VVOB CLASSROOM LIBRARY PROJECT

FINAL REPORT / JANUARY 2022

CONTENTS

LIST OF FIGURES AND TABLES

TABLES

FIGURES

ACRONYMS

CASME	Centre for the Advancement of Science and Mathematics Education
DBE	Department of Basic Education
ELITS	Education Library Information and Technology Services
KZN	KwaZulu-Natal
NGO	Non-Governmental Organisation
SMT	School Management Team

INTRODUCTION

CONSIDERABLE PROGRESS HAS BEEN MADE IN UNDERSTANDING HOW TO IMPROVE THE TEACHING OF EARLY GRADE READING, USING COMBINED COMPONENT MODELS OR THE EDUCATION TRIPLE COCKTAIL (PIPER ET AL, 2018, FLEISCH, 2018).

However, there is a growing awareness that acquiring reading proficiency requires that children have extended and frequent opportunities to read texts at an independent reading level. The key challenge is not only providing "learning to read" materials at schools, but implementing initiatives to ensure that books at the right level and interest get into children's hands and are read at school and at home.

Prior to South Africa's democratic era, insufficient library books were provided to young children in disadvantaged communities (Le Roux, 1995). Since 1994, various approaches have been developed to assist schools promote reading for meaning. Nali'Bali's Story Powered Schools (Mubalwu, 2020) is one of the more prominent examples. But, as Equal Education has noted, the variable availability of books remains a major indicator of the profound inequality in the school system, with the majority of young children in disadvantaged schools seldom getting access to books at the right level in their home language (Equal Education, 2011). One promising approach to providing access to quality storybooks is The Classroom Library Project, which is the subject of this report. A pilot of this low-cost classroom library intervention was implemented in 2018 and showed promise (Sikenyi & Beggs, 2019).

The pilot study addressed the following research questions:

1. Does the Classroom Library model increase children's access to appropriate storybooks and does it increase the number of books children take home? Access is assumed to be a precondition but not a guarantee of independent reading.
2. On average, how many storybooks will children take out of the classroom library per month?
3. If the model is successful in increasing reading of storybooks, what factors may explain this?
4. What, if any, are possible inhibiting factors associated with the Classroom Library model?

As a follow-up to the original research, this study reports on a randomized control trial that was designed to evaluate the effectiveness of the Classroom Library model. The intention of the Classroom Library model is to increase access to appropriate level storybooks for rural Foundation Phase learners in South Africa, and to increase reading of those books. There is a growing body of evidence that has shown the importance of independent reading for the development of fluency and comprehension (Toppings et al, 2007). Unlike group guided reading that takes place as learners are taught to read, independent reading involves children reading print materials on their own, in or out of school, either voluntarily or as homework.

The National Reading Panel (2000) noted that there was little research on the effectiveness of independent reading programmes in schools.

Since the publication of this seminal work, there has been a growing number of studies of not only the links between independent reading and reading proficiency, but more specifically of programmes and/or interventions that are effective in getting independent reading materials into children's hands on a regular basis (see for example Room to Read, 2015). Most recently, Yi et al (2018) conducted a randomized control trial with 11,083 learners in rural China to examine the causal effects of providing in-classroom libraries on reading outcomes. Despite the importance of this topic, and the relatively high number of programmes geared towards supporting reading corners and classroom libraries, surprisingly little robust empirical research has been conducted specifically on cost-effective and sustainable models to increase access to storybooks for early grade learners in rural contexts.

2. THE CLASSROOM LIBRARY MODEL

THE CLASSROOM LIBRARY MODEL WAS A SPIN-OFF OF THE EARLY GRADE READING STUDY (EGRS) CONDUCTED IN SOUTH AFRICA'S NORTH WEST PROVINCE.

In the course of this study it was recognized that although learners were clearly demonstrating improved outcomes in the various elements of reading, for example, letter recognition, word recognition and oral reading fluency, it would be very difficult to sustain and extend gains in reading and consolidate the habit of reading unless a means could be found for children to access large numbers of storybooks in their home language.

Key lessons learnt from the EGRS informed the design of a Classroom Library model to consolidate the habit of reading. First, the model would need to be scalable. Second, the model would need to be tightly specified and easy to use but allow for local-level adaptations. Third, professional development and ongoing support needed to be school-based. Fourth, the learning resources used in the model needed to address children's learning (or reading) levels. Finally, the model needed to be cost-effective.

The Classroom Library model went through an extended design process involving building a prototype, exposing the prototype to expert teachers in the field, field-testing the prototype in a process evaluation and, finally, testing the model as an intervention in a large-scale randomized control trial setting. It is the latter that is the focus of the report.

The model consists of two integral elements: The Classroom Library Kit and professional teacher development.

THE CLASSROOM LIBRARY KIT

The Classroom Library Kit includes the following components:
- Printed isiZulu storybooks
- Cardboard boxes
- Cardboard box dividers
- A0 Book cover posters
- A0 Collection management posters
- A4 isiZulu letters to parents' sheet
- A4 Five figure rule sheet
- A5 Individual reading card
- A5 Plastic sleeves used as book bags
- Boxes of colour stickers

Each grade has a specific selection of storybooks allocated to that grade, which together form a classroom library set. All the storybooks used in the classroom library set are open access and were selected through a two-stage expert screening process. The books that were selected came from the *African Storybook* and *Vula Bula* collections.

Each library set contains five copies of each selected title, allowing for concurrent reading by learners. The Grade 1 class has 20 titles,

amounting to 100 books in total, and the Grade 2 and 3 classes each have 40 titles, amounting to 200 books each. The books were printed in A5 format so that they could be stored in a custom-designed, heavy-duty cardboard box with cardboard dividers between titles.

To help children choose the storybook they want to read, the Kit provides A0 laminated colour posters with actual size cover images of all the titles in the collection. For the Grade 2s and 3s, two posters were needed to accommodate the real size images of all the titles. To keep track of the check-out and retrieval of the storybooks, the Kit includes an A0 poster referred to as the Classroom Library Management Chart. On this Chart, the titles of all the books in the collection are printed down the vertical axis, while space is provided at the top of the horizontal axis for the teacher to write the names of all the children in the class. The Kit also contains copies of letters to parents, written in isiZulu, which provide parents with information about the Classroom Library Project and parents' role in it. The Kit also contains enough Reading Cards and Book Bags for every child. The Reading Cards contain a printed list of all the storybook titles for the grade

and include a space for parents to sign in order to confirm that their children had brought the books home. The Kit also includes a simple tool, known as the Five Finger Rule, to help teachers determine the right level of book for the child to begin reading from the Classroom Library. Finally, the Kit includes four boxes of stickers for each teacher to stick on to the Chart in order to record and publicly demonstrate learners' checkout and retrieval.

TEACHER DEVELOPMENT

Professional teacher development was provided in order to help teachers understand the model and acquire the skills and practice to implement it successfully. Small groups of teachers at each school received a two-hour training session, a 20-minute practical session in the classroom to assist teachers to set up the libraries in their classrooms, and two on-site coaching visits in the classrooms in one-month intervals following the training and set-up sessions. The teacher development approach was informed by the outcomes of the EGRS research (Cilliers et al, 2020).

3. STUDY DESIGN

BUILDING ON A PROCESS EVALUATION UNDERTAKEN BY ROOM TO READ (SIKENYI & BEGGS, 2019), THE RESEARCHERS DESIGNED A RANDOMIZED CONTROL TRIAL IN 101 PRIMARY SCHOOLS IN THE RURAL KWAZULU-NATAL PROVINCE OF SOUTH AFRICA.

