weeks from January 2017 onwards.

The TfaC Tisinthe! Broadcast has been re-launched in September 2016, with a new outlook, topics, and dramas which TfaC hopes will create excitement and interest from parents all over Malawi. For GEC schools, the launch will begin at the beginning of December 2016 with three shows dedicated to celebrating the results and successes

across the project, with the show presented by girls from the programme. The show will also feature interviews and segments that engage parents and key stakeholders from across the districts. It is hoped that this will bring the existing listening clubs back together and continue parental support for the new show from January 2017 onwards.

AoCs have also had refresher training on how to work with adults and have specifically developed workshops that will run in their communities to support their work. Additionally, a final mother group training will also support the work of bringing parents and Girls' Clubs together.

Previous listening clubs have been run with the provision of soap and there might challenges to attendance if this is not provided. However, the project hopes that with the recent trainings, continuing clubs and positive response from communities so far, the commitment to clubs and girls' education in general will continue. Despite this challenge, several AoCs mentioned that they would continue to conduct Listening Clubs in order to sustain changes in community and parental attitudes towards girls' education: "The community listening club, this helped us to create an understanding with the parents and we'll do our best to make it going".

Table 34 show the results of the Sustainability tool.

Table 34: Results of Sustainability Tool

Level	Indicator	Result by Endline
National	Become a central part of at least 1 influential network that works directly with the MoEST on issues around improving girls' education across Malawi.	This has been successfully accomplished by TfaC heading the NGEN (National Girls' Education Network).
	3 organisations use Theatre for a Change's unique methodology.	This has been achieved through TfaC Malawi training NAPHAM and Red-Cross, ongoing partnerships within Malawi also include cross staff training.
	1 learning day with at least 2 Malawian organisations interested in learning more about Theatre for a Change methodology.	TfaC has already established 1 learning day with GIZ, and will shortly deliver TfaC's methodology to several organizations within Malawi concerning TfaC's radio show and the methodology as a whole.
	2 interactive midline and endline dissemination events with MoEST and forum stakeholders.	These will both be done after the endline has been finalized
	Tfac is a member of a technical working group to learn and share about best practices for Sexual and Reproductive Health	TfaC is now a part of the Safe Motherhood Technical Working Group.
	As Chair of National Girls' Education Network to partner with MoEST to advance compulsory national Child Protection Guidelines and teacher code of conduct	These have been drafted and TfaC is currently working with MoEST to finalize these.
	1 sharing event/ partnership with Educational Institution of higher learning	The UK team have delivered at the UKFIET (education and learning conference) in the UK
	Positive promotion of the project's aims in Malawian electronic and print media focusing on the GEC project aims.	There have been many articles and also there are radio shows planned which showcase the GEC and TfaC's work at large
District	All project schools (225) to have operational and high quality Child Protection policy and procedures i.e. a girl can report abuse and the case is followed up.	All project schools have received high quality child protection policies and procedures. In this sustainability phase, there will be further training
	6500 teachers have attended AoC led teacher training.	This has happened throughout the project. On average, it is around 30 for every school (225 schools)
	50 schools receive model school competition prize.	This has been completed; all have been awarded the prize. Budgets on a number the schools are currently being reviewed and will receive the award shortly.
	95 % of project schools have contact with their	All project schools Head Teachers and AoCs have had the

Level	Indicator	Result by Endline
	District Level Child Protection Officer.	contacts of the District Level Child Protection Officers.
	10 SHNs are capacitated to support the ongoing implementation of the project after Feb 2017.	10 SHNs will be attending the ongoing trainings and will continue to play a large role in the sustainability of the project.
	100 AoC teachers express their interest in sustaining the project after Feb 2017.	Over 150 teachers have so far reported that they have continued running girls' clubs
	75% of schools continue to run a minimum package of afterschool girls' clubs and listening clubs	Girls clubs appear to be running in 97% of all schools. The listening clubs will begin again in the second term of the academic year.
	100 AoC teachers that demonstrate good practice attend refresher training after formal close of project activities	100 teachers attended training in Blantyre and Lilongwe in August 2016
	10 District Social Welfare Offices and Child Protection workers have participated in interactive, participatory and comprehensive Child Safeguarding and Protection training.	These are currently being conducted and will be complete by the end of November.
	50 head teachers include girl specific items in their next school improvement plan.	This has been advocated for by TfaC, but will continue to be monitored into term 2.
Community	6750 parents / guardian attend school based activities.	There have been many parents and guardians that have attended school based activities. It has reached over 10000
	In school attendance is 75%	Average is at 81% for the Girls Clubs.
	120 chiefs/group village heads attend Community Listening	Unfortunately, this has not been achieved due to a lack of funding to encourage chiefs/group village heads to attend.
	Clubs and Open days that support the attendance of girls in school.	Clubs are still running in many of our schools after the close
	75% of Mother Group meetings continue to meet 1/term after the close of formal activities	This is so far happening into term 1, and will continue to measure this into the second term.
	225 head teachers and AoCs actively participate in 3 days of interactive and participatory TfaC training on SRH, Child Protection, community engagement and project sustainability.	This is scheduled to happen to the 218 schools that are still in the project after the official close down. Due to budgetary restrictions, it is also now one and a half days, which the project finds quite satisfactory
	95% of head teachers actively participate in Open Days.	All schools have run several open days which the head teacher has been a central figure in.

2.5.2 How likely is it that the projects' benefits will be sustained?

There are great chances for aspects of the project to continue so long as these do not impose a financial burden on AoCs. In many FGDs, AoCs manifested that they will do their best to keep running the clubs, in part due to their popularity in schools and parental support. However, when asked about difficulties they would face if the project ended AoCs mentioned that they would have some difficulties engaging a portion community and girl participants without incentives. One AoC commented "The project is going to an end. So it makes me worry [sic], how are going to keep hold of these girls without TfaC helping us, many girls will be demotivated". Another continued, "Many who have been benefiting from this project are those we took from the village who stopped school in the first place and they received necessities so without these things we are in trouble".

However, given TfaC strategies of communication, training and advocacy at various levels, many AoCs feel confident that they will be able to run the clubs after the project's conclusion and implement the project's teachings in their own classrooms. Since the project begun, many AoCs mentioned that stakeholders take them

more seriously because TfaC was involved. All AoCs agreed that TfaC also played a key role in their immediate school. This is also evidenced on the institutionalization of Child Protection Policy (CPP) across all treatment schools, which is widely respected and considered necessary by school communities. Given the straightforwardness of the policy and their wide acceptance, schools have effected long-lasting change.

Overall AoCs recognized the importance of club activities continuing after the project and seem committed to doing so. TfaC has greatly contributed to norm change in their communities, manifested in a prioritization of girls' education when the funds are limited, a reduction of chores or at least their equal distribution within the household and independent advocacy initiatives that parents carry out in their communities out of their own volition.

2.5.3 To what extent has the project leveraged additional investment to sustain its activities?

The project was initially contracted to raise an additional £382,243 of match funding. In January 2015, this was increased to £476,700 and TfaC currently meets targets to raise or exceed this amount of match funding. TfaC's match funding is provided by Christian Aid Malawi, an anonymous Trust, Comic Relief and The Medicor Foundation. The anonymous Trust has signalled their interest in continuing to support an education-based project in Malawi from 2017, in large due to the proven impact being made by the GEC Tiphunzire project.

In February 2016 Patrick Young, TfaC's Executive Director was invited to present the project to a panel of donors at The Varkey Foundation Conference in Dubai. Because of this event, TfaC was approached by several donors interested in supporting a second phase of the project, with whom they are now in active conversation.

In addition, TfaC has developed a strong dissemination plan to share midline and endline findings, and TfaC's GEC film advocating for girls' education will be shared across many relevant platforms. Midline findings were presented at the UKFIET conference in Oxford, at a TfaC-run learning event in London and presented to a range of stakeholders, including DFID Malawi, in Lilongwe. TfaC plans to disseminate endline results widely, with a focus on encouraging collaboration and funding to enable the organization to continue with the intervention. This plan is being led by the MEL team, the Executive Director in London, the Country Director in Malawi, TfaC UK and TfaC Malawi trustees.

3. Conclusions

Overall, the Theory of Change of the project held true throughout Tiphunzire's implementation. Below we discuss our findings considering project's assumptions:

1. **Girls receive more tailored support from AoCs due to small group sizes and subsequently learn more effectively.** Most girls strongly agreed or agreed that it was easier to learn reading in Girls' Club than in school (79.1%), and that it was easier to learn mathematics in the Girls 'Club than in school (77.4%). In Girls' Clubs almost all girls (89%) felt as if the AoC was able to answer all their SRH related questions and that the skills learned in girls' clubs are usable in everyday life (94.6%). When asked what makes Girls' Clubs so different, girls mentioned that Girls' Clubs are better in promoting participation and interaction, are more girl-friendly, and allows extra time for re-teaching of core skills, which is often needed by many marginalized girls.
2. **Girls' Clubs provide targeted support through a highly participatory and empowering methodology**. By Endline, 72% of AoCs were able to demonstrate the ability to teach literacy, numeracy and life skills in interactive ways based. AoCs reported that "games are natural to kids… [They] like to play and if you teach them like you're playing then they will not forget that easily"[83]. However, only 73% of AoCs sampled by Endline scored 80% correct or higher on SRH knowledge items (19% below target). In terms of SRHR, 90.2% of AoCs by Endline had correct knowledge of girls' gender and SRH rights compared to only 65% at Baseline.
3. **Building the confidence and self-efficacy of girls positively impacts girls' attendance and learning because they the enhance effort, persistence and resilience[84] and promote a more positive perception of one's self**. Through the girls' clubs, the intervention had a significant impact on the academic self-efficacy of girls, ($t(3,2429) = 4.74$, $p < .001$). The girls in the treatment schools improved more than the girls in control schools and even score higher at Endline, even though their scores were lower at the start of the intervention. Similarly, the project had a visible impact on the self-esteem of participants ($t (3, 1571) = .182$, p.<001). These variables are found to be very important predictors of learning outcomes, suggesting that the intervention had both an indirect and direct effect on the learning and access of girls to school. Self-esteem correctly predicted attendance, literacy and numeracy at significant levels and self-efficacy was found to be an important predictor of enrolment, literacy and numeracy. The project also reached a significant level of impact on the degree to which girls enjoy school and feel part of the school community (interaction: $t(3,2428) = 5.90$, $p < .001$).
4. **Improving the Sexual and Reproductive Health of girls affect her chances to be in school and learn within**. Delaying sexual debut, or being sexually active are important predictors of enrolment and literacy. Being a mother significantly affects the chances of acquiring better literacy, predominantly due to low readership. Being married significantly affects numeracy, but less so other learning outcomes. Becoming pregnant significantly affects the odds of being enrolled in school, and may thus represent a great risk towards improving literacy and numeracy skills. When comparing the differences between treatment and control using chi-square tests, results suggests that girls have significantly improved their SRH after Tiphunzire. At Baseline in 2013, treatment and control schools had similar proportions of all relevant SRH groups. At Midline, there were significantly less sexually active girls the treatment group, a trend that was sustained by Endline. At Endline, there were also significantly less married girls in the treatment group as a result of the intervention.
5. **Self-efficacy beliefs as well as increased levels of performance are likely to result in higher levels of SRH.** Correspondingly, school retention reduces the risk that marginalized girls engage in risky sexual practices, leading to more positive health outcomes[85]. Girls that have been exposed to the intervention express higher levels of self-efficacy and therefore like reading better (indirect effect: B = .08, LLCI = .05,

[83]

[84] Bandura, A. (1997). Self-efficacy: The exercise of control. New York: Freeman; Pajares, F., & Schunk, D. (2001). The development of academic self-efficacy. *Development of achievement motivation. United States*, *7*.

[85] Hallfors, D., Cho, H., Rusakaniko, S., Iritani, B., Mapfumo, J., & Halpern, C. (2011). Supporting adolescent orphan girls to stay in school as HIV risk prevention: evidence from a randomized controlled trial in Zimbabwe. *American journal of public health*, *101*(6), 1082-1088.

ULCI = .12). It was also found that girls that are able to go to school more frequently also experience higher levels of efficacy. Self-efficacy plays a significant role in the relationship between attendance and the reported ability to say no to unwanted sex. The evaluation provides evidence in favour of the effectiveness of the intervention in achieving empowerment, since the project reaches a significant level of impact for the extent to which girls feel that they have the power to make their own life decisions (interaction: $F(1,2634)$ 22.2, $p < .001$).

6. **Attending school is possible with Parental Support, in spite of poverty.** Poor or uninformed attitudes towards girls' education among parents affect the chances of a girl to return to school. The intervention had an impact on the extent to which guardians feel that it is equally valuable to invest in a daughter's education than a son's when funds are limited [$b = .243$, $t(123) = 1.794$, $p < .05$]. At endline, 97% of parents in treatment schools believed that girls have as much right to go to school in spite of hardship, though only 76% of parents believe that girls can make use of their education as much as boys. Qualitative evidence suggests that this is a pervasive belief in Malawi. However, the project has performed well above endline targets for these indicators. Parents at both control and treatment schools report to desire higher levels of education for their girls. The number of parents who reported that they would like their daughter to complete primary school or any higher level increased from 73% to 99% at treatment schools and from 79% to 97% at control schools.