Fifty schools were randomly selected to receive the intervention (treatment or Phase 1 group) before the learner data collection, while a further fifty one schools (control or Phase 2 group) received the classroom library intervention after the data collection. The study aimed to evaluate the impact of the Classroom Library model on learners' access to storybooks by comparing the Phase 1 and Phase 2 learner interview survey information on storybook access, information from teacher interviews and analysis of the Classroom Library Management Chart.[1]

STUDY SITE

The study was conducted in four districts in KwaZulu-Natal: Amajuba, Harry Gwala, Umkhanyakude and Zululand.

FIGURE 1.
Districts in KwaZulu Natal
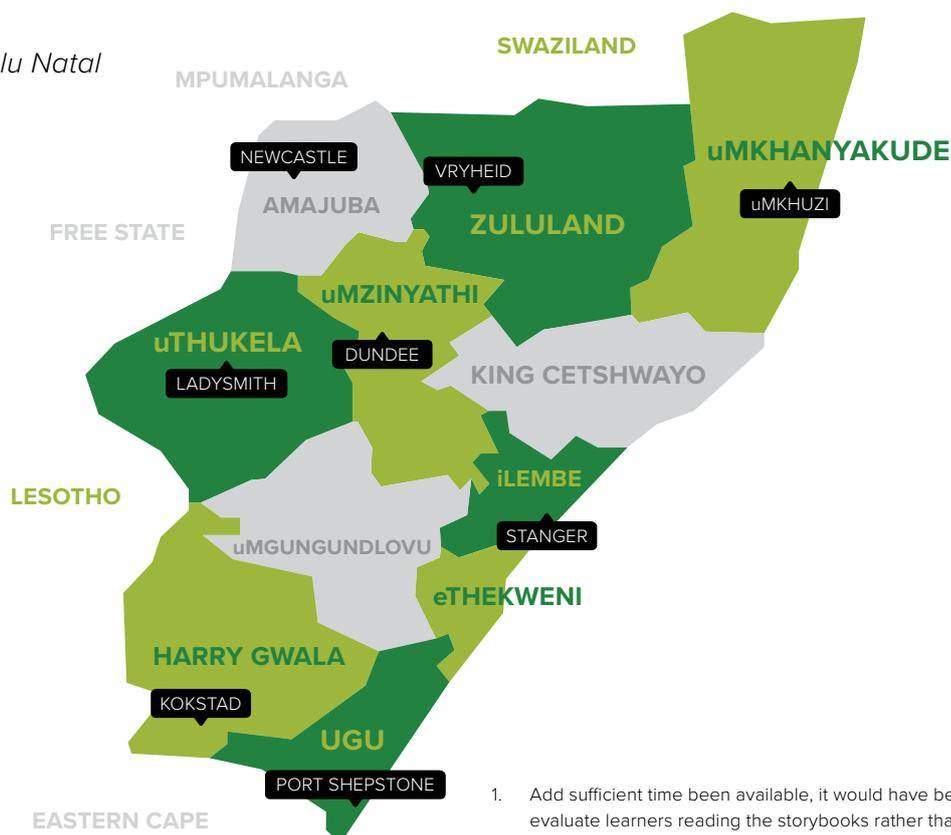
1. Add sufficient time been available, it would have been preferable to evaluate learners reading the storybooks rather than having access to them – since access alone, as we know, does not automatically lead to reading or create a reading habit.

SCHOOL SELECTION

The following criteria were used to shortlist schools to be included in the study:
- Schools with a minimum of 40 learners per class in Grade 1
- Schools that use isiZulu as the language of learning and teaching (LOLT) in Grade 1
- Schools falling into Quintiles 1-4
- Schools that have been identified by the Department of Basic Education's district office as meeting a minimum level of functionality
- Schools that provide written consent

The district officials used their discretion as to how to define minimum levels of school functionality. In most cases, district officials sent the study team the entire list of schools that met the criteria of a minimum of 40 learners in Grade 1, a LOLT of isiZulu and a Quintile 1-4 classification. Unfortunately, due to circumstances related to COVID 19, it was not possible to apply the last criteria – written consent - in the initial stages of the school selection. The original intention of the written consent was to exclude schools that were not committed to participating in the project. As a result, the final sampling frame included all schools that met the first four criteria.

DATA COLLECTION

In late October through early November 2021, data was collected in both Phase 1 and Phase 2 schools. In each school, a survey was conducted with each Grade 3 teacher, a random sample of 20 Grade 3 learners were assessed and photographs were collected of each Grade 3 Book Management Chart.

Two data collectors were appointed per district. Centre for the Advancement of Science and Mathematics Education (CASME) worked with partner non-governmental organisations in Harry Gwala (Family Literacy Project) and in Zululand and Umkhanyakude (Lula Maphiko) to

recruit suitably qualified field researchers. Two data collectors were also appointed by CASME directly to conduct the data collection in the Amajuba District.

Data collectors were trained for their role via a virtual training workshop held on 7 October 2021. The workshop provided data collectors with background information on the project as well as focused training on the research objectives, methodology, ethical considerations and data management processes. As the data collection for the learner assessments was undertaken via the Droid Survey mobile app, along with a hard copy tool, data collectors also received practical training on the app.

Once in schools, the project required that each school principal give signed permission for the research to be conducted in the school. In addition, teachers who were interviewed in the early intervention schools were required to provide signed consent to participate in the research. Parents of learners who were selected to be assessed were requested to give written consent, and learners whose parents did not grant consent were removed from the data collection component of the study. Learners were asked to give verbal assent before each interview.[2]

Learners were interviewed and assessed individually by a data collector, and learners' responses were captured on both a hard copy tool and on Droid Survey via the data collector's cell phone. The data was captured on the offline app and later uploaded by data collectors when they had internet connectivity. The electronic capture of the learner data was successful, and all data collectors submitted their assessments via the app accurately and timeously.

In total, 1 968 Grade 3 learners were interviewed and assessed: 955 learners in the early intervention schools and 1 013 learners in the late intervention schools, as set out in Table 1 below. This translates into a 98% response rate (1 968/2 013).

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2.   For more details of this process see the CASME Data Collection Report.

TABLE 1.

Number of Learners Assessed (Per Phase and District).

DISTRICT	PHASE 1 INTERVENTION SCHOOLS	PHASE 2 INTERVENTION SCHOOLS	TOTAL
AMAJUBA	256	234	**490**
HARRY GWALA	234	241	**475**
UMKHANYAKUDE	245	261	**506**
ZULULAND	220	277	**497**
TOTAL	**955**	**1013**	**1968**

In a handful of cases, data collection was hampered by the rotation of learners in schools due to the ongoing Covid-19 pandemic, and thus fewer learners were interviewed than expected. Learner data was obtained from all 101 project schools, however, largely according to the original schedule. Where minor scheduling changes were necessary, these were made in communication with school principals and all visits were successfully rescheduled and completed within the data collection period.

Individual interviews were conducted with Grade 3 teachers in the early intervention schools using a structured interview instrument based on the Room to Read 2019 teacher interview questionnaire. The interview instrument includes both closed-ended and open-ended questions that aim to capture the teachers' opinions of, and experiences with, the Classroom Libraries. The data collectors used hard copies of the instrument to conduct the interviews.

In total, 83 of the total 91 Grade 3 teachers were interviewed, representing a 91% response rate. The response rates across the four districts were extremely high, with only eight teachers not available for interviews on the day of the scheduled visits.

Whilst in schools, data collectors were asked to take a clear photograph of each Management Chart in the Grade 3 classrooms. These images were sent to CASME via the project WhatsApp Group and a staff member uploaded all pictures onto Google Drive. A research assistant at the University of the Witwatersrand was responsible for capturing the data from these images. During this process, six schools were identified as having duplicate photographs uploaded. CASME worked to rectify these cases.