7. **Increased attendance leads to higher grades**. Attending school correctly predicts numeracy and literacy, though other predictors alongside attendance improve the quality of this predication. This means that attendance alone may not necessarily lead to better grades. There is a substantial body of evidence that shows that increased attendance at school is the first step to improving learning outcomes amongst children[86]. Although the quality of teaching in many rural Malawian schools is low, the additional contact time offered to TfaC's target girls by specially trained AoC teachers through the project will mean that increased attendance leads to more engagement with quality literacy, numeracy and life skills sessions, ultimately resulting in higher marks in annual school tests.

8. **Girls face additional barriers to education when compared to their male peers.** At midline, girls had mentioned to have problems attending school during menstruation. At endline, however, the provision of sanitary pads and pain killers made it less difficult for girls to attend school. In regression models for the treatment group, menstruation was not a predictor of attendance or enrolment. Aside from menstruation management, girls mentioned the importance of Girls' Clubs' as being an environment where girls can feel comfortable to participate and receive feedback. In normal classrooms, qualitative findings suggest that girls are usually subject to peer pressures and bullying from boys. Low progress on the domain of enabling girls to have ability to confidently interact with boys in coed learning environments (-19% under target) show this is a barrier that is yet to be fully overcome.

9. **Parents of marginalised girls (and particularly out-of-school girls) feel alienated by the physical school environment which leads to lack of support for girls' education.** Getting parents of out-of-schools girls to 'cross the threshold' and come into schools for Listening Clubs was an important step in engaging parents in their girls' education and aims to remove the fear parents may associate with school as a result of their own experiences as children or their lack of engagement with education in general. Based on monthly attendance data from December 2015 – July 2016, average attendance at Girls' Clubs and Holiday Clubs was 82.5% by Endline. When asked what difficulties prevented attendance, participants mentioned that their own time constraints, rather than organizational or technical issues prevented them from coming and only on occasion.

10. **Parents, guardians and schools allow teaching on SRH and family planning and pregnancy in school.** After participating in listening clubs, parents increasingly understand the consequences of not supporting the SRHR of girls. "My child would have had two kids by now because I wasn't concerned and

[86] Newman Ford, L., Fitsgibbon, K., Lloyd, S. & Thomas, S. (2008). A large scale investigation into the relationship between attendance and attainment: a study using innovative, electronic attendance monitoring system. *Studies in Higher Education*, 33, 6: 699-717
Attendance Works (2014). Research brief: Attendance in the Early Grades: Why it Matters for Reading. Available at: http://www.attendanceworks.org/wordpress/wp-content/uploads/2014/03/Attendance-in-the-Early-Grades.pdf
Roby, DE 2004, 'Research on school attendance and student achievement: a study of Ohio schools', Educational Research Quarterly, vol. 28, no. 1, pp. 3–14.
Daraganova, Mullan, & Edwards (2014). Occasional Paper No. 51. Attendance in primary school: factors and consequences. Commonwealth Australia.

she would have just stopped school.". However, TfaC performs -32% below endline target (still 16% above control), revealing important shortcomings of the intervention in improving community attitudes towards the sexual and reproductive health rights of the girls. When asked whether girls have a right to know about contraceptives, parents answered across many FGDs that "…no, they don't. Because they are still young", "…no, because if they know then they will start bad behaviours" and because, "if we do let them know that, then we are encouraging them to start having sexual relations." Given that 13% of the treatment population is sexually active, the project may do well in exploring a strategy to gain parental support to expand SRH education into teaching condom use and safe sex practices. Generally, thanks to the intervention, Parents and guardians have also become more comfortable to speak about contraception with their daughters. The interaction effect is significant ($t(3,942) = 2.60$, $p < .01$), which means that the increase in comfort to talk about this issue is higher at treatment schools.

11. **Girls who fear abuse/ are victims of abuse at school are less likely to attend.** Whether a girl perceives the school to be a safe place significantly affect her odds of being enrolled. School safety was also shown to be a predictor of school attendance. By Endline 85% of club girls feel safe at school. A cross-sectional regression model finds that interaction is a statistically significant predictor of perceived safety, indicating that the project had a positive impact on perceived safety over time. Qualitative sessions supported these findings with many girls stating that they now feel safe in school as the school now has a Child Protection Officer.

4 Recommendations

1. The project should explore ways to integrate boys into the promotion of girls' education. Many of the barriers to being motivated to go to school and participating in class relate to class dynamics where girls are teased or laughed at for making mistakes, predominantly by boys. Given all the progress done regarding self-esteem, school belonging and self-efficacy, it remains a challenge to improve the capacity of girls to confidently interact in coed educational environments.

2. While parents and community members have become increasingly more open to speak about SRH with their children, the same cannot be said about discussing contraception with girls due to perceptions that it may lead to promiscuity. While sexual education is imparted in schools, discussion of contraception above abstention will remain a contentious policy challenge to the intervention. Notwithstanding parental values towards discussing SRH, the intervention may focus future health promotion activities to consider raising awareness about condom use and early sexual debut among Malawian youth.

3. Tiphunzire may also study programmatic differences that exist between Y1 and Y2 interventions. Given that the project achieved more for the Y1 cohort, further research can consider whether programmatic differences (and not unobserved phenomena) can account for changes in literacy and attendance from midline to endline.

4. A high proportion of AoCs have reported improved support from traditional authorities in the promotion of girls' education. The project should work actively to engage Head teachers in project implementation and future consultations, thereby bolstering the credibility that AoCs need to engage the wider school community.

5. Tiphunzire may also provide more frequent opportunities for refresher training. AoCs require more frequent training in order to improve their sexual and reproductive health knowledge and capacity to support marginalized girls. SRH knowledge regressed by an average of 11.2% between Baseline and Endline. Furthermore, only 52% of AoCs by Endline could correctly describe child protection reporting processes. Future intervention planning should account for some loss of knowledge over time and plan for targeted refresher trainings in key areas.

6. Promote awareness of child protection reporting mechanisms. Although the intervention had a positive impact on school safety all stakeholders reported that reporting mechanisms are often not utilized. While AoCs assume this is because schools are safe the project should more actively raise awareness of reporting mechanisms to ensure all cases can and are reported. This is especially important as only 52% of AoCs at Endline correctly described reporting processes.

7. Track key subpopulations in routine monitoring activities. The intervention selects participants based on a checklist which targets orphans, sexually active girls, married girls, and young mothers. Routine monitoring activities should track these key populations over time so as to ensure the intervention remains appropriately targeted and inclusive.

Annex 1

Logframe

Output and Output indicators	Activities	Baseline	Midline	Endline	Endline Target	Perfor-mance	Source
Output 1: Agents of Change run inclusive workshops (AoC training; Girls' Clubs; Listening Clubs; Holiday Clubs)							
	Summary of activities to lead to output achievement	*Baseline*	*Midline*	*Endline*	*Endline Target*	*Improvement since Baseline*	*Summary of source(s) (HHS, FGDs, observation tools etc.)*
1.1 Percentage of AoCs who demonstrate ability to teach literacy, numeracy and life skills in participatory and interactive ways	*Teacher training, refresher courses, financial and remote support*	**0%**	**83%**	**72%**	**95%**	**+72%**	Monitoring Data; Percentage of AoCs scoring 75% or higher on 7 scorecard items (maximum 5 points each) from Girls' Club Observations. Items measured facilitation skills of AoCs including organizational skills and use of participatory and interactive methods.
1.2 Percentage of AoC with correct basic sexual and reproductive health (SRH) knowledge	*Teacher training, refresher courses, and provision of guidance materials*	**86%**	**72%**	**75%**	**94%**	**-11%**	Monitoring Data; 10 knowledge questions from SRH monitoring Survey. AoCs answering at least 80% of questions correctly are considered to have "correct basic" SRH knowledge.
1.3 Percentage of AoC with knowledge of girls' gender and sexual and reproductive health rights	*Teacher training, refresher courses, and provision of guidance materials*	**65%**	**85%**	**90%**	**91%**	**25%**	Monitoring Data; 9 SRHR and gender rights knowledge questions from SRH monitoring survey; AoCs answering at least 75% of questions correct considered to have "knowledge" of girls' gender and SRHR
1.4 Percentage attendance at AoC Girls 'Clubs/ Holiday Clubs	*Teacher training, and provision of tools to gather attendance data*	**0%**	**74%**	**83%**	**70%**	**+83%**	Monitoring Data; average percentage of club attendance per month over 8-month period (December 2015 – July 2016)
1.5 Percentage of girls who show improved self-confidence and self-efficacy	*Teacher training, provision of guidance materials, Girls' Clubs*	**0%**	**83%**	**72%**	**80%**	**+72%**	Percentage proportion of girls who scored ≥3.00 in a composite scale made from the Rosenberg Self Esteem Scale and Academic Self-Efficacy items.
Output 2: Marginalised girls increase participation in co-educational environments (Girls' Clubs; Listening Clubs; Holiday Clubs)							
2.1 Percentage of club girls with awareness of their gender, sexual and reproductive health rights	*Girls' Clubs*	**N/A**	**80%**	**80%**	**80%**	-	Percentage proportion of girls who are able to say no to unwanted sex and are able to use contraception if sexually active.
2.2 Percentage of club girls who believe they have the power to make decision in their own lives	*Girls' Clubs, Listening Clubs and Home Visits*	**55%**	**82%**	**86%**	**55%**	**+31%**	Percentage proportion of girls who scored ≥3.00 for the item "I have the power to make decisions for myself"

Output and Output indicators	Activities	Baseline	Midline	Endline	Endline Target	Perfor-mance	Source
2.3 Percentage of club girls demonstrating the ability to confidently interact with boys in co-ed learning environments	*Girls' Clubs, Holiday Clubs, School Listening Clubs, Peer-to-peer teacher training.*	**57%**	**58%**	**66%**	**85%**	**+9%**	Percentage proportion of girls who score ≥3.00 in Participating and interacting in class in co-ed environments.
2.4 Percentage of club girls able to attend school during menstruation	*Girls' Clubs & provision of sanitary pads and pain killers*	**62%**	**64%**	**83%**	**75%**	**+21%**	Percentage proportion of girls who have begun menstruating and feel that menstruation does not represent a problem when attending to school.
2.5 Percentage of club girls who report that they enjoy school	*Girls' Clubs & Holiday Clubs*	**87%**	**89%**	**96%**	**90%**	**+9%**	Percentage proportion of girls who scored ≥3.00 for the School Belonging Scale.
Output 3: Parents actively support girls' education (Community mobilisation and sensitisation; Open Days; Community Listening Clubs; AoC/ team home visits)							
3.1 Percentage of girls' club parents/ guardians who feel that it is equally valuable to invest in a daughter's education than a son's when funds are limited	*Community Radio Listening Clubs, Home Visits, and Open Days.*	**82%**	**79%**	**97%**	**87%**	**+15%**	Percentage proportion of guardians who scored ≥3.00 in a composite scale made from Items Q64, Q65 and Q68 of the HHS.
3.2 Percentage of Listening Clubs attended by at least 30 community members every month	*Community Radio Listening Clubs, Home Visits, and Open Days*	**N/A**	**14%**	**57%**	**70%**	-	Monitoring Data; Monthly average percentage club attendance
3.3 Percentage of girls' club parents / guardians with knowledge of girls' gender and sexual and reproductive health rights	*Community Radio Listening Clubs*	**0%**	**27%**	**39%**	**80%**	**+39%**	Percentage proportion of guardians who scored ≥4.00 in a composite scale made of 5 items (Q163-Q169) in the Endline HHS (same items for other evaluation periods).
3.4 Percentage of girls' club parents/guardians who feel that their daughter is as likely as their son to make use of her education after school	*Community Radio Listening Clubs, Home Visits, and Open Days*	**31%**	**46%**	**76%**	**70%**	**+45%**	Percentage proportion of guardians who scored ≥4.00 in a composite scale made from Items Q66, Q67, Q68 and Q69 of the HHS.
3.5 Percentage of girls' club parents/ guardians who report feeling comfortable discussing SRH issues with their daughters	*Community Radio Listening Clubs*	**43%**	**45%**	**62%**	**55%**	**+19%**	Percentage proportion of guardians who scored ≥4.00 in a composite scale made from item Q162 of the HHS and similar items from other periods.
Output 4: Project schools are more safe and inclusive (CPP policy put in place; AoC training of teachers in inclusive learning environments and CPP)							
4.1 Percentage of AoC teachers with comprehensive knowledge of child abuse reporting mechanisms in school	*Teacher training and provision of guidance materials*	-	**67%**	**53%**	**90%**	-	AoC Child Protection Survey item asking about process of reporting abuse.
4.2 Percentage of non-AoC teachers at intervention schools with positive attitudes towards girls' participation in class	*Peer-to-peer teacher training*	**90%**	**92%**	**91%**	**75%**	**1%**	Percentage proportion of girls who scored teachers ≥3.00 for "teachers at this school treat student fairly" and "teachers at this school treat girls fairly".
4.3 Percentage of club girls who feel equal to boys in classrooms	*Girl Clubs, School Listening Clubs*	**74%**	**79%**	**89%**	**75%**	**+15%**	Percentage proportion of girls who scored ≥4.00 for equal participation items.
4.4 Percentage of club girls reporting they feel safe at	*Establishment of CPP in schools,*	**82%**	**94%**	**85%**	**80%**	**+3%**	Percentage proportion of girls who scored ≥4.00 for

Output and Output indicators	Activities	Baseline	Midline	Endline	Endline Target	Perfor-mance	Source
school	*development of partnership with education and public authorities, training of CPP in schools*						school safety items (at school, on the way to school and on the way back from school).
4.5 Percentage of club girls able to identify a person in school that they could report abuse to	*Girls' Clubs, Community Listening Clubs and establishment of CPP in schools.*	**62%**	**47%**	**78%**	**75%**	**+16%**	Percentage proportion of girls who know they can report child abuse concerns and identified teachers, traditional or public authorities as reporting access points.

Annex 2: Outcome Spreadsheet

Outcome Spreadsheet - See attachment.

Annex 3: Changes to Project Design

This Annex, outlines any changes to the project's interventions since the proposal.

Table A3.1: Intervention types and changes to interventions

Intervention types	Planned at proposal stage (X)	Added?	Removed?	When?	Describe change and rationale
District Stakeholder Meetings	No	Yes	N/A	Jan-March 2016	This sensitised all stakeholders in the projects motivations to gain buy in into the project and support the teachers in project schools
Child Protection Training	No	Yes	N/A	Jan-March 2016	A response to our midline this was to ensure that the project schools were well versed in child protection procedures and were better linked with the current local infrastructure

Overall as a project, as highlighted in the table above TfaC did not make any considerable changes to the project design and delivery method.

Child Protection training was introduced as during the initial implementation it became clear that there was limited or no child protection or safe-guarding procedures at a national, district or school level.

TfaC was required to run additional child protection training with AoCs and key stakeholders, provide schools with posters, procedures and record books and is currently working with the Ministry of Education to finalise a national child protection policy.

This remains a key challenge for the education system as whole, however currently TfaC is considered a leader in developing this work through their leadership of the girls' education network.

In terms of the district stake holders meeting, a learning for us as an organization was the need to involve all school and district level stakeholders in the set up and initiation of the project. In the beginning TfaC's focus was on the AoC's we were working with to introduce the project and aims of the work within their school.

However due to the traditionally formal and hierarchical nature of key school and community structures, this led to tensions and a lack of support. As learning from the Midline, TfaC implemented many key stake holder meetings, which also combined child protection training with head teachers and school stakeholders. This was immediately reported to have increased responsiveness and consistent engagement with project.

At present, as part of our sustainability plan, we are running another 10 district trainings with head teachers and AoCs, where there is a half day Child protection refresher training. Additionally, in Term 2 we will be running 10 child protection trainings with the District Social Welfare offices, to support Traditional Authority Child Protection Officers to follow up cases and support GEC schools and other schools in their engagement.

Annex 4: Endline Research Methodology

Process

Individual-level data for Year 1 learners and their households was gathered at baseline in 2013, at midline in May/June 2015, and at Endline in June and July 2016. The first baseline for Tiphunzire was conducted in December 2013 by the original external evaluators. Due to concerns raised by TfaC regarding the quality of the work, particularly at the reporting stage the relationship between TfaC and the external evaluators broke down. Due to this the original data that was collected was withheld from TfaC and when it was eventually sent (the paperwork to TfaC Ghana and the electronic data to TfaC Malawi) there were a lot of mistakes in the coded data which were missing unique codes for the participants in the study.

The endline data collection process was conducted by One South, LLC in June and July 2016. Enumerators were selected through an open competitive process and requested to submit a formal application online. Forty enumerators were selected among 1110 applicants because of their experience in data collection and on literacy and numeracy assessments. Enumerators visited 10 districts in Malawi over the course of three weeks. Enumerators participated in a training workshop and learnt the administration of the EGRA, EGMA, historical attendance data collection, the HHS, the Girls SSQ, and the AoC questionnaire. EGRA, EGMA and the Girls SSQ were administered in school. The HHS was administered at the household and matched to all instruments during the data entry process. Data was collected using paper surveys and entered through the mobile using the Mobenzi Research Console Platform. Using ICT technologies when entering data reduced the chance of data entry errors.

The evaluation also hired three qualitative researchers among the pool of applicants to organize and moderate focus group discussions and key informant interviews. Qualitative researchers were chosen among a pool of 1100 applicants for their past experience and educational background. Qualitative Researchers participated in an alternative 3-day training workshop and deployed over the course of two weeks to 6 districts of the intervention. During data collection, qualitative researchers were asked to submit session debriefing forms to enable the management team to trace the evolution of ideas and discourses and adapt interviews accordingly. Data was recorded using the mobile phones of the qualitative researchers, transcribed in the local vernacular, and translated into English for review by a separate team of transcribers and translators.

Attendance

Attendance was measured using historical attendance data made available by school authorities through school registries and attendance records. Attendance was measured as the percentage proportion of days present in a school calendar month. For the midline the study used historical attendance records for the months of February 2015 as proxy of the attendance level. For the endline, we used the month of February 2016[87].

Using the following expression, the level of attendance was calculated for each participant of the study:

$$Attendance\ Level = \frac{DaysPresentperSchoolCalendarMonth(s)}{TotalDaysperSchoolCalendarMonth(s)} x100$$

Learning

Literacy

In order to assess project impact on literacy, the study administered the Malawi Early Grade Reading Assessment, at Baseline, Midline and Endline.

The Malawi 2010 EGRA instrument, administered at Baseline, and the Malawi 2011 EGRA instrument, administered at Midline, were both developed by RTI in consultation with stakeholders from the MoEST and

[87] We selected these months as these are outside the harvest or raining seasons and these factors are known to significantly affect attendance. The records were found in school registers or attendance books that were made available by head teachers in all midline schools.

specialists on the Malawian educational curriculum. The Malawian EGRA is administered in Chichewa and is used by the MoEST in the national assessment of literacy. At Endline, TfaC Malawi developed, piloted, and recalibrated an EGRA assessment following GEC guidance and advice from colleagues at RTI International.

The EGRA assessment contains eight sub-tasks, namely (1) Letter name knowledge; (2) Phonemic awareness; (3) Letter sound knowledge; (4) Familiar word reading: (5) Unfamiliar word reading; (6) Oral reading fluency with comprehension; (7) Listening comprehension; and (8) Dictation.

For Midline-to-Endline comparisons, the chosen dependent variable for analysis is Oral Reading Fluency (ORF) as measured in Words per Minute (WPM). The scoring of ORF is depicted by the following formula:

$$WPM = \frac{Number\ of\ Words\ Read\ Correctly}{Seconds\ required\ to\ read\ (time\ taken)} \text{ x 60 seconds}$$

Oral reading fluency (ORF) provides a well-documented measure of 'overall reading competence'[88]. In the context of EGRA, ORF is understood as 'the ability to translate letters into sounds, unify sounds into words, process connections, relate text to meaning, and make inferences to fill in missing information'[89].

Based on guidance from the Fund Manager and the absence of oral reading fluency data from the Y1 Baseline, we calculated an Overall EGRA score to measure literacy changes for baseline-to-midline comparisons. The "Overall EGRA Score" was calculated, therefore, by weighting scores of individual subtasks as shown in the following table.

Table A3.2: Weighting for EGRA Overall Score

Subtask	Weight
Letter Naming Knowledge	8.334%
Initial Sound Awareness	8.334%
Letter Sound Knowledge	8.334%
Syllable Reading Fluency	8.334%
Familiar Word Fluency	8.334%
Nonsense word reading fluency	8.334%
Oral Reading Comprehension	40%
Listening Comprehension	10%

Numeracy

The EGMA assessment tested girls on eight components including (1) oral counting; (2) Rational counting; (3) Number recognition; (3) Quantity discrimination; (4) Pattern completion; (5) Word Problems; (6) Addition Questions (level 1 and 2); (7) Subtraction Questions (level 1 and 2); and (8) Written Exercise.

For each subtask, the total number of correct answers is divided by the total number of possible correct answers. To calculate the EGMA overall percentage, scores from subtasks 3 to 9 are averaged and multiplied by 100 to obtain an overall percentage.

Sampling

The primary population of interest are marginalized girls who attend school or not. Participants of the intervention are defined as girls who have enrolled in Girls' Clubs since the onset of the intervention. Marginalized girls have been identified by the AoCs and their school communities and invited to join depending on their marginalization status. On average, AoCs have selected 40 girls to participate in girls' clubs according to a set of

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

[89] RTI International. Early Grade Reading Assessment Toolkit, 2009

observable marginalisation and vulnerability criteria. We may therefore assume that all beneficiaries are marginalized and may not rely on marginalization data to select participants for this study, except for control cases. We created a counterfactual by gathering outcome data on populations not exposed to any development intervention (control sample) and comparing it to a (treatment) dataset gathered on Girls' Clubs participants at the aggregate level. As such, we rely on cross-sectional panel data in the analysis of the project's achievement[90].

Sampling Stratification Criteria

As a distinct group, marginalized girls were classified according to in-school and out-of-school status aiming for a 66.6% of in-school girls and 33.3% of out-of-school girls at Baseline in 2013. At endline, girls were selected from a list of participants obtained from previous baseline data and replaced using a one-for-one replacement rule[91]. At baseline, in-school Girls' Clubs' participants were selected through a standard-level criterion corresponding to the primary school years in the Malawian education system. This means Standard 5 and 6 at the baseline level and Standard 7 and 8 at endline for most of the cohort. We also included in-school girls who repeated the grade and out-of-school girls who re-enrolled in any standard level. Cohort membership is defined by their original enrolment status (and grade level) at baseline in October 2013. Primary school education in Malawi is made up of eight years (referred to as Standard 1 to Standard 8).

Household Sampling

In addition to the total cohort of marginalized girls, we have sampled the heads of their households and the caregivers of Girl participants. For the Year 1 cohort, a large portion of households were tracked since baseline. Households from the Year 2 cohort were sampled only at Endline as the baseline for Year 2 had originally sampled a non-representative sample of 125 unmatched households. Household sampling enabled the collection of relevant socio-economic and attitudinal data from guardians of the participant girls, as well as the confirmation of consent for participation in the study for the girls under their care.

Data Collection

Data was gathered at baseline in 2013, at midline in May/June 2015 and at Endline in June 2016 using the Malawi Early Grade Reading Assessment (EGRA) and the Early Grade Mathematics Assessment (EGMA) for a cohort of 827 marginalised girls across 72 primary schools in rural and peri-urban Malawi. Attendance data was gathered from attendance registries made available to the data collection team at participating schools.

Table A3.3 Midline & Endline Sample Sizes

Year 1 Cohort EGRA	**Treatment**			**Control**		
	Baseline	*Midline*	*Endline*	*Baseline*	*Midline*	*Endline*
Standard 5 at Baseline	277	171	172	193	139	109
Standard 6 at Baseline	172	265	165	153	198	144
Out-of-school	187	23	65	187	45	58
Sub-Total	636	459	402	533	382	369
Total Treatment/Control (All Periods)		1497			1284	
Midline Total Students	**841**					
Endline Total Students	**771**					
Total Sample (Midline and Endline)	**1612**					
Total Sample (all periods)	**2781**					

[90] See note 30 on DiD implementation challenges.
[91] UK AID (2016) GEC Tracking Cohorts Endline Guidance GEC. *Girls Education Challenge Fund Endline Pack for Innovation Window Projects* (unpublished).

Year 2 Cohort EGRA	Treatment		Control	
	Baseline Y2	*Endline*	*Baseline Y2*	*Endline*
Standard 5 at Baseline	118	175	76	62
Standard 6 at Baseline	23	152	31	60
Out-of-school	0	95	0	42
Sub-Total	141	422	107	164
Total Treatment/Control (All Periods)	1199		804	
Baseline Y2 Total Students	**248**			
Endline Total Students	**586**			
Total Sample (Baseline Y2 and Endline)	**834**			
Total Sample (all periods)	**834**			

Year 1 Cohort EGMA	Treatment			Control		
	Baseline	*Midline*	*Endline*	*Baseline*	*Midline*	*Endline*
Standard 5 at Baseline	277	135	137	193	167	89
Standard 6 at Baseline	172	210	146	153	108	101
Out-of-school	187	13	62	187	35	56
Sub-Total	636	358	345	533	310	246
Total Treatment/Control (All Periods)		1339			1086	
Midline Total Students	**668**					
Endline Total Students	**591**					
Total Sample (Midline and Endline)	**1259**					
Total Sample (all periods)	**2425**					

Year 2 Cohort EGMA	Treatment		Control	
	Baseline Y2	*Endline*	*Baseline Y2*	*Endline*
Standard 5 at Baseline	127	158	11	34
Standard 6 at Baseline	29	117	51	54
Out-of-school	0	80	0	54
Sub-Total	156	355	62	142
Total Treatment/Control (All Periods)	511		204	
Baseline Y2 Total Students	**218**			
Endline Total Students	**497**			
Total Sample (Midline and	**715**			

Endline)

Total Sample (all periods) **715**

Sample Attrition

In total, the team achieved a total sample size at Endline of 1,299 cases (55% Treatment and 45% control). After replacing lost girls and randomly resampled new ones, we sampled 870 new endline cases. With, 1,403 cases at midline (Y1 and Y2 Cohorts), bringing our total sample size to 2,141 vertically-merged cases. This places the sampling attrition rate to about 21% from the minimum target of 790 horizontally-merged cases for a 0.8 power (c.f. the TfaC's M&E framework).