BALANCE

One of the key factors to ensure that the randomized control trial provides reliable results is that the two groups of schools (phase 1 and phase 2 schools) are as similar as possible in their characteristics, i.e. that the only difference between the two groups of schools is that one group of schools gets the classroom library in phase 1 and that the other group schools only gets the classroom library during phase 2. In order for us to compare the two groups, they need to be as similar as possible in any other characteristics.

Normally, RCTs would collect baseline information – data on learners, teachers and schools – prior to the intervention. Unfortunately, in our study, we only collected information at the end of phase 1, i.e. after the classroom library intervention had been implemented. We therefore do not know how many books the learners took out or took home prior to the implementation of the classroom library. However, we can test if the two groups of schools were sufficiently similar in characteristics that were not affected by the intervention but are likely to affect the learners' reading behavior. We use information on 89 schools out of the total study sample of 101 schools. Unfortunately, we do not have the full set of information on all schools to test the balance across the full study sample.

As is shows by the set of graphs in appendix B (Graphs 1A – 6A), the two groups of schools exhibit similar characteristics. Specifically, schools in the control group and treatment group have similar distributions of the total number of learners in 2019, learner per educator ratios, as well as total number of IsiZulu and English speaking learners. We only observe a noticeable difference in the distribution of control and treatment schools by quintiles and some difference in the allocation within districts. The group of control schools include a significant higher number of quintile 2 schools compared to the schools in the treatment groups. The probit regression (table 1A in appendix B) confirms that the difference in quintile 2 schools is statistically significant. However, treatment and control schools do not differ in any of the other characteristics.

To test if these differences affect our results, we control for some of the school characteristics in our statistical analysis of the classroom library intervention.

RELIABILITY OF LEARNER SELF-REPORTED INFORMATION

To test the reliability of the learner self-reported number of books taken out and taken home, the project referenced the photographic evidence of classroom charts in treatment schools. Specifically, we tested the correlation of the average number of books per learner captured on the classroom chart against the average number of books self-reported by the sample of learners of the same classroom. The covariate in this analysis is the grade average across all Grade 3 classes and the average of the sample of Grade 3 learners interviewed. The interviewed learners reported the number of books that they had taken out and taken home over the last two weeks. The grade average was for all Grade 3 learners for the duration of the project. Thus, the reference time period differed across the two indicators. The classroom chart data was part of the intervention, with the result that information was available only for treatment schools (Phase 1) and not for control schools (Phase 2).

Interviewed learners were asked to report the number of books that they had taken out as well as the number of books that they had taken home over the last two weeks. There are several factors that may have affected the accuracy of this indicator: a. measurement error due to inflated reporting by the learner (social desirability); b. measurement error by the enumerator; c. teacher may not have completed the chart and d. non-random selection of learners from the classroom.

TABLE 2.

Correlation coefficients of learner reported indicators and classroom charts.

	BOOKS/LEARNER (CHART)	BOOKS/LEARNER/DAY (CHART)
NUMBER OF BOOKS TAKEN OUT (LEARNER)	0,67	0,64
NUMBER OF BOOKS TAKEN HOME (LEARNER)	0,65	0,65

We compare the correlation coefficient of the average number of books per learner across the entire study period and the average number of books per learner per day of the study period. With different starting days, the total number of days that the various classrooms were exposed to the classroom library differs. We therefore account for the total number of days that a classroom had the intervention.

As can be seen in Table 2, the correlation coefficients across the different measures between 0.64 – 0.67 indicate a moderate to high correlation, that is strong relationship between the number of books captured on the classroom chart and the number of books reported by the learners, suggesting that reported books indicator is relatively reliable.

FIGURE 2.

Scatter diagram of learner-reported number of books taken out vs average number of books per learner according to classroom chart.

LEARNER VS CHART: BOOKS TAKEN OUT

$R^2 = 0,5706$

CHART AVERAGE NUMBER OF BOOKS PER LEARNER

LEARNER NUMBER OF BOOKS TAKEN OUT OVER THE LAST 2 WEEKS
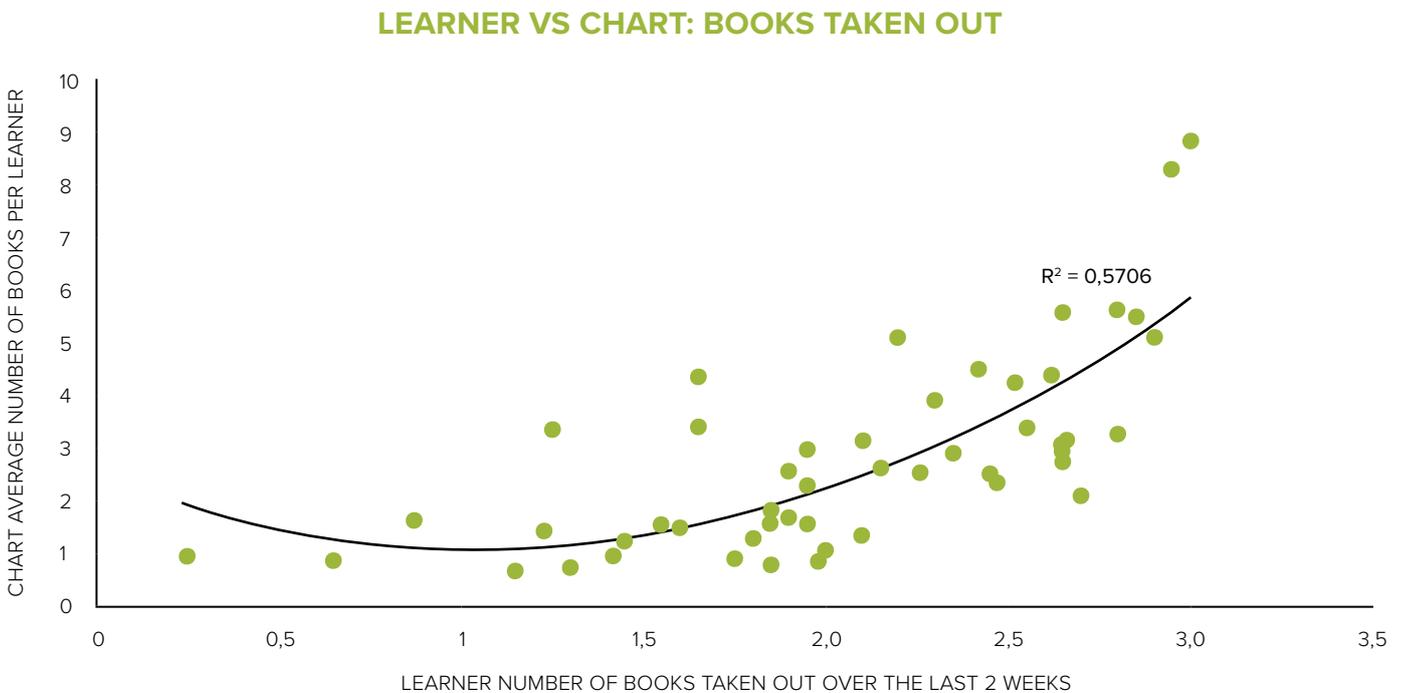
In a few schools with a low number of average books per learner captured on the chart, the learner self-reported number of books was weakly correlated. However, learners that report a higher number of books tend to be from classrooms with Charts that indicate a higher average number of books per learner. Notwithstanding the few outliers in the schools with low number of average books taken out and taken home, the relationship between the two indicators is relatively strong.

FIGURE 3.

Scatter diagram of learner-reported number of books taken home vs average number of books per learner according to classroom chart.

LEARNER VS CHART: BOOKS TAKEN HOME
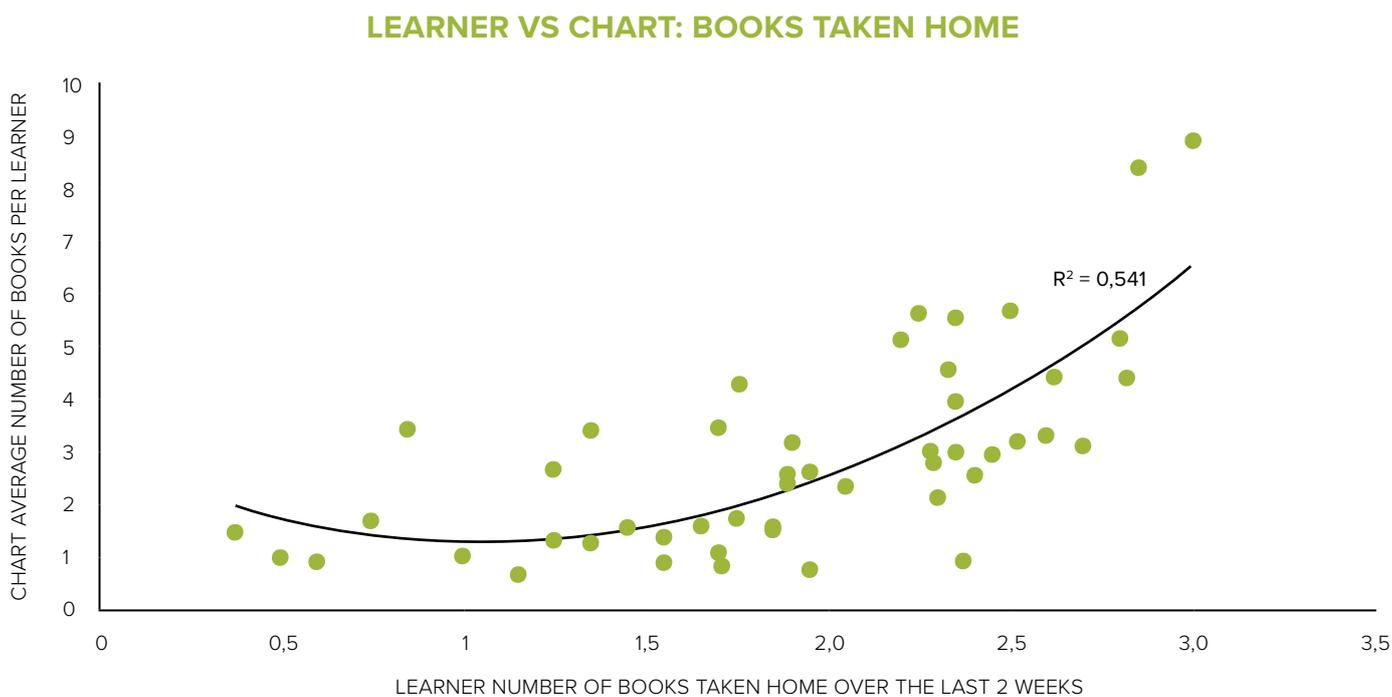
A similar picture evolves when we compare the learner reported number of books taken home and the average number of books taken out per learner as captured on the Chart.

ETHICS APPROVAL

Ethics approval for this study was provided by the University of the Witwatersrand Human Research Ethics Committee (Non-medical). Conditional approval was granted (permission letters were required from schools prior to data collection commencing). The study was classified as low risk. Permission number is H21/06/07.

4. IMPLEMENTATION

DELIVERY, TRAINING AND SET-UP

The implementation of the delivery, training and set-up of the Classroom Libraries was divided into two phases: early and late intervention schools. During each phase, 51 schools across the four districts were provided with a Classroom Library for each Grade 1-3 class, and all teachers received training on the Library Kit. In total, 101 schools benefited from the project. In the Phase 1 delivery, set-up and training in schools, CASME worked with partner non-governmental organisations (NGOs) in Harry Gwala (Family Literacy Project), Zululand (Lula Maphiko) and Umkhanyakude (Zisize Educational Trust). Education Library Information and Technology Service (ELITS) officials provided a key role in supporting trainers and teachers during these initial school visits.

In preparation for the school visits, district trainers and supervisors developed school visit schedules. These schedules were provided to ELITS KZN for inclusion in a provincial ELITS circular that was sent out to all participating schools. The Phase 1 school visits took place between 29 July and 18 August 2021.[3] On arrival at each school, trainers used Google Maps to record the GPS co-ordinates of the location of the school. A project WhatsApp group was set up so that trainers could pin through their locations and send photographs.

The trainers introduced themselves to school staff as they arrived, and completed the set-up and training activities with the teachers. They then handed over the Classroom Library Kits, and each receiving teacher signed a register to acknowledge that they received a full Kit. Each classroom library was then set up in the classroom. Trainers submitted digital reports of their activities after each school visit, using the Google Forms tool provided.

The main challenge experienced by trainers during set-up was overcrowding in classrooms – this was reported in 33% or 16 of 49 visits. Trainers reported that they struggled to find a space in some schools to set up the libraries. Many classrooms have print-rich walls and teachers and trainers had to take down some posters to put the project posters up. In very crowded classrooms the set-up took a little longer than expected.

Some material shortages were reported where items were missing from the Kits. In the majority of these cases, shortages were identified and addressed timeously so that schools were unaffected, with trainers typically replacing missing items from their own Kits. In a few cases, the shortages could not be addressed immediately and instead mitigation steps were implemented to ensure that affected schools received full Kits as soon as possible.[4]

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3.   All visits except for one took place as per the schedule. The last school visit scheduled for 18 August 2021 could not take place as the school was shut due to a Covid-19 case in the school (Itshelejuba Primary in Zululand). This visit has been rescheduled for 30 August 2021.
4.   Shortages found in library book boxes (e.g. missing books, dividers, and stickers) will be replaced by the printer (Jetline) at no additional cost. These materials will be delivered with the Phase 2 stock so that trainers can replenish their packs. Extra kits and charts handed out by trainers due to increased class numbers and sizes will also be replaced ahead of Phase 2 from the kit extras stored at CASME.

FIGURE 4.

Classroom Library Set-Up at a primary school (Amajuba)

Two hundred and eighty-eight (280) teachers were targeted for training across the 50 selected schools in Phase 1: 100, 95 and 85 teachers in Grade 1, 2 and 3 respectively. All trainees signed a training register. Table 3 below provides an aggregate breakdown of the number of teachers targeted for training per district and grade, as well as the aggregate number and percentage of teachers trained. In some schools, teachers from other grades also joined the training. Across the four districts, 18 Grade R teachers and 15 Grade 4 teachers received training. In Umkhanyakude, Grade 5, 6 and 7 teachers also participated in the training sessions (three, four and six teachers per grade respectively).

In cases where teachers were absent from the scheduled training, trainers trained School Management Team (SMT) members so that they could support the participating teachers to cascade the training to those who had missed it. Trainers also provided extra support during the school support visits to teachers who did not attend the training.

TABLE 3.

Number and Percentage of Teachers Trained (per district and grade)

ZULULAND			AMAJUBA		
GRADE 1	Target	27	**GRADE 1**	Target	31
	Actual	22		Actual	29
	%	81		%	94
GRADE 2	Target	27	**GRADE 2**	Target	29
	Actual	22		Actual	28
	%	81		%	97
GRADE 3	Target	25	**GRADE 3**	Target	28
	Actual	22		Actual	26
	%	88		%	93
UMKHANYAKUDE			HARRY GWALA		
GRADE 1	Target	28	**GRADE 1**	Target	14
	Actual	17		Actual	14
	%	61		%	100
GRADE 2	Target	26	**GRADE 2**	Target	14
	Actual	22		Actual	11
	%	85		%	76
GRADE 3	Target	26	**GRADE 3**	Target	14
	Actual	20		Actual	14
	%	77		%	100

In schools across the four districts, SMT and DBE KZN department officials participated in the training and set-up of the classroom libraries. Figure 5 shows the percentage of SMT and DBE officials that participated in the Phase 1 activities as per the information pulled from the training registers. Department official participation, including by ELITS provincial and district officials and Subject Advisors, was also highest in the Amajuba and Zululand districts (85% and 55% respectively). Fewer DBE officials were part of the training in the Umkhanyakude district (33%) and in the Harry Gwala district (8%). The reason for this requires further investigation.