Attrition occurred when the midline girl is not present in school during three school visits, has dropped out of the school, or cannot be located anymore. This was the case for 76% of the lost girl cases, who were not found after efforts to locate them with our Field Manager and Head Teachers. Whenever girls were not found and the enumerator could not locate her, the enumerator contacts the Field Manager and head teacher to support locating the girl.

In rural Malawi, these locations can at times be up to 3h from the catchment school making it impossible for either the enumerator or the family to meet each other. Our enumerator team visited 10 districts and a different rural location every day. Due to the long distances and road conditions, local travel was impossible to arrange outside the catchment area.

Based on feedback from the enumerator team, the primary reason for high attrition was lack of household data from previous evaluation periods. The household survey provides an additional means to locate the girl through information on the location of the household and the name and contact details of the head of the household. However, the evaluation design required a non-representative sample of households for the year 2 group and a sample size lower than that required for learning assessments for the year 1 group. In practice, this resulted in girls with household data being easier to track at Endline than girls without household data from previous periods. The main point of contact for girls without household data was the school. Schools do not always have reliable information on the name of students in their school and this often varies greatly from school to school. This information is meant to be held by the head teacher in the school register, however in some cases it is the class teacher who has a more updated version of the list. In order to schedule visits with schools field assistants on average had to make 3-4 calls to the school to verify participant information and availability. This was much more difficult than for girls with household data where one could use the head of household name or his/her contact information. In FGDs, when asked if any event affected a girls' attendance, many parents indicated that children are sent to fields after exams to support farming activities. Given Malawi's ongoing drought since early 2016, we expect this to be a particular hard year for children from families in the lowest income strata, many of whom have travelled to other areas as part of the season or to seek additional sources of income.

Table 1 below shows that the highest percentage of replacement cases replaced original girls who moved to a different location outside the study's catchment area.

Table A3.4 Reason for Attrition at Endline

Reason	Percentage (n = 870)
Child is still enrolled in this school but is absent and not found	2%
Original girl does not go to this school anymore	10.2%
Original girl or caregiver refused	1.6%
Child is married and was unable to participate	2%
Girl transferred to different location or a different school since 2014 or 2015 and cannot be located by either the Field Manager or School	76%
Girl's name not recognized by school	8%

We can also confirm that sample attrition affected both enrolled and un-enrolled girls randomly and we may thus run the same OLS analyses for both groups.

The table below compares re-contact girls to substitute girls at Endline. At Midline this comparison was not possible as the previous external evaluator did not have unique codes matched to girls names, therefore it is impossible to identify which girls are re-contact and which are substitute.

Replacement Cases

Replacement cases selected following a *one-for-one* replacement procedure to substitute for girls who have dropped out of the survey. This means that the replacement girl was to the extent possible from the same school, have the same age, and ideally attend the same grade and class as the initial midline girl. After drawing an initial list of suitable replacements, the replacement girl is selected at random.

We strived to replace Out-of-school girls who were not enrolled at midline with girls matching in key characteristics, most notably enrolment. We understand the exclusion biases involved when out of school girls who were not enrolled are replaced with girls that re-enrolled and implemented rigorous protocols to replace girls. During data collection, enumerators

Table 2 and Table 3 below show the quality of the sampling procedure. The table shows that both original girls and groups were similar in composition across key demographic and psychometric variables during the Midline for the Y1 cohort. Only the number of orphans differs at significant levels according to chi-square tests. At endline, the evaluation team strived to sample more OOS given their low representation in the Midline sample and the groups differ significantly in the number of mothers and pregnant girls included, with significantly more mothers and pregnant girls resampled at Endline.

Aside from these small differences, results suggest that seemingly no biases were introduced by cross-sectional sampling.

Table A3.5 Comparability of Original (Lost) Girls and Re-contacted (Midline)

	Control					Treatment				
	Original		Re-contacted			Original		Re-contacted		
	Mean	Column N %	Mean	Column N %	Sig.	Mean	Column N %	Mean	Column N %	Sig.
Number of Children per Adult in HH	1.55		1.71		p>.05	1.93		1.73		p>.05
Level of Hardship	1.93		1.84		p>.05	1.77		1.90		p>.05
Mother (given birth)		10.3%		8.3%	p>.05		7.5%		7.3%	p>.05
Been Pregnant		13.2%		10.2%	p>.05		8.5%		8.8%	p>.05
Orphans		30.5%		15.5%	p<.05		34.1%	X`	19.0%	p<.05
Self-Esteem	3.19		3.25		p>.05	3.10		3.20		p>.05
Academic Self-Efficacy	4.38		4.09		p>.05	4.07		4.23		p>.05

Table A3.6 Comparability of Original Girls and Re-contacted (Endline)

	Control					Treatment				
	Original		Re-contacted			Original		Re-contacted		
	Mean	Column N %	Mean	Column N %	Sig.	Mean	Column N %	Mean	Column N %	Sig.
Number of Children per Adult in HH	1.12		1.36		p>.05	1.34		1.50		p>.05
Level of Hardship	2.00		2.03		p>.05	1.99		2.04		p>.05
Mother (given birth)		3.1%		6.6%	p<.05		2.6%		7.1%	p<.05

Been Pregnant	5.8%	10.6%	p>.05	3.3%	8.5%	p<.05
Orphans	4.4%	3.7%	p>.05	2.4%	3.0%	p>.05
Self-Esteem	3.53	3.51	p>.05	3.60	3.55	p>.05
Academic Self-Efficacy	4.01	3.78	p>.05	4.14	4.08	p>.05

Table A3.5 Comparison of Substitute vs. Recontact at Endline

	Intervention (Endline)				Control (Endline)			
	Substitute (329)	Re-contact (262)	Difference	P-value of the difference	Substitute (162)	Re-contact (156)	Difference	P-value of the difference
Outcomes								
Mean Literacy score (WPM)	54.6	59.4	4.8	0.004	52.9	57.9	5	0.02
Mean Numeracy score (Overall %)	82.4%	80.4%	2	0.006	78.3%	80.4%	2.1	0.10
Currently OUT of school (in %)								
Mean Attendance rate	93.1%	94.2%	1.1	0.598	93.8%	94%	0.2	0.67
Socio-economic characteristics								
Roof made of Thatch (in %)	30%	31%	1%	N/A	64%	37%	27%	N/A
Roof made of Tin	24%	26%	2%	N/A	36%	31%	5%	N/A
Head of Household occupation (Salesperson/Vendor)	34%	36%	2%	N/A	28%	25%	3%	N/A
Head of Household education level (none)	25%	36%	11%	N/A	22%	34%	12%	N/A
Head of Household education level (secondary)	29%	37%	8%	N/A	19%	21%	2%	N/A

Approach to estimating learning outcomes and Enrolment

To estimate the project's impact, we measured Tiphunzire's attribution to the changes in learning outcomes, access and retention of a stratified sample of Girl Clubs' participants[92] using a quasi-experimental cross sectional approach.

While the endline had originally planned to analyse the data using Difference-in-difference techniques, the study managed to match horizontally a third of total cases collected.

To determine the impact of Tiphunzire's Project, we analysed a cross-sectional dataset of 2,823 marginalized girls participating in Tiphunzire activities since the Midline for the Year 1 Cohort (May/June, 2015) and the Baseline for the Year 2 Cohort (October, 2014). The data was analysed through three fixed effects regression models using literacy, numeracy and attendance scores as dependent variables. By virtue of its cross-sectional nature, this approach follows a quantitative appraisal of the project's achievement on the levels, rather than changes, in education outcomes.

The model follows the general expression:

$$Yi = \beta + \gamma * (Ui * Ei) + \delta * Ei + \omega * Ui + vi$$

Where Yi are the levels in learning scores or attendance achievement for each girl (either originally sampled or replacement), β is an intercept, γ is the achievement, Ui is a treatment dummy variable taking value 0 for girls in the control group and taking value 1 for girls in the intervention group, Ei is a time dummy taking value 0 for midline observations and taking value 1 for endline observations, and vi is a standard residual term. By proving

[92] See stratification criteria in p.10.

the significant presence of impact, this model aims to show that participatory pedagogies significantly affect the learning of marginalized girls.

Enrolment is measured at the individual level using also a cross sectional approach. To estimate the project's additionality, we calculate the probability of being classified as "enrolled" or "not enrolled" in school using a logistic regression function[93] of three predictors, namely (1) time (midline-to-endline), (2) treatment status and (3) an interaction variable between (1) and (2). The significance of the predictor is calculated using a Wald statistic.

The model follows the logit equation:

$$p(Y) = \frac{e^{\beta + \gamma * (Ui * Ei) + \delta * Ei + \omega * Ui + vi}}{1 + e^{\beta + \gamma * (Ui * Ei) + \delta * Ei + \omega * Ui + vi}}$$

Where p(Y) is the probability that a given case is classified as "enrolled" (either originally sampled or replacement), β is an intercept, γ is the achievement, Ui is a treatment dummy variable taking value 0 for girls in the control group and taking value 1 for girls in the intervention group, Ei is a time dummy taking value 0 for midline observations and taking value 1 for endline observations, and vi is a standard residual term.

Enrolment data was obtained through the Girls SSQ "are you currently attending school?" We triangulate findings with the HHS question "Is [GIRL] currently enrolled in school?", though HHS data is not available for all cases in the logistic regression.

Readers should bear in mind that only girls who take part in Girl Clubs receive the full intervention and thus only girls who participate in Girls' Clubs take part on this study. As such, findings are representative of the treatment group, composed of a selected group of marginalized girls at a given school. Girl Clubs are attended by in-school girls and out-of-school girls alike. To replace out of school girls lost due to attrition, we followed one-for-one replacement rules and sought to match replacement cases to lost cases in enrolment status whenever possible.

Given this characteristic of the intervention, we opted to measure enrolment at the individual rather than at the aggregate school-level.

This approach was chosen because the project experienced 21% attrition at Endline and it was determined that cross-sectional cohorts were suitable for comparison.

Qualitative research approach

In order to triangulate with quantitative findings and explored key qualitative dimensions organised the following activities with selected groups or individual staff:

5. **Document and Literature Reviews.** Prior to the evaluation and throughout the appraisal of results the evaluation team has made use of key project documents and the relevant literature on the issues being discussed.
6. **Focus Group Discussions (FGDs).** FGDs were held with a diverse range of marginalized girls, parents of in-school and out-of-school girls, AoCs and community members. Discussions focused on identifying project effects, causal mechanisms and implementation.
7. **Key Informant Interviews (KIIs).** KIIs were held with project staff and district officials to discuss project design and implementation in relation achievement of outcomes and learning. KIIS were also held with a number of school stakeholders including head teachers, AoCs, and out-of-school girls. These discussions focused on individual experiences of the projects and its effects.
8. **Structured Observations of Holiday Clubs**. Structured observations of holiday clubs allowed us to see TfaC's methodology in practice and document how literacy and numeracy is being taught.

These methods were chosen to complement quantitative outcome level attendance or learning data; provide output level data (possibly alongside quantitative data); and provide contextual data to help explain the broader theory of change. Qualitative data was available for the Midline and Endline periods and was collected by the external evaluator.

[93] Details of the Logistic Regression Function see Annex 2.

Primary research instruments were created based on the questions posed by the endline template and according to the guidance provided in the Webinar series (see qualitative dimensions' checklist in Webinar Endline 2).

Qualitative research sampling and analysis

Qualitative researchers were offered a 3-day training exercise on the three methods to gather data from key populations. Researchers were also offered all interview scripts, session debriefing forms and session summary forms to organize and manage the collection of data.

Research populations were selected by purposive sampling with support from AoCs and Head Teachers. The composition of focus groups was decided once the qualitative research scope was well defined and relevant populations were identified. Research populations included marginalized girls (and sub-groups), parents, community members, teachers, traditional authorities, AoCs, and public officials.