FIGURE 5.

Percentage of Phase 1 School Visits with SMT and DBE Participation

PERCENTAGE OF PHASE 1 SCHOOL VISITS WITH SMT AND DBE PARTICIPATION
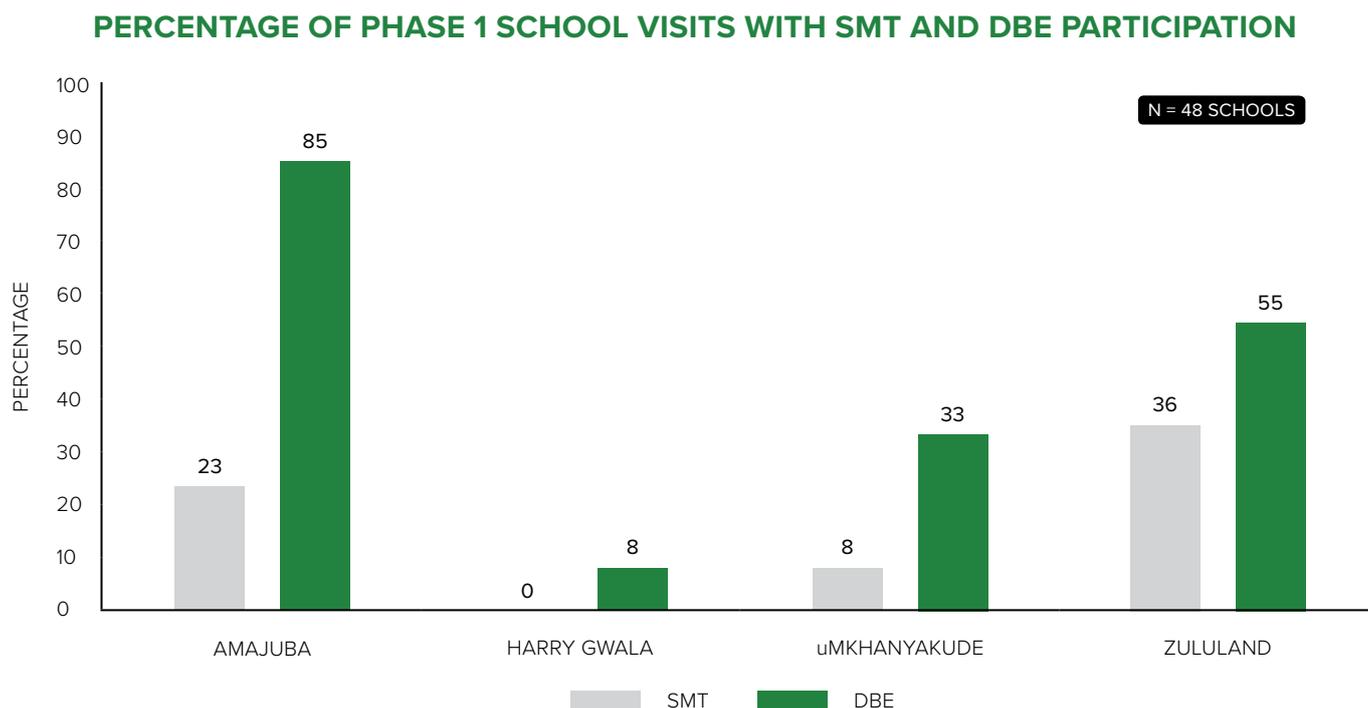
Overall, the trainers reported that the training went well in schools. The few challenges mentioned - absent teachers, overcrowding in classes and Kit shortages – were largely resolved through mitigating actions.

TABLE 4.

Classroom Library Kit Allocation (per project phase, grade and district)

PHASE	DISTRICT	GRADE 1	GRADE 2	GRADE 3	TOTAL
PHASE 1	AMAJUBA	30	29	28	87
	HARRY GWALA	15	13	14	42
	ZULULAND	30	30	29	89
	uMKHANYAKUDE	34	32	30	96
	TOTALS FOR PHASE 1	**109**	**104**	**101**	**314**
PHASE 2	AMAJUBA	36	29	30	95
	HARRY GWALA	15	14	15	44
	ZULULAND	28	27	27	82
	uMKHANYAKUDE	27	28	27	82
	TOTALS FOR PHASE 2	**106**	**98**	**99**	**303**
TOTAL FOR BOTH PHASES		**215**	**202**	**200**	**617**

CLASSROOM VISITS

Support visits were only provided to Phase 1 schools because of time constraints[5]. The support visits to schools took place in two rounds. In total, all 50 visits were conducted in the first round from 30 August to 12 September 2021, and all 50 of the second visits were conducted between 13 and 26 September 2021.[6] Although trainers visited the schools and took photos on the day, they were prevented from meeting teachers one-to-one due to a Covid-19 case being identified. Thus, in total, all 100 school support visits were completed in the 50 Phase 1 schools.

TABLE 5.
Number of Teacher Supported in Phase 1: District and grade

ROUND 1				
DISTRICT	**GRADE 1**	**GRADE 2**	**GRADE 3**	**TOTAL**
AMAJUBA	29	28	25	82
HARRY GWALA	13	10	13	36
uMKHANYAKUDE	16	22	17	55
ZULULAND	24	21	22	67
TOTAL	**82**	**81**	**77**	**240**
ROUND 2				
DISTRICT	**GRADE 1**	**GRADE 2**	**GRADE 3**	**TOTAL**
AMAJUBA	30	29	26	85
HARRY GWALA	14	12	12	38
uMKHANYAKUDE	22	24	21	67
ZULULAND	24	23	18	65
TOTAL	**90**	**88**	**77**	**255**

On a school-by-school basis, the trainers were able to reach a high percentage of teachers across the two rounds of visits in all districts. Most schools received the two planned visits. In Zululand and Amajuba districts, all teachers received both visits. In Harry Gwala, one third of the schools (4/12 schools or 33%) received both visits. In Umkhanyakude, there was only one school (1/13 or 8%) where trainers were unable to support all teachers in both visits.

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5. NGOs have taken up the challenge and in one districts have arranged to provide support visits in 2022.
6. Nomagaga Primary (Harry Gwala) was visited later than planned (11 Nov 2021). This visit was cancelled on the original day for the visit as the school was busy with assessments. Besides this one postponed visit, all other visits were conducted as per the district schedules. In the Umkhanyakude district, the visit to Khulubone Primary was postponed due to heavy rain on the day that made the road to the school impassable. This visit took place three days later. This schedule change meant that two other schools (Majindi Primary and Nyalazi Primary) had the dates of their visits reworked too. However, all three schools were visited within the allocated time period for Round Two. Finally, It was not possible to see all the teachers during the first visit to Esibovini Primary in Harry Gwala (2 September 2021).

In some cases, SMT members and/or DBE officials were also present during the support visits. The figure below shows the number of SMT and DBE officials that participated in support visits across the two rounds (per district). As is evident on the graph, attendance of SMT and DBE officials during these visits was low. The highest attendance of SMT and officials was seen in the Umkhanyakude and Amajuba districts, whilst fewer SMT were part of the Zululand visits. In Harry Gwala, no SMT members or DBE officials took part in the support visits. Further research would be needed to account for this variability.