A summary of all qualitative sessions carried out can be seen in the table below:

District	Interviews	FGDs	Observations
Dedza	In-depth Interviews with AoCs or Pairs of AoCs (4) KII with District Education Manager (DEM) (1) KII with Social, Health and Nutrition Coordinator (SHN) (1)	• FGD with Drop Out Girls • FGD with Re-enrolled Girls • FGD with AoCs on Girls' Clubs and Sustainability • FGD with AoCs on Outreach Activities & Targeting • FGD with Community Listening Club Members and Non-Members • FGD with Marginalized Girls on Girls' Clubs and Barriers and Drivers to Learning (include OS and IS). • FGD with Parents and Caregivers of Girls from the Girls' Club on SRH and Girls Education (encourage AoC to invite parents with different attitudes towards discussing SRH and contraception in schools). (1) • FDG (To be confirmed later) (1)	Holiday Clubs (2)
Nkhotakota	In-depth Interviews with AoCs or Pairs of AoCs (4) KII with District Education Manager (DEM) (1) KII with Social, Health and Nutrition Coordinator (SHN) (1)	• FGD with Drop Out Girls (1) • FGD with Re-enrolled Girls (1) • FGD with AoCs on Girls' Clubs and Sustainability (1) • FGD with AoCs on Outreach Activities & Targeting (1) • FGD with Community Listening Club Members and Non-Members (1) • FGD with Marginalized Girls on Girls' Clubs and Barriers and Drivers to Learning (include OS and IS) (1) • FGD with Marginalized Girls on Sexual and Reproductive Health (encourage a mix sexually active and non-sexually active girls) (Ages 14-16) (1) • FGD with Parents and Caregivers of Girls from the Girls' Club on SRH and Girls Education (encourage AoC to invite parents with different attitudes towards discussing SRH and contraception in schools). (1)	Holiday Clubs (2)
Balaka, Ntcheu and Salima	In-depth Interviews with AoCs or Pairs of AoCs (4) KII with District Education Manager (DEM) (1) KII with Social, Health and Nutrition Coordinator (SHN) (1)	• FGD with Drop Out Girls (1) • FGD with Re-Enrolled Girls (1) • FGD with AoCs on Girls' Clubs and Sustainability (1) • FGD with AoCs on Outreach Activities & Targeting (1) • FGD with Community Listening Club Members and Non-Members (1) • FGD with Marginalized Girls on Girls' Clubs and Barriers and Drivers to Learning (include OS and IS) (1) • FGD with Marginalized Girls on School attendance and Sexual and Reproductive Health (encourage a mix sexually active and non-sexually active girls) (Ages 14-16) (1) • FGD with Parents and Caregivers of Girls from the Girls' Club on SRH and Girls Education (encourage AoC to invite parents with different attitudes towards discussing SRH and contraception in schools). (1)	Holiday Clubs (2)

To analyse the data, we coded for individual quotes along categorical dimensions using a thematic approach. We strived to code all related quotes within a single category and reported on most salient themes according to their frequency. In doing so, we hope to have achieved a high degree of data saturation.

Overall, the data generated was of high quality. However, given the large scope of the evaluation, it was at times difficult for interviewers to go deeper in certain topics and ask all necessary follow up questions. During the data collection process, we process session debriefing forms to trace and follow-up on key ideas. In the future, however, we would advise to double the number of qualitative researchers to six, to be able to reduce the scope of FGDs and KIIs so as to reach more depth in the items discussed.

Research ethics and Child Protection

Given the potential vulnerable status of target beneficiaries and possible conditions of hardship, as well as the sensitivity of the topics to be discussed and enquired we paid close attention to the potential to do harm by conducting research. We commit to taking great care when involving vulnerable persons in our research in a manner consistent with accepted ethical principles in order to protect participants from exploitation, to engage and build capacity, and to promote wellbeing. In doing so, we use the guidelines of the British Sociological Association for Ethical Practice in Research.

All field staff and consultants undergo research ethics training as part of the enumerator workshop and are familiarised with the One South Code on Conducting Ethical & Child-friendly Research. At Endline, training on Child Protection Policy and Abuse Reporting Mechanisms was carried out by a representative from TfaC Malawi. Whenever necessary, enumerators reported cases of abuse or suspected abuse to the management team, who then passed the information to TfaC. TfaC Malawi will carry out the necessary steps to address these cases.

Annex 5: Beneficiary tables

Individuals included in the project's target group are considered direct beneficiaries of the project. Direct beneficiaries are described in Table 1. Other beneficiaries are described in Table 2.

Tables 4-5 of the Endline Report Template as project targeting does not account for age, or social group (poverty, disability, child labourers etc.).

Table A5.1: Direct beneficiaries

Beneficiary type	Total project number	Total number of girls targeted for learning outcomes that the project has reached by Endline	Comments
Direct learning beneficiaries (girls) – girls in the intervention group who are specifically expected to achieve learning outcomes in line with targets. If relevant, please disaggregate girls with disabilities in this overall number.	**9000**	9000	We have reached all the girls that we have planned to. Some have been replaced over the past few years of the project, but overall we reached the target of direct beneficiaries

Table A5.2: Other beneficiaries

Beneficiary type	Number	Comments
Learning beneficiaries (boys) – as above, but specifically counting boys who will get the same exposure and therefore be expected to also achieve learning gains, if applicable.	N/A	No boys were directly targeted with the same resources although a few did also go to listening clubs.
Broader student beneficiaries (boys) – boys who will benefit from the interventions in a less direct way and therefore may benefit from aspects such as attitudinal change, etc. but not necessarily achieve improvements in learning outcomes.	150000	This is based on the average amount of boys at schools who have delivered one or more open day.
Broader student beneficiaries (girls) – girls who will benefit from the interventions in a less direct way and therefore may benefit from aspects such as attitudinal change, etc. but not necessarily achieve improvements in learning outcomes.	141000	This includes all the girls at the project schools that have been exposed to the open days and radio shows we have aired
Teacher beneficiaries – number of teachers who benefit from training or related interventions. If possible /applicable, please disaggregate by gender and type of training, with the comments box used to describe the type of training provided.	400	Overall 400 teachers have been trained in TfaC methodology and given training on SRH and general teaching knowledge, this is 399 Women and 1 Man
Broader community beneficiaries (adults) – adults who benefit from broader interventions, such as community messaging /dialogues, community advocacy, economic empowerment interventions, etc.	6750	This is based on the number of adults we know have gone to the Community Listening Clubs

Table A5.3: Target groups – by school

School Age	Project definition of target group **(Tick where appropriate)**	Number targeted through project interventions	Sample size of target group at Endline
Lower primary	0	0	
Upper primary	Standards 5-8 in Primary School	9000	
Lower secondary	0	0	
Upper secondary	0	0	
Total:		9000	[This number should be the same across Tables 3, 4, 5 & 6]

Table A5.4: Target groups – by school status

Educational sub-groups	Project definition of target group **(Tick where appropriate)**	Number targeted through project interventions	Sample size of target group at Endline
Out-of-school girls: have never attended school	**Out-of-school: have either dropped out or have never attended**	**2250**	
Out-of-school girls: have attended school, but dropped out			
Girls in-school	**YES**	**6750**	
Total:		**9000**	[This number should be the same across Tables 3, 4, 5 & 6]

Annex 6: Summary of the Quantitative Data

All variables are found in the dataset file: 2016 09 30 DATA Tiphunzire Baseline-to-Endline.csv or *.sav

Table A6.1: Summary of quantitative data-sets

Variable	Variable name in data-set	Comments
Final Literacy Score (all periods)	OS16_LITERACY_WPM_ALL_915	Combines WPM scores Midline and Endline
Final literacy score, Midline	M_WPM_915	
Final literacy score, Endline	E_WPM_915	
Variables used in Cross-Sectional Model	TIME_915 TREATMENT_915 INTERACTION_915	
Literacy sub-task variables (multiple) for Midline and Endline (including timing variables if used)	e.g. *EGRA_1aML, EGRA_1bML, EGRA3aTime etc.*	
Final numeracy (all periods)	OS16_NUMERACY_EGMA_ALL_PERCENT_915	
Final numeracy score, Endline [add more than one variable if more than one test used]	OS16_EGMA_withWritten_Endline_915	
Final numeracy score, Midline	OS16_EGMA_Midline_915	
Numeracy sub-task variables (multiple) for Midline and Endline	E_EGMA3_NumberRecognition_Percent_915 E_EGMA4_QuantDiscrim_Percent_915 E_EGMA5_Pattern_Percent_915 E_EGMA6_Word_Percent_915 E_EGMA7_AdditionAandB_Percent_915 E_EGMA8_SubtractionAandB_Percent_915 E_EGMA9_Written_Percent_915 M_EGMA3_NumberRecognition_Percent_915 M_EGMA4_QuantDiscrim_Percent_915 M_EGMA5_Pattern_Percent_915 M_EGMA6_Word_Percent_915 M_EGMA7_AdditionAandB_Percent_915 M_EGMA8_SubtractionAandB_Percent_915 BY2_EGMA3_NumberRecognition_Percent_915 BY2_EGMA4_QuanDiscrim_Percent_915 BY2_EGMA5_Pattern_Percent_915 BY2_EGMA6_Word_Percent_915 BY1_EGMA7_AdditionAandB_Percent_915 BY1_EGMA7_SubtractionAandB_Percent_915	

	BY1_EGMA3_NumberRecognition_Percent_915 BY1_EGMA4_QuanDiscrim_Percent_915 BY1_EGMA5_Pattern_Percent_915 BY1_EGMA6_Word_Percent_915 BY1_EGMA7_AdditionAandB_Percent_915 BY1_EGMA7_SubtractionAandB_Percent_915
Treatment / Control status	TREATMENT_915
Recontacted / substituted / lost status	Respondenttype_915

Annex 7 – Declaration Form

Name of Project: Tiphunzire! (Let's Change) implemented by Theatre for a Change Malawi

Name of External Evaluator: One South, LLC

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

Names of all members of the evaluation team:

- Andrés O. Navarrete (Team Leader)
- Tariq T. Omarshah
- Dr. Marieke van Egmond

Andrés O. Navarrete hereby affirms that One South, LLC has no previous affiliation or relationship with the Tiphunzire Project, Girls' Education Challenge Fund, PwC, Coffey, DFID or the stakeholders interviewed as a part of this evaluation.

Andrés O. Navarrete certifies that the independent evaluation has been conducted in line with the Terms of Reference and other requirements received.

Specifically:

- All of the quantitative data was collected independently ((Initials: ANB)
- All data analysis was conducted independently and provides a fair and consistent representation of progress (Initials: ANB)
- Data quality assurance and verification mechanisms agreed in the terms of reference with the project have been soundly followed
- The recipient has not fundamentally altered or misrepresented the nature of the analysis originally provided by One South, LLC (Company) (Initials: ANB)
- All Evaluation Manager (EM) guidance on data cleaning has been followed (Initials: ANB)
- All data has been uploaded to the EM's SharePoint system in the instructed shape and format ((Initials: ANB)
- All child protection protocols and guidance have been followed ((initials: ANB)
- Data has been anonymised, treated confidentially and stored safely, in line with the GEC data protection and ethics protocols (Initials: ANB)

Andrés O. Navarrete (Name)

One South, LLC (Company)

22/09/2016 (Date)

Annex 8: Data collection tools used for Endline

For key dependent variables in the regression models, we administered the following standardized tools:

1. **Literacy - Malawi Early Grade Reading Assessment (2016).** The Malawi EGRA test has been conducted in Malawi by RTI and USAID in 2010 and 2011. A new calibrated version of the Malawi EGRA was adapted into Chichewa through Fund Manager guidance and support from colleagues at RTI Malawi. The adaptation process was conducted by TfaC, who piloted EGRA to ensure that items are specific to Chichewa rules and the tool was responsive to analytical needs. Literacy is assessed through the measure of Oral Reading Fluency, corresponding to the number of words a girl can read from a passage in one minute.
2. **Numeracy - Malawi Early Grade Mathematics Assessment (2016).** The Malawi EGMA test is comprised of eight sub-tasks. It is designed to measure the rate at which students develop critical early math skills. These subtasks are described in more detail in the EGMA Toolkit developed by RTI and USAID in 2009. A calibrated EGMA tool was developed by One South and piloted in local schools. The overall score for the EGMA test is the average percentage correct from sub-tasks 3 to 8.
3. **Attendance- School Registers**. Historical attendance data made available by school authorities through school registries and attendance records triangulated with attendance spot-check data. Attendance was measured as the percentage proportion of days present in a school calendar month. For the baseline the study used historical attendance records for the months of September and October 2013 as proxy of the attendance level. For the midline, we used the month of February 2015[94]. Using the following expression, the level of attendance was calculated for each participant of the study:

$$Attendance\ Level = \frac{DaysPresentperSchoolCalendarMonth(s)}{TotalDaysperSchoolCalendarMonth(s)} x100$$

For benchmarking exercises, assumption testing and programming we have also administered the:

4. **Semi-structured Questionnaire (SSQ) with Marginalized Girls.** Contingent on parental consent, the SSQ is administered to marginalized girls and aims to provide self-reported psychometric data on attitudes, aspirations, and basic SRH information.
5. **Household Survey with Parents & Caregivers.** It is designed to provide contextual information about project participants such as economic and social characteristics and data on parental values towards girls' education, SRHR, and life aspirations
6. **AoC Questionnaire.** Designed to explore implementation success stories and challenges encountered by AoCs.

In order to triangulate with quantitative findings and explored key qualitative dimensions organised the following activities with selected groups or individual staff:

7. **Document and Literature Reviews.** Prior to the evaluation and throughout the appraisal of results the evaluation team has made use of key project documents and the relevant literature on the issues being discussed.
8. **Focus Group Discussions (FGDs).** FGDs were held with a diverse range of marginalized girls, parents of in-school and out-of-school girls, AoCs and community members. Discussions focused on identifying project effects, causal mechanisms and implementation.

[94] We selected these months as these are outside the harvest or raining seasons and these factors are known to significantly affect attendance. The records were found in school registers or attendance books that were made available by head teachers in all midline schools.

9. **Key Informant Interviews (KIIs).** KIIs were held with project staff and district officials to discuss project design and implementation in relation achievement of outcomes and learning. KIIS were also held with a number of school stakeholders including head teachers, AoCs, and out-of-school girls. These discussions focused on individual experiences of the projects and its effects.
10. **Structured Observations of Holiday Clubs.** Structured observations of holiday clubs allowed us to see TfaC's methodology in practice and document how literacy and numeracy is being taught.

Annex 9: Project Management Response

As requested we have split our project response into 4 key sections:

- Reflection on our results in relation to the Logframe
- The Theory of Change and validity of assumptions
- Project response to the external evaluator recommendations
- Our key overall learning from the project

Overall the GEC project has been a time of incredible growth and learning for TfaC as whole, with the project allowing the organization to really understand our core strengths and how best to utilize this learning to maximize our impact going forwards.

Project Response to Logframe Output Results and Findings

When focusing on the log frame we are pleased to note that overall we saw positive trends and changes, even though there were cases where we have been unable to meet the end target. We are particularly pleased with the improvement of output 3 and 4, which were amber level concerns at the Midline review and were the subsequent focus of some of our key learning.

Table A9.1. Project Response on Logframe Outcomes

Output and Output Indicators	*Endline*	*Endline Target*	*Performance (improvement over target)*	*Project Response*
1.1 Percentage of AoCs who demonstrate ability to teach literacy, numeracy and life skills in participatory and interactive ways	72%	95%	**-23%**	Overall there is clear evidence that the scale up of the project from 36 to 225 schools led to a challenge in maintaining the quality of the intervention. Through our continuous learning, we identified that quality training and the AoC ability are key to any project success achieved. Since Midline, we have now implemented a new training programme focussed on ensuring quality facilitation. However, due to timing and project scale, not all AoCs would have completed this in time. Because of this we feel the lower score at Endline (compared with Midline) is due to increasing quality standards, with both the training and monitoring becoming more rigorous. Additionally, having built our experience of what is achievable in this context; TfaC has set the organisational key performance indicator at 75% for facilitation and will be focussing on achieving this with AoCs and future programming going forwards.
1.2 Percentage of AoC with correct basic sexual and reproductive health (SRH) knowledge	75%	94%	-**19%**	As highlighted in the evaluator recommendations, maintaining knowledge is a key challenge for AoCs. Due to project scale-up, size and volume of content, which had to be expanded to include literacy and numeracy, child protections and community engagement, it was challenging to repeat learning and make time for revision. A lack of repetition with AoCs only focussing on the topics covered in the most recent term led to a drop in this indicator. For future projects TfaC will be revising the training schedules and curriculum to ensure key information is highlighted and repeated regularly. Additionally, TfaC will make use of our social media platforms to encourage knowledge sharing and using quizzes / games to boost knowledge as well as explore e-learning options.

Output and Output Indicators	*Endline*	*Endline Target*	*Performance (improvement over target)*	*Project Response*
1.3 Percentage of AoC with knowledge of girls' gender and sexual and reproductive health rights	90%	91%	**-1%**	The curriculum in the final term was focussed on rights, child protection and gender equality which has ensured a gain in this area from Midline.
1.4 Percentage attendance at AoC Girls 'Clubs/ Holiday Clubs	83%	70%	**+13%**	Girls value and enjoy the space and time to learn provided by the club which is reflected in the strong attendance despite the challenging conditions faced across the project period by many in rural areas. The project encouraged flexible scheduling to AoCs, in terms of how and when they run their clubs. This ensured that all were run suitable to their environment and needs.
1.5 Percentage of girls who show improved self-confidence and self-efficacy	72%	80%	**-8%**	Although below target, this is a strong improvement, particularly in view of the results highlighting that Tiphunzire girls, started from a lower point than control girls, and managed to significantly surpass them. In terms of the decrease from Midline; this presents an opportunity for further research in to the measurement, focus and the true experience of girls as they go through a process of behaviour adoption and change. SC / SE is not a linear process and from our extensive work across all of our programmes with children and adults it is clear that the development and building of confidence is unique to the individual and we experience results fluctuating up and down throughout progression of the programmes. Moving forwards TfaC will focus on learning how best to monitor and capture the changes that occur. Additionally, the learning on breaking down results by marginalised sub-group and focussing on their key needs will help to ensure the curriculum is bet tailored to their needs.
2.1 Percentage of club girls with awareness of their gender, sexual and reproductive health rights	80%	80%	**0%**	As highlighted in 1.3, the focus of the curriculum has been rights based topic ensuring strong impact on girls' awareness. This has also supported our improved training and focuses in these areas during the 2nd half of the project.
2.2 Percentage of club girls who believe they have the power to make decision in their own lives	86%	55%	**+31%**	As a key indicator to empowerment and a driver of girls feeling motivated and inspired to learn, the strong results here are supported by the good attendance and commitment to learning we have seen from girls in the results.
2.3 Percentage of club girls demonstrating the ability to confidently interact with boys in co-ed learning environments	66%	85%	**-19%**	Engaging boys in the programme has been a challenge. Despite including boys in all listening club and community activities, it was difficult to engage the boys without being able to allocate any resources due to the funding restrictions.
2.4 Percentage of club girls able to attend school during menstruation	83%	75%	**+8%**	Provisions of pads and confidence workshops concerning menstruation have been a key support to achieving this target.
2.5 Percentage of club girls who report that they enjoy school	96%	90%	**+6%**	As indicated in the report there is success in girls feeling supported and engaged with school, which has ensured re-enrolment at Midline and continued attendance through to the end of the project.

Output and Output Indicators	*Endline*	*Endline Target*	*Performance (improvement over target)*	*Project Response*
3.1 Percentage of girls' club parents/ guardians who feel that it is equally valuable to invest in a daughter's education than a son's when funds are limited	97%	87%	**+10%**	The considerable increase at Endline is a positive reflection of the extensive focus on community listening clubs since the Midline report. Ensuring the audience were parents of girls rather than community member ensured that girls received support where needed.
3.2 Percentage of Listening Clubs attended by at least 30 community members every month	57%	70%	-**13%**	Unfortunately, overall TfaC were not able to hit the end line target despite the highlighted improvements. Positively the target was achieved for the June and July broadcasts and the programme team will continue to learn from implementation of clubs with all future projects.
3.3 Percentage of girls' club parents / guardians with knowledge of girls' gender and sexual and reproductive health rights	48%	80%	**-32%**	While the radio appears to have been very successful at changing attitudes and the focus of parents on girls' education, in terms knowledge building further programming may need to be included to support the work of the radio. Through discussions with AoCs it was also discovered that they were less comfortable to discuss SRH and facilitate with adults rather than children. How to work with adults was a focus in our August training and will become an additional part of future curriculums.
3.4 Percentage of girls' club parents/guardians who feel that their daughter is as likely as their son to make use of her education after school	76%	70%	**+6%**	As highlighted, this is a positive reflection of the renewed focus on community listening clubs since Midline.
3.5 Percentage of girls' club parents/ guardians who report feeling comfortable discussing SRH issues with their daughters	62%	55%	**+7%**	The success of the community listening club in the final year has allowed for a safe space for parents to discuss and share on these topics.
4.1 Percentage of AoC teachers with comprehensive knowledge of child abuse reporting mechanisms in school	53%	90%	**-37%**	AoCs' specific knowledge of reporting procedures remains low overall. As a project TfaC continues to face challenges in this area particularly due to the inconsistency of child protection from school management level to district and national levels. While TfaC has made uniform rules across our schools, challenges remain in a consistent and uniform approach in the communities we are working. This also made it difficult for us to test knowledge effectively with a standardised questionnaire which may have impacted the result. As an organisation, we continue to work with MoEST to ensure that CP procedures will be implemented across all schools
4.2 Percentage of non-AoC teachers at intervention schools with positive attitudes towards girls' participation in class	91%	75%	**+16%**	Each year of the project, AoCs have conducted many trainings across their schools for all teachers over the lifetime of the project, which is reflected in this result and the improvement of girls' experiences at school.

Output and Output Indicators	*Endline*	*Endline Target*	*Performance (improvement over target)*	*Project Response*
4.3 Percentage of club girls who feel equal to boys in classrooms	89%	75%	**+14%**	A positive result supported by increased confidence from girls and general school environment. This result again highlights the challenge of not including boys in the process and the complexity of what is means to be confident. Here Girls report feeling equal to boys in the classroom but from 2.3 fail to practically and confidently interact with them in a co-ed environment. Anecdotally this may be because boys have failed to change, and girls reported instances of teasing from boys particularly in maths and science subjects. Moving forwards more work will need to be dedicated to ensuring girls take this foundation forwards into their behaviour and actions in the classroom.
4.4 Percentage of club girls reporting they feel safe at school	85%	80%	**+5%**	Despite challenges for the AoCs to know how to navigate the reporting and higher level procedures, it is positive to see that girls' experiencing getting direct support and feeling safe.
4.5 Percentage of club girls able to identify a person in school that they could report abuse to	78%	75%	**+3%**	Girls can identify where to report and our continued focus will be now to ensure that reporting procedures and follow up are correct in the schools in which we work

Results Relating to the Theory of Change, Project Design and Key Assumptions

Theory of Change Overview

In reviewing the results in relation to our Theory of Change, overall the key results chains and assumptions remain consistent for the project as highlighted by the external evaluator. This is further supported by the limited changes to the physical design and delivery of the project that we have made overall.

Please see below for a detailed breakdown and reflection on each of the key elements to the Theory of Change:

Impact: Improved life chances for marginalised girls in Malawi

The results show a distinct improvement in a wide range of areas for marginalized girls. An important discovery for the project has been that key marginalized subgroups that are more disadvantaged than the average club girl are affected by the intervention in a much greater way, thus proving that the project works for the most marginalized girls in rural areas.

Outputs:

Learning: 7830 marginalised girls supported by GEC that have increased their learning (including literacy, numeracy, self-efficacy and self-confidence)

Overall the results of the learning outcomes as summarised by the evaluators have been mixed in terms of success. For the most marginalized girls, improvements in these areas have been achieved. But for the target population the impact has been seen most in the foundational skills of self-confidence and self-efficacy.

Although there has been significant improvement in Numeracy from Midline to Endline, it has not been possible to prove a significant change for Literacy. Despite this, qualitative feedback from AoCs, heads and girls has been

positive in terms of their improved practice and affinity for reading with an improvement in academic self-efficacy overall.

Attendance: Number of marginalised girls who have stayed in school (or equivalent) through the life cycle of the project (as defined by enrolment, attendance and drop out data)

Proactive work in providing resources as well as increasing self-efficacy and instilling the drive for education for the girls and their parents has meant that the majority out-of-school girls re-enrolled in school and remained enrolled throughout.

- ✓ Teachers have ability to teach literacy and numeracy in participatory and interactive ways
- ✓ Girls' demonstrate increased participation and confidence at school
- ✓ Parents and communities have a more supportive attitude towards girls attending school / education
- ✓ Schools are safer and friendlier for girls

The results show that AoCs are able to teach in ways that encourage girls to re-enrol in school, and enjoy their experience. It is clear to see that parents are more supportive of girls' education overall and schools feel safer for girls. On an individual school level, the child protection policy and procedures have been put into place and TfaC will now focus on the need for extensive monitoring to ensure that they are implemented as effectively as possible in the current context. As highlighted, an area that would have supported this further would have been the inclusion of boys which is discussed more extensively in the learning section.

Output Indicators:

Training of AoC Teachers

- ✓ Girl friendly learning environments created
- ✓ AoCs have knowledge and skills to run high quality, girl friendly workshops
- ✓ AoCs have knowledge and skills to embed literacy and numeracy in teaching practice
- ✓ Girls have increased access to contact time with trained female teachers
- ✓ Girls have increased access to participatory numeracy and literacy activities

It is clear from the report that AoCs and girls' clubs have created an exceptionally girl friendly space and with high quality workshops and a positive learning environment. Due to project design, the participants have had access to a smaller teacher to student ratio of around 40, compared with the national average of just less than 100 students to 1 teacher. The evaluation has shown that although the AoCs were able to deliver effective workshops in confidence building, motivation and SRH. The application of literacy and numeracy has shown little effect overall, except for the most marginalised. Literacy and Numeracy is discussed further in the project design and assumption and learning section below.

Girls' Clubs, Listening Clubs and Holiday Clubs

Girls in the programme showed strong improvements in their self-efficacy, particularly academic efficacy, which is foundational for learning and having an overall higher level of confidence. Despite this, it has been challenging to translate this into transferring knowledge and facts around SRH as well as numeracy and literacy.

Due to restrictions in funding, the project has struggles to engage with the boys at schools. However, our experience from other work in Primary schools which has a mixed gender approach, where members of the same club are supported equally would support that including boys in work to promote girls education is effective in improving the school and learning environment for girls.

- ✓ Girls have greater awareness of their gender and sexual rights
- ✓ Girls report enjoying school
- ✓ Girls have higher confidence to interact with boys
- ✓ Boys are more sensitive towards girls needs and rights
- ✓ Girls have SRH knowledge
- ✓ Girls are more confident to attend during menstruation
- ✓ Girls increase participation in co-ed environments across school

Community Sensitisation/ mobilisation/ listening clubs

- ✓ Parents are more open to discussing education aspirations with their children
- ✓ Parents have increased knowledge around SRH and gender rights
- ✓ Parents have a better knowledge of education opportunities for young parents
- ✓ Parents feel more confident about being in a school environment
- ✓ Parents more aware of girls' potential and achievements at school

Attendance at community listening clubs for girls' club parents translated directly into improvements of parents' attitudes towards educating of their daughters and the girls within their community.