FIGURE 6.
Number of SMT Members and DBE Officials Participating in Support Visits
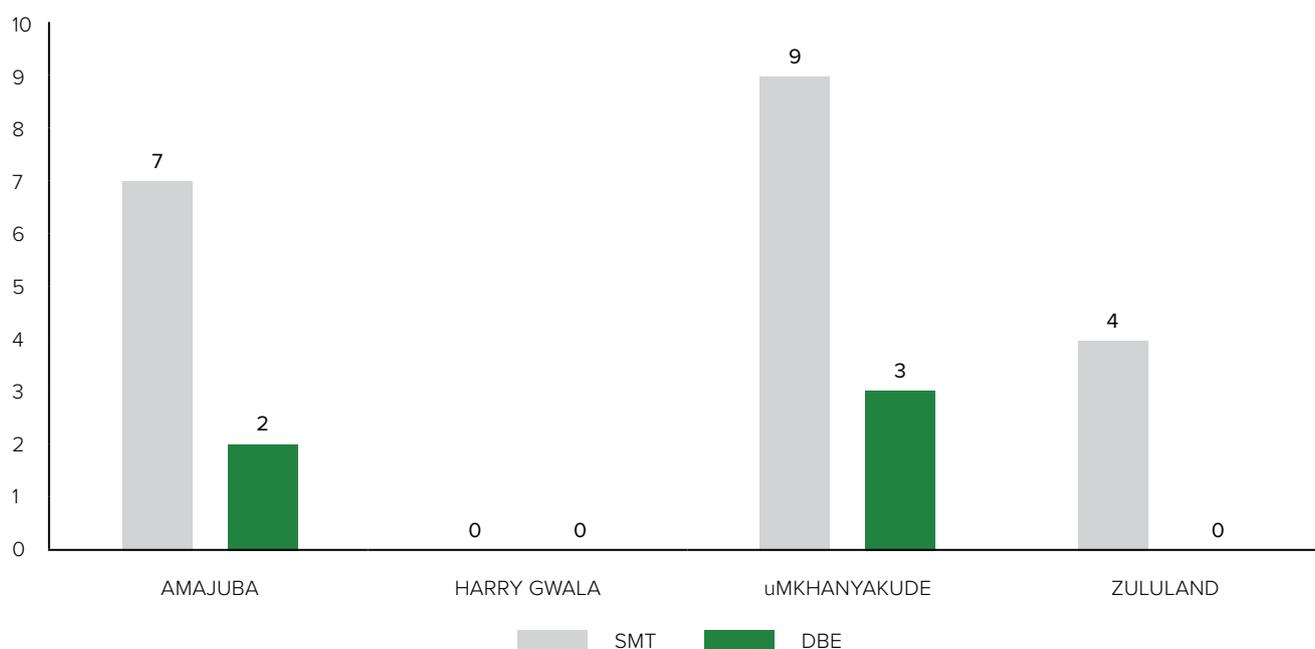
Note: These are absolute numbers

In the large majority of cases, the Classroom Library Kits were found in a good condition – this was the case in 93 of 99 visits, or 94%. In the few cases where damages were reported, they were minimal – for example, a single book was damaged. Teachers who were absent for the initial set-up and training were supported during the follow-up visits. Common challenges included teachers needing more support in how to use the stickers, teachers not writing all of the learners' names on the Book Management Charts, and parents not signing the Library Cards. In a few cases, schools had not started or were lagging in implementation. The reasons for this varied, including that teachers had been absent for long periods, teachers were unenthusiastic or uncooperative and learners were struggling to read.

5. FINDINGS

TO ADDRESS THE RESEARCH QUESTIONS, DOES THE CLASSROOM LIBRARY MODEL INCREASE CHILDREN'S ACCESS TO APPROPRIATE STORYBOOKS AND TO WHAT DEGREE, AND WHAT FACTORS MAY EXPLAIN THESE RESULTS, WE MADE USE OF THREE DISCRETE DATASETS.

These included the learner interviews, and secondary analysis of Book Charts and teacher interviews.

One thousand, nine hundred and sixty-eight (1 968) Grade 3 learners, 955 in treatment schools and 1013 in control schools, were interviewed by the team of field workers about their access to school libraries, their attitudes towards reading, their access to storybooks in their classrooms and their reading habits. To address the possibility of socially desirable responses, particularly to the number of storybooks children had access to, supplementary questions were posed to the children. These questions asked learners to recall the title of a storybook they had recently read or some part of that story.

An analysis of the questions related to learners' knowledge about the existence of a library in their school/classroom and their reading motivation provided limited useful information. Most children in both groups reported that they liked to read in class time "very much" and they liked to read storybooks "very much". (On the latter, the researcher showed the learner an example of a storybook).

To address the extent to which the Classroom Library increased children's access to books, we analysed the response to this question: How many storybooks have you checked-out/taken out in the past two weeks? In Figures 7 and 8 we show the results both as children responded to the question and as adjusted based on whether they recalled the title of any of the books. In the case of no recollection, we recoded the result as zero books.

Figure 7 shows that almost 31% of learners interviewed reported not having read a book in the past 14 days in the control schools compared to 11% in the intervention schools. Of those who reported having read a book, almost half the children in the intervention schools reported reading three or more books, compared to 33% in the control schools. There is reason to believe that there is a considerable impact of socially desirable responses in these numbers. To check the extent of these socially desirable responses, we asked children to recall the titles of the books they claimed to have read. If they could not recall, we recoded the responses as zero. As Figure 8 demonstrates, when this recoding is conducted there is little change in the patterns

for learners in the treatment group, but a dramatic increase from 31% to 49% in the percentage of learners in the control group who read zero books in the prior two weeks. In other words, 18% of learners in the control group reported reading a book, but may have responded positively to the question to please the interviewer rather than answered accurately.

FIGURE 7.

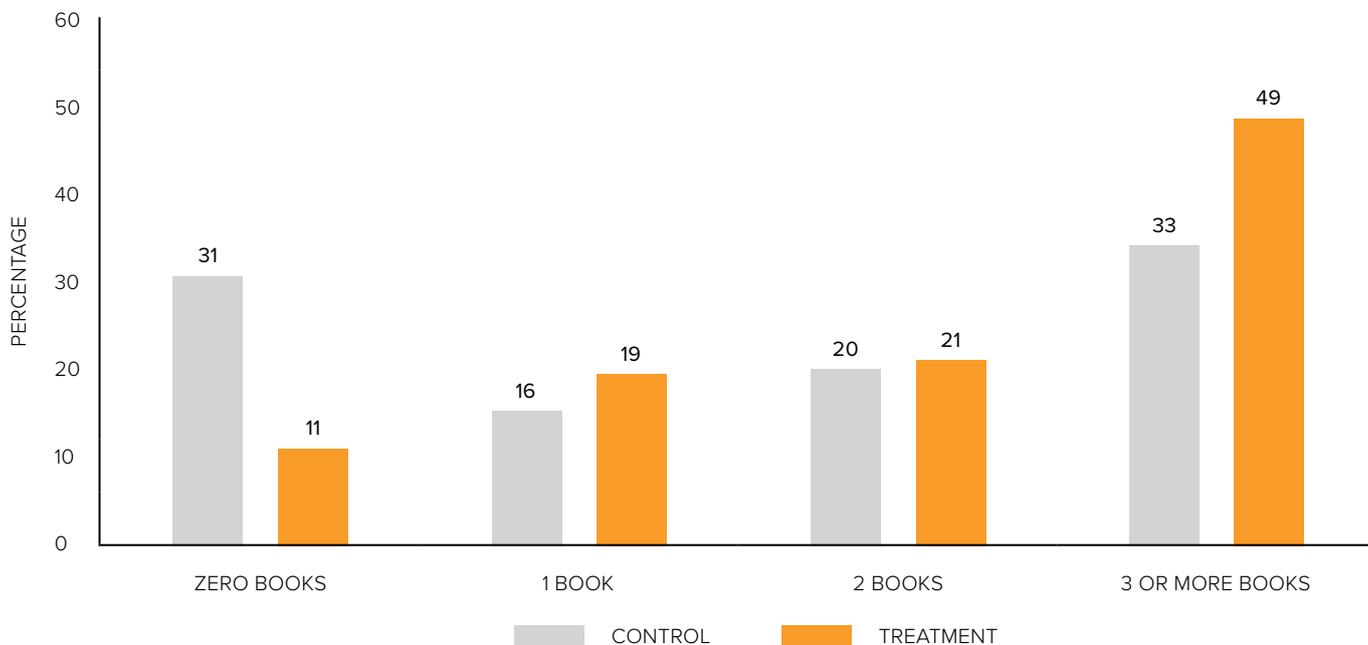*How many storybooks have you checked-out/taken out*

FIGURE 8.

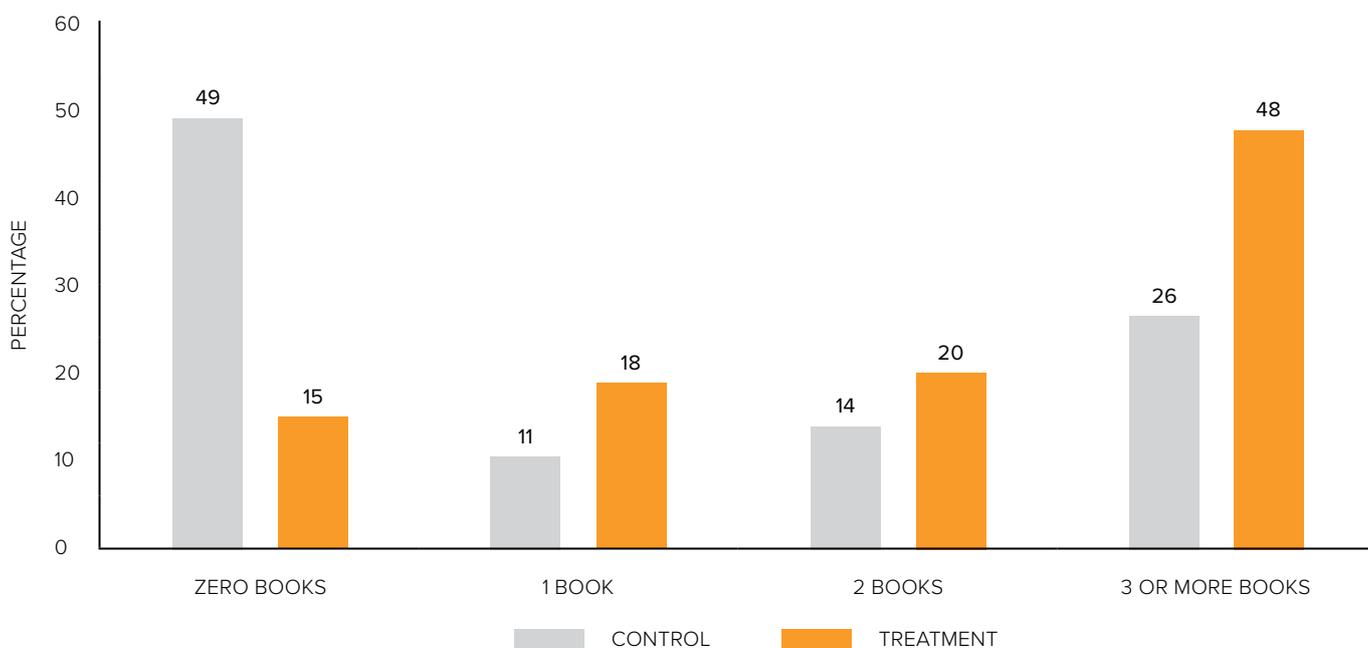*How many storybooks have you checked-out/taken out (Adjusted for memory)*

Table 6 shows that the differences between the intervention school group and those in the control schools is statistically significant.

TABLE 6.

Poisson regression of number of books taken out during the last 2 weeks/ 14 days

VARIABLES	1. BOOKS TAKEN OUT (RAW/ UNADJUSTED)	2. BOOKS TAKEN OUT (ADJUSTED FOR MEMORY)	3. BOOKS TAKEN OUT (ADJUSTED FOR MEMORY)	4. BOOKS TAKEN OUT (ADJUSTED FOR MEMORY)	5. BOOKS TAKEN OUT (ADJUSTED FOR MEMORY)
CLASSROOM LIBRARY	0.287***	0.385***	0.373***	0.369***	0.343***
	(0.0752)	(0.0850)	(0.0887)	(0.0881)	(0.0847)
LIKES READING					0.286***
					(0.0436)
CONSTANT	0.440***	0.323***	0.394***	0.448**	-0.310
	(0.0623)	(0.0738)	(0.0971)	(0.185)	(0.222)
ADDITIONAL CONTROLS:					
SCHOOL QUINTILES	No	No	Yes	Yes	Yes
DISTRICTS	No	No	No	Yes	Yes
OBSERVATIONS	1,968	1,968	1,968	1,968	1,968

Note: Cluster adjusted robust standard errors (cluster: school) in parentheses, *** p<0.01, ** p<0.05, * p<0.1

We approach the regression in the following way. The first specification (column 1) regresses the unadjusted number of books with the classroom library as the only explanatory variable. In the second specification (column 2) we use the adjusted number of books as the dependent variable. In specification 3 we include additional controls for school quintiles (column 3), specification 4 we add controls for districts (column 4), and finally we include an indicator if the learner likes to read (column 5).

On average, learners from schools that were given classroom libraries during phase 1 report to have taken out around 0.3 of a book more than the average learner in the control schools. Once we adjust for the potential inflation of the number of books (using the learner's recall of the most recently read book's title or content), learners in treatment schools report around 0.35 more books on average.

Following our analysis of balance between treatment and control schools (see appendix B), we test if our findings are affected by any differences between the two groups. While the additional controls reduce our point estimate slightly, the overall finding is robust to the inclusion of controls for schools quintiles and district as well as the learner's self-reported affinity to reading (question 4: "Do you like reading in class time?").

Considering that we only have endline data, it is impossible to establish if the learner's enjoyment of reading was obtained prior to the intervention or if it is an outcome of the intervention itself. The number of books reported to have been taken out by the learner is positively correlated with the learner's reported level of enjoyment as one would expect. Nevertheless, the inclusion of the learner's enjoyment of reading affects the point estimate of the treatment effect only slightly.