As with the other output indicators there has been an issue with the knowledge improvement and TfaC will need to explore further how best to support learning through the radio show as well as continue with strong attitudinal change.

School Based Activities

This output has seen a lot of attention from the project since the Midline findings with emphasis on getting the schools up to an appropriate standard. Results show that AoC training for other school teachers had a positive impact overall and in relation to girls; confidence and awareness have gone up in line with other indicators.

As discussed reporting knowledge is limited due to the continued lack of uniformity and different and inconsistent Child Safeguarding and Protection infrastructure at a school, district and national level.

- ✓ Increased awareness of who to report abuse to amongst club participants
- ✓ Schools are more child friendly and safe
- ✓ Girls are more confident that their rights will be protected in schools
- ✓ Girls feel safe at school
- ✓ Teachers have knowledge of reporting mechanisms
- ✓ Boys and girls participate more equally in class
- ✓ Teachers have positive attitudes towards girls participation in class
- ✓ Teachers demonstrate skills to involve girls in class
- ✓ Teachers have improved understanding of positive discipline

Assumptions and Project Changes

Generally key Theory of Change assumptions still apply today; however, a key challenge to this context and scale of the project has been the difficulty of making generalisations across the schools, communities or districts. The lack of uniformity in almost all areas has made the project particularly challenging, which will be highlighted further in our key learning section.

Overall there are four core assumptions to the theory of change that were not supported, requiring significant changes to our programming, focus or curriculum. Additionally, while our assumption concerning the need for school safety held, it has been highlighted here due to the need for considerable programmatic changes required.

Table A9.2. Comments on Assumptions

(1)If girls like school they will achieve more at school in terms of literacy, numeracy/ life skills **&** **(2) Increased attendance leads to higher grades**	As an innovation project, the original hypothesis of the project was that by improving girls SRH and attendance at school their literacy and numeracy would improve. It is clear from the results that this hypothesis has not been proven. Despite improved attendance and re-enrolment, the current quality and standard of the Malawi education system has meant that girls did not improve their learning overall. Despite having reached standard 5 or 6 many girls were barely or non-literate when starting the programme. After Midline results confirmed low levels of learning, TfaC refocused the full curriculums on literacy and numeracy with support from independent Malawi educational specialists and hiring a curriculum development advisor. Although through our efforts, girls showed some improvements particularly in numeracy and their affinity for reading, combined with positive feedback from teachers and head teachers on the girls improvements, without increased time and resources the project could not cover all of the educational needs that are currently lacking in the system overall.
(3) AoC teachers have sufficient confidence & interpersonal skills to engage communities **&** **(4) AoC teachers receive support from schools / someone else**	Working with and training communities has been until recently a key challenge for our AoCs. AoCs expressed a challenge in their confidence to teach adults instead of children and many reported a lack of support for their work. In the final year of the project, because of the feedback we received, working with the wider school and community has been a key focus. Conducting key stakeholder meetings in all districts has helped head teachers and community leaders to support the project in full, provided extra training to the community members to support child protection and created improved buy in and support to the work of the AoC. Recent training of the AoCs has also focused on building their confidence and the development of community workshops focused on their individual community challenges. Facebook and WhatsApp have also been used extensively to share best practices across the AoC community.
Girls do not attend because they are afraid of abuse at school	Whilst this assumption holds, it is highlighted here, due to the need of the programme to spend a significantly larger amount of time on child protection issues than previously planned. During initial implementation, it became clear there was limited or no child protection or safe-guarding procedures at a national, district or school level. TfaC was required to run additional child protection training with AoCs and key stakeholders, provide schools with posters, procedures and record books and is currently working with the Ministry of Education to finalise a national child protection policy. This remains a key challenge for the education system as whole, however currently TfaC is considered a leader in developing this work through their leadership of the girls' education network.

Context that may have impacted the results

During the course of the project, Malawi has suffered numerous natural disasters including both periods of flood and drought and therefore currently nearly 7 million people are now requiring food aid to meet basic nutritional requirements. This greatly impacts on social behaviour change communication projects such as ours, particularly

in terms of girls being able to attend school or concentrate due to hunger or the need for them to support family incomes in time of difficulty.

A lack of government infrastructure has hindered the project overall. The fractured nature of the district social welfare offices, that cannot in their current state reach those most in need; the lack of highly qualified teachers and occasionally the lack of money to pay them means that over-arching support from other structures is lacking and can often undermine the work which is being done in TfaC clubs.

One of the key challenges for the project and for the education system as a whole in Malawi is the constant transferring of teachers between schools within the district, often with little or no notice throughout the school year. This had a significant impact on the project despite our training of back-up AoCs to cover where possible; it often meant that clubs could be on pause for some time while a replacement AoC could be arranged.

Again, on the education system, the innovation relied on girls being able to learn in school if they were in regular attendance, with our work on literacy and numeracy designed only to boost current teaching. However, the current standard of teaching quality, class sizes and resources mean that children are unlikely to be receiving a full and comprehensive education despite enrolment and regular attendance.

During the project, AoCs would often go through extended periods without payment due to a lack of Government resources, this put extra pressure on their ability to teach, run clubs and find other income generating activities to support themselves.

Project Response to Recommendations in the Report

The project recommendations are valuable considering both the sustainability of the current project and moving forwards to inform the design of new work to support marginalized women and girls.

Recommendation 1: In terms of boys' integration into the promotion of girls' education, TfaC would fully support this. Of TfaC's projects, the GEC is the only time that we have worked on a girls' only focused club within schools. Although boys were included as an addition to the listening club, as has been mentioned, it was difficult to encourage boys to attend as we were not able to allocate resources to boys. Based on this learning TfaC will continue to implement projects that promote a co-educational environment and focus on the idea of a girl friendly space which has been successful.

Recommendation 2: Concerning parents discussing contraception, while Malawi is a very conservative country and discussion of contraception with young people remains taboo, the results showing parents were becoming more open to talk to their children about SRHR after attending community listening club and school open day activities are encouraging. A key challenge to starting the discussion, is the current MoEST policy that contraception should not be taught in Primary Schools, despite the age of children as they complete school being commonly well into adolescence. Advocacy on this issue will be a continued focus for TfaC going forwards.

Recommendation 3: Studying the differences between the Y1 and Y2 cohort is certainly important to explore for the team. It would be good for us to know if it is just the length of time that made the difference, as this will help us to target programmes and funding that are based on longer time periods for maximum results. Additionally, as highlighted the project scale up for year 2 did have an impact on our ability to maintain the high quality and focus on individuals required. Our learning and plans for future project are further highlighted in the lessons learned section.

Recommendation 4: For the engagement of stakeholders (recommendation 4) Head teachers, traditional leaders and other stakeholder meetings will continue in the following 6 months and this was a key focus in the August AoC sustainability training. Working with the community and key stakeholders such as SMC and Mother Groups will also be included in the 'Best of Curriculum' manual that is currently being produced as part of our club sustainability plans.

Recommendation 5: concerning the frequency of training for AoCs, due to nature of the TfaC methodology, it is difficult to provide training in a format that is not face to face however we will explore ways to engage AoCs particularly in terms of knowledge on SRH through our Facebook group or Whatsapp, potentially with quizzes or facts to make sure knowledge is up to date and we are encouraging continuous learning. As highlighted above, TfaC has redesigned the training and curriculum focused on the quality of facilitation. Additionally, a key learning has been the need to increase the number of staff focused on a project this size: having key staff per district going forwards would significantly improve the delivery of training due to the ability to have more contact time with each individual teacher.

Recommendation 6: Child protection and safeguarding is a continued focus for TfaC across all of its programmes and we will continue to support the promotion of child protection reporting mechanisms as suggested. There are key challenges to the reporting and particularly the follow up of cases in Malawi. At present, as part of our sustainability plan, we are running another 10 district trainings with head teachers and AoCs, where there is a half day Child protection refresher training. Additionally in Term 2 we will be running 10 child protection trainings with the District Social Welfare offices, to support Traditional Authority Child Protection Officers to follow up cases and support GEC schools and other schools in their TA. To mitigate the challenge of students or families reporting without seeing an appropriate resolution, TfaC is partnering with the Malawi Humans Rights Commission to support the cases we receive. In addition, TfaC is leading a consortium for the Ministry of Education to write and implement a child protection policy which can be applied across all schools in the country going forwards.

Recommendation 7: The final recommendation concerning sub-population analysis is very helpful, in terms of strengthening our monitoring and evaluation of projects and a recommendation we will take forwards to all new initiatives. As highlighted in the report, this a valuable learning as it highlights how successful the project was for the most marginalised and is something to take forwards when designing future work.

Key Lessons Learned

As an organization the GEC project has provided many opportunities for growth and learning across the implementation of the project. In particular due to the innovative nature of the project and for TfaC it was the first time for us to run a project of this size and scope. Below we have highlighted our key learning and how we either made changes to the current project or intend to in future.

Organisational Development, Processes and Training

1) Project Scale and Staffing

The GEC project is the largest project that TfaC has run as an organization and while this opened up a number of positive opportunities and experiences, the large scale up and evolving scope of the project also bought its own challenges. Implementing our unique behaviour change method on a large scale whilst also maintaining a high level of quality was challenging. During the project, the number of staff dedicated to GEC project needed to be doubled; key to this decision was to support individual relationships with AoCs. Staff capacity was also increased, moving from Assistants to predominantly Officer and Senior Officer level staff to cope effectively with the demands of the project. Another key challenge linked to the size of the project was communications with AoCs, following this challenge a dedicated communications team, to manage AoC queries and requests quickly and efficiently was set up, our extensive use of social media platforms ensured that all felt included and supported.

Moving forwards, for new projects, TfaC will be implementing staffing structures that have TfaC staff closer to the schools and teachers they are working with, with a district level focus rather than managing for the central location. This design would allow for increased contact time for training and support of AoCs and improve our relationships with important district stakeholders and improve the quality of the work delivered.

2) Acceptance of Organisational Strengths and Project Scope Limitation

While there are many strong results across the project, for some areas these could have been stronger, had we remained fixed to the original scope of the project. As highlighted, as an innovation project, our focus was to deliver an SRH education to support girls to go back to school, which would potentially improve their learning. During the course of the project it became clear that despite now being back in school, girls were not in quality learning environments. Because of the increasing amounts of work on literacy and numeracy, our focus on SRH was compromised. Additionally, after Midline the increasing focus on child protection required, resulted in further stretching of our resources and focus, consequently affecting the overall results.

Moving forwards TfaC will maintain our focus and expertise in sexual and reproductive health, seeking partnerships when required for areas that support our work.

3) Improved Facilitation and Training of AoC Teachers

Core to all the work that TfaC does is the quality and dedication of the facilitators. In the respect of facilitation and training, TfaC has made changes in how we deliver training and improved the quality of our staff and AoC teachers. In the last year, a 3-level training programme in the TfaC methodology has been delivered to all staff working on programmes, ensuring that they have a good understanding before training or monitoring others. The hiring of a curriculum and training development expert has helped to maintain this focus and in recent August

training for sustainability, AoCs reported strong improvement. The results highlight for us the need for more consistent and continuous training of AoCs to ensure that they are retaining information. Going forwards, projects will be designed where teachers receive regular training in the holidays and support throughout the terms with our district level focus. We will continue to explore how we can use our mobile technology, social media and other platforms to support our training further.

4) Use of Mobile technology

The project made extensive use of mobile technology as a way to collect monitoring data and to support and motivate teachers in their role. Moving forwards TfaC will continue to keep mobile phones as a key part of monitoring. As well as the monitoring software, the phones have been an incredibly valuable tool in keeping our AoC teachers connected through social media, using Whatsapp and Facebook groups. These groups have been vital to AoCs to provide motivation and support for those who are often in isolated communities. It has also been a fantastic way to collect photographic evidence and share learning of activities across the schools.

5) Monitoring, Evaluation and Learning and Target Setting

As an organization, the opportunity to take part in the GEC project expanded our monitoring, evaluation and learning capacity and capabilities extensively. In reflecting on the original targets, there are areas that were potentially over ambitious, particularly in terms of what can be achieved within the community and wider school environment with the focus and resources we have. This learning has been valuable to us and has already begun to be implemented on new projects and development of organizational Key Performance Indicators.

One of the challenging aspects to the results has often been the complexity of the data: for example; often teachers, girls and parents anecdotal feedback was extremely positive but our test results would remain low. Moving forwards, we will explore further how best we monitor improvements in SRH or self confidence, potentially moving away from a questionnaire format where possible and reducing the amount of data collected per girl to ensure that the results are reflective of their experience and we have chance to explore key themes in detail.

Finally, on learning for MEL, in terms of EGRA and EGMA, we would look for more suitable testing methods, related to the age and skills of the girls within the programme. For numeracy at Midline we experienced a ceiling effect due to the test being aimed at standard 1-4 learners while our girls were standard 5-8, which proved challenging in having to develop a new test at Endline. Additionally, in discussing with RTI in Malawi, the developers of the EGRA and EGMA, they highlighted the limitation of the way in which we are required to analyse the EGRA results, with their guidance stating that results should be overall rather than by sub-task, so moving forwards we would look to implement their recommendations and analysis approach.

6) Ensuring the correct balance of resources and focus across the project outcomes

Across the project many key outcomes and indicators focused on girls, AoC teachers, parents and key stakeholders. However, in terms of resources, the focus has been predominantly on the girls, which is clearly reflected in our results. As a project, using the Midline as guidance we re-budgeted to ensure that all indicators were included in our focus and work planning with initiatives such as providing soap for parents at community listening club and engaging wider stakeholders at district level meetings proving successful. This significantly improved our results for outcomes three and four and supported us to be able to improve and maintain the girls' results.

7) Identifying and supporting the needs of young female teachers

Using young female teachers to lead girls' clubs was crucial to the design of the programme to have strong female role models for girls in school. However, working with this group could be challenging due to their stage in life, managing competing family challenges and responsibilities. TfaC implemented many successful policies and initiatives that support the AoC's effectively such as provision for Nannies during training periods, back up AoCs to cover for maternity leave periods and transfers and support for breastfeeding mothers. However, it has remained a constant challenge as many of our AoCs that have left, have done so to follow husbands.

8) Literacy and Numeracy

The shift in focus from primarily SRH to also teach literacy and numeracy during the project presented many learning opportunities and challenged some of our key assumptions. In terms of assumptions it became clear that the girls were at much lower level than the standard 5 assumed, particularly in terms of literacy. Additionally, in developing the content for holiday clubs, it was discovered that our teachers' ability to deliver a basic literacy and numeracy curriculum was also low.

After the Midline results, TfaC implemented the following actions to improve the overall scores;

- Designed courses with differentiation built-in to their structure and content so that facilitators can then use to target a range of abilities. This meant providing workshops on different topics at different levels in a non-linear format for facilitators to 'pick and choose' what best suits their group.
- Trained AoC facilitators to use differentiated work and to assess the levels of ability within their groups. Provided more 'toolkit' style resources and core methodology training to ensure facilitators can be creative and flexible with their workshops and activities.
- Ensured that all project staff and MEL team members go through Level 1, 2 and 3 of the TfaC Behaviour Change Training for facilitators and trainers as required.

While this approach led to improvements, again due to scale and scope these changes were potentially implemented too late to have an impact at Endline and further stretched the ability and workload of AoCs. Moving forwards as an organization, as highlighted above we will continue to focus on our expertise in SRHR programmes and delivery, and look for partners and support for areas outside of this scope.

Working with the wider school environment and stakeholders

1) Child protection and safe-guarding

One of the key elements to our project was to improve girls' feeling of safety in the school environment, which included supporting child safe-guarding and protection policies in schools. Overall our Theory of Change over-estimated the structures and policies currently in place, finding that head teachers and teachers had limited or no understanding of key child protection principles and at a district and national level there was limited scope within existing social welfare structures. Over the course of the project, while there are still many challenges for Malawi in this area, we feel we have made considerable progress. The hiring of a dedicated Child Safe Guarding Manager meant that schools could report their challenges to TfaC; TfaC also offered extensive training to our AoCs and to their head teachers and community stakeholders such as Mother Groups and School Management committees. Thus, head teachers have been particularly supportive of the training they have received and the project. The focus on child protection will continue in to the next phase and while the country has considerable challenges in supporting the effective reporting and follow up, TfaC has been able to make progress in changing people's attitudes towards the importance of child safety, the reduction of abuse and through working with the Ministry and in our role as Chair of the Girls Education Network have been seen as experts in driving improved child protection and safeguarding in schools and communities

2) Head teachers' and district level education officers' involvement

A learning for us as an organization was the need to involve all school and district level stakeholders in the set up and initiation of the project, it is also particularly important to follow all district level procedures before implementation. In the beginning TfaC's focus was on the AoC's we were working with to introduce the project and aims of the work within their school. However due to the traditionally formal and hierarchical nature of key school and community structures, this led to tensions and a lack of support. As learning from the Midline, TfaC implemented a number of key stake holder meetings, which also combined child protection training with head teachers and school stakeholders. This was immediately reported to have increased responsiveness and consistent engagement with project. Moving forward, as we design all of our school based projects, we will ensure that stakeholder meetings are a key part of the inception period and regular update meetings and consistent support, particularly with Head teachers are provided.

3) Transfers of AoCs across the project

One of the key challenges for the project and for the education system in Malawi is the constant transferring of teachers and district education officials between schools and districts, often with little or no notice throughout the school year. This had a significant impact on the project despite our training of back-up AoCs to cover where possible. Moving forwards as highlighted the importance of gaining full commitment of district level officials from the beginning of the project is crucial and TfaC will move to create specific memorandums of understanding with each district to reduce the transfer of teachers where possible.

4) Paired AoCs instead of singles

One of the key elements to explore as part of the project was whether the model is best delivered by AoC's in a pair or on their own in each school. Although there were exceptions, overall feedback from AoCs and from project staff has been in favour of the paired approach. This is driven by the ability to share the workload of the clubs and

community work, provide support and friendship in the remote settings and for the project staff, has ensured consistency of the club in the event of one of the teachers transferring or being absent.

5) Incentive Schemes

The GEC project required a large amount of work from AoCs on top of their normal teaching and as such TfaC supported AoCs with allowances every month, dependant on their completion of reporting and project milestones. This has proved difficult at times within the low salaried environment; with other teachers being jealous or resentful of the AoC and it has limitations on the potential sustainability of the project. As we move into the sustainability phase, we will be highlighting areas of the programme that we feel are key to the success and reducing the workload accordingly. We have also introduced greater flexibility into when and how AoCs conduct the workshops to allow it to fit easily into their work. During the August training as a team TfaC and AoCs discussed what would motivate AoCs (separate to financial payment) with suggestions focused on the opportunity for continued professional development, support for school development and prizes such as solar lights or chargers or resource items for the club and school. We will be continuing to trial these different incentive options but in the first month without support, we have been very successful with 241 clubs being run and 8021 girls attending clubs.

7) Inclusion of boys

The project has identified throughout that engaging boys in the programme has been a challenge. Despite including boys in all listening club and community activities, it was difficult to engage the boys without being able to allocate any resources due to the funding restrictions. The key learning is that moving forward TfaC will, in line with all of our other programming, be including boys equally as recognition of their role in the continued support in girls' education. Curriculums will focus on mixed sessions with girls or boy only spaces at different times as appropriate. Additionally, in future programming TfaC will also plan and budget for no discrepancies between what members of the same club receive to reduce tension within the group.

8) Allocation of Resources among Girls

As part of the project design, each girls' club contained 30 in-school marginalized girls and 10 out of school girls. In planning and budgeting we had assumed that out of school girls would require extra material support to attend school, such as uniforms, back to school packs and exam fees, so these resources were allocated to those 10 out of school girls. However, when the project began, this became a source of tension in the clubs as some of the in-school girls were highlighted as being in greater need than some of those who has re-enrolled. After discussions with AoCs we moved to a system where they could separate the girls as 'in need' or not, instead of out of school and in school, identifying the girls in need with the support of mother groups and through their home visits. This was widely accepted and understood by the girls and led to greater cohesion and supportive environments across the club. In future, funding dependent, it is preferred to give all members of the club equal resources, to avoid creating further marginalization within this group.

Working with the community

1) Consistent Community Engagement

Our key learning in community engagement is the need to ensure a consistent focus with these groups and keep the momentum of attendance. Initially resources and focus were dedicated to the schools and girls which meant at Midline we were significantly down on targets for communities. Following this a significant push towards our community listening clubs, ensuring that we used a broadcaster that ran the show ran regularly, AoCs were trained to be able to run a club even if there were challenges with the technology and encouraging key community figures to support the club. A key boost to this was AoCs sharing their successes with each other on Facebook, providing suggestions to each other for the different challenges they had in the community. The provision of soap and prizes for the dedicated parents also helped to encourage attendance. We also notice that if the radio show is more regularly aired it resulted in higher attendance, so moving to new programme we will look to have parent shows every two weeks instead of every month to keep people engaged.

2) Working with young female teachers in communities

As highlighted in the learning around Head teacher involvement, AoCs also faced challenges within the community in addressing traditional authorities and key formal community's structures. Again, the introduction of the stake holder meetings significantly improved the acceptance of the female teachers and TfaC will continue to support and facilitate that introduction. Additionally, many AoCs found it useful to approach the mother group leaders or other community support to facilitate that introduction. As well as the stakeholder meetings, our training

manuals now include key workshops on working with the community, and addressing the gender and power imbalances that exist, all of which have helped to improve significant AoC community relationships.

Annex 10: Dissemination Plan

Table A10.1 Dissemination Plan

To be disseminated	Milestone	Summary
Presentation based on the evaluation report	Project Report for AoCs Project Report for stakeholders	A short presentation which will delivered during term 1 Head Teachers, District Education Managers and Agent of Change Teachers.
Radio show	Project Report for AoCs and community Project report shared with girls	Radio show to take a "community listening club" slot for community, parents and the girls.
2 page report	Project report for AoCs, Project report for Stakeholders Project report for girls	A 2 page précis which will highlight the key results printed and delivered to a number of stakeholders including donors, government, teachers, and the public as well as posting online.
Full evaluation report	Evaluation report sent to stakeholders and partners	The full report as submitted and signed off by the Fund Manager, the stakeholders include all government institutions, current and potential donors as well as posting online.
Film Event	N/A	A viewing of the GEC film (2015) for public consumption in Lilongwe, with endline results communicated at the same time. To be completed in December.
Case Studies	N/A	A small report created by the project will be referred to for a more qualitative insight with stakeholders when appropriate.
Full learning meeting	60 stakeholders attend dissemination meeting	60 stakeholders from the 10 GEC districts (girls, parents, head teachers, DEMs, AoCs, Government officials) come together to discuss their own learning, successes and challenges of the project in Lilongwe in January 2017.

The project has aligned the dissemination strategy with the milestones which were committed to at the beginning of the project. The ways they are being completed builds upon the strategies that the project uses to engage with stakeholders, but in a way that will effectively disseminate the keys messages from the project evaluation.

After the Endline report has been finalised there will be a number of different formats which will convey the findings. The Monitoring, Evaluation and Learning (MEL) team will develop a presentation that will be used in conjunction with the sustainability strategy. The presentation will be delivered to Head Teachers, at the meetings in all 10 GEC districts over the course of October – December 2016.

There will be a 2-page report, more focused on the outcomes than the official endline report which will be emailed to all the AoCs, to deliver in their clubs. It will also be printed and sent to the District Education Office, for government officials as well as the donor community to view as well as distribute to a wider audience, this will be accompanied by the presentation previously developed as appropriate. This is designed to influence the authorities that can influence girls' education within the districts. The District Education Offices will also receive the full report for a more in depth look at what impact the project has had in their district.

To engage the community and parents, the project is also developing a radio show which will take place as the special *Community Listening Club. This builds on the existing Community Listening Club activities.* This will be designed as an entertaining endline results sharing show, as this will be the best way to share with the community which were engaged with the project. The GEC communities are comfortable with this medium and will also be a good platform to discuss with their local Agent of Change (AoC) what can be done to continue the positive aspects of the project despite a reduction in funding. This is intended to encourage the people who most closely influence girls to attend school and can help in their development at home, as well as at school. This is planned for Term 1 in 2016. This is also the time which the project girls will be engaged to listen to the results. After listening to the

show the AoCs will be encouraged to run a workshop that will encourage discussion and how the girls feel about the results and ways forward from there.

In December, there will be a film event which will showcase the GEC it will revolve around the GEC film which was produced last year, and will provide a platform for the project to share the results and learning from the endline to a wider public. The project team has also prepared many case studies and stories which will be extremely useful to use in setting context and qualitative impact to technical and non-technical audiences alike.

In the New Year, there will also be a meeting of 60 +varying stakeholders from across the country attend an event in Lilongwe. It will comprise girls, head teachers, AoCs, District Education Managers (DEMS), mother groups and other government officials. They will be an opportunity to come together to discuss their experiences of the project and to expand on what has been learned, the progress that has been made and how to take the momentum of the project forward to improving the life chances of not only the participants who were directly involved in the project, but of all the girls in the districts in which they live.

For higher level advocacy as chair of the National Girls' Education Network, all major learning points that are relevant to girls education as a whole can help to shape the agenda of the network. This will improve the evidence based approach for advocacy in Malawi.

It is important for the project to recognise which information will be most relevant to each stakeholder. For example, the students may be more interested to learn about how much other girls enjoyed the project. The parents, communities and mother groups will be interested in this as well the attainment that has been achieved by the girls since joining the project. Government officials and head teachers will be interested in these as well as the training methods which have been used to great effect with the AoCs.

Through this myriad of media, radio, reports and presentations we are confident that the project will be able to deliver a comprehensive dissemination of the results, incorporating a strong sustainability strategy. Bringing together the voices most important to the project as well as being the people who will take the project's gains forward.