Testing and adjusting for social desirability

Learner's memory of the most recent book they have read recently

LEARNER REMEMBERS SOMETHING ABOUT THE BOOK
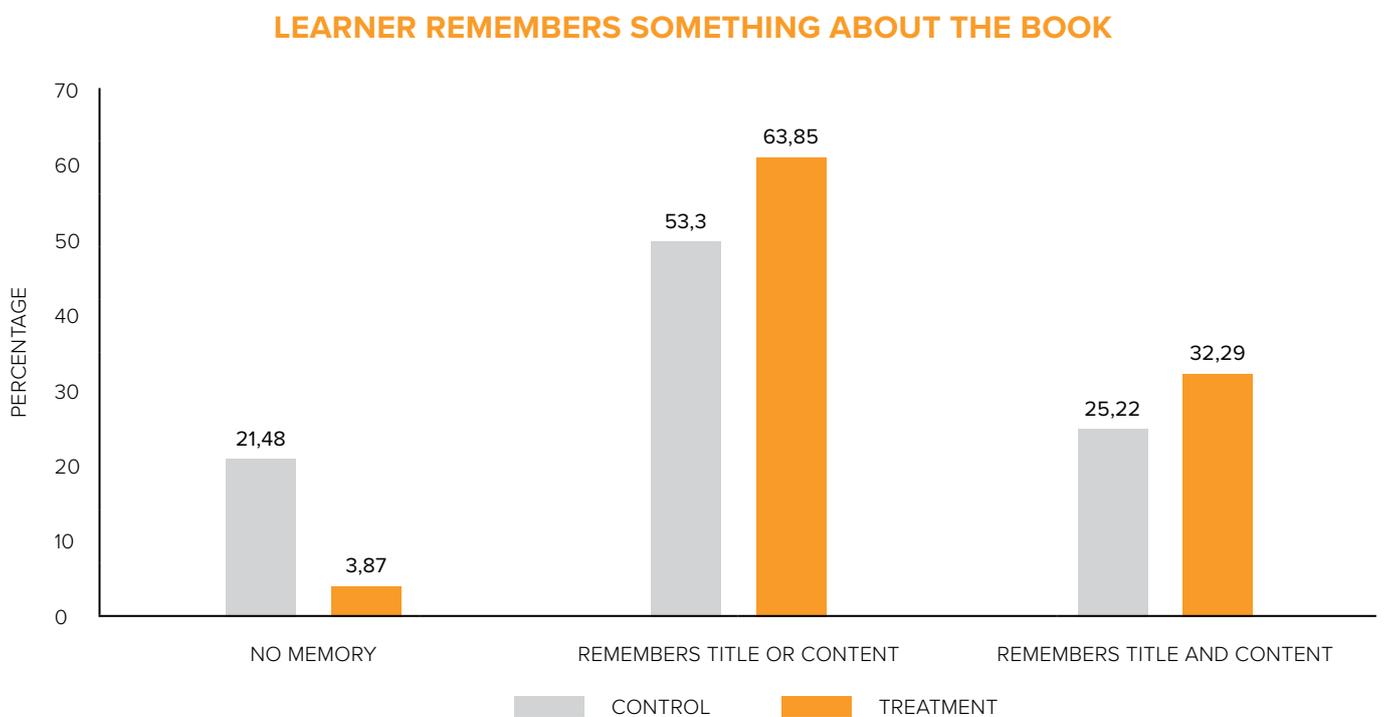
Learners were asked to recall either the title or favourite section of the book that they had read most recently ("Can you tell me the name (title) of your favorite book you have read recently?" and "If you cannot remember the name (title) of the book, which part of the book is your favourite?") We use this information to identify learners who cannot recall any information and adjust the variable "Books taken out" and "Books taken home" accordingly. For learners who cannot remember the name or content of the book, we recode the two variables as zero.

Figure 9 shows that learners from control schools were less likely to remember the title and the content of the book compared to learners from the treatment schools.

FIGURE 10.

Learner's memory of title and/or favourite content of book they have read recently

LEARNER REMEMBERS TITLE AND/OR CONTENT OF THE BOOK
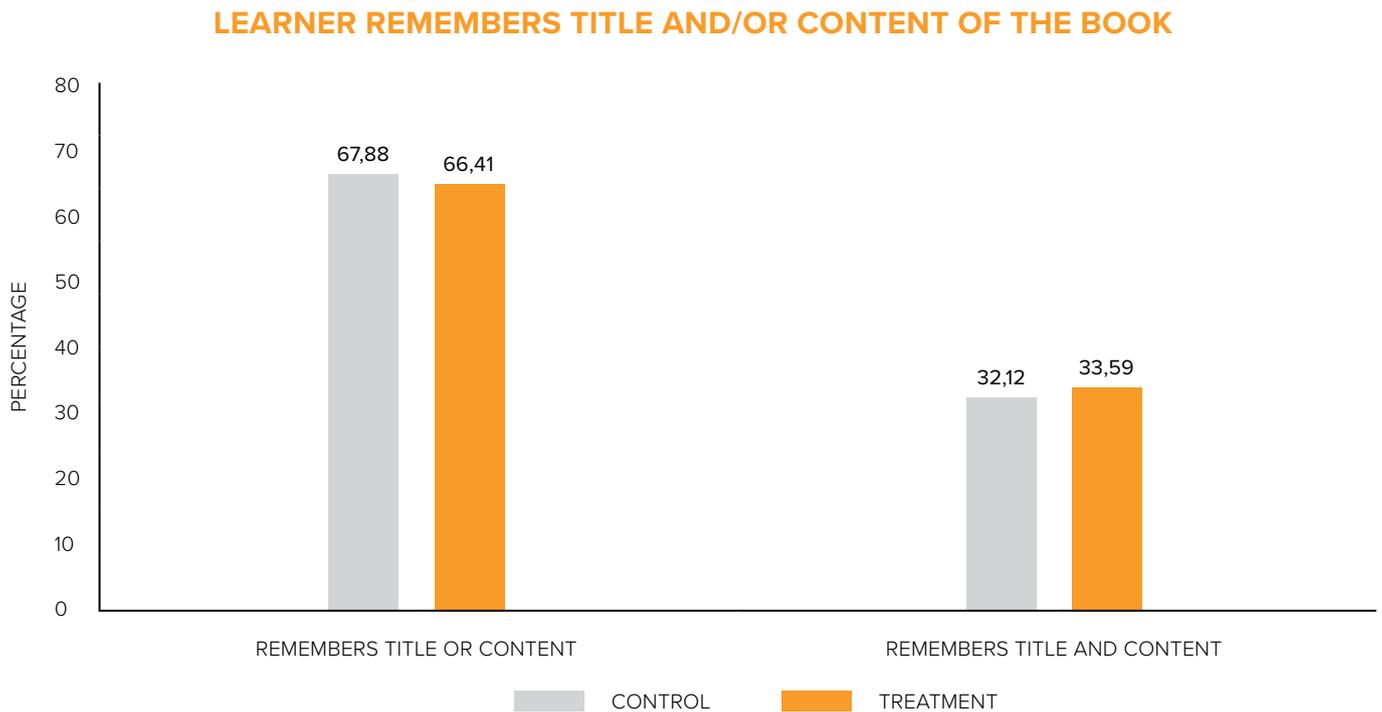
However, conditional on the learner reporting something about the book (figure 10), there is no difference between the proportion of learners in control schools and treatment schools. This seems to confirm that when they have read a book, learners from treatment and control schools are equally likely to remember either the title, their favourite content or both. We use this to support our claim that the adjusted variables of books-taken-out (adjusted) and books-taken-home (adjusted) account for some of the potential misrepresentation (social desirability) by the learner are appropriate adjustments and are more likely to reflect the impact of having access to a class library. Nevertheless, the fact that we recode all observations of learners that cannot remember any parts of the book as zeros imposes a strict penalty on the learner's reporting. It should therefore be seen as the upper level of the impact.

TABLE 7.

Probit model of remembering something about the book read most recently

VARIABLES	1. REMEMBERS/ DOES NOT REMEMBER	2. REMEMBERS/ DOES NOT REMEMBER	3. REMEMBERS/ DOES NOT REMEMBER	4. REMEMBERS/ DOES NOT REMEMBER	5. REMEMBERS/ DOES NOT REMEMBER
TREATMENT	0.951***	0.999***	0.978***	0.995***	0.982***
	(0.148)	(0.166)	(0.154)	(0.170)	(0.169)
LIKES READING					0.132***
					(0.0471)
CONSTANT	0.778***	0.506***	0.893***	1.004**	0.833***
	(0.102)	(0.220)	(0.170)	(0.271)	(0.281)
ADDITIONAL CONTROLS:					
SCHOOL QUINTILES	No	Yes	No	Yes	Yes
DISTRICTS	No	No	Yes	Yes	Yes
OBSERVATIONS	1,968	1,968	1,968	1,968	1,968

*Cluster adjusted robust standard errors in parentheses (cluster at school level), *** $p<0.01$, ** $p<0.05$, * $p<0.1$*

Table 7 confirms that learners in treatment schools have a higher probability of recalling the title and/or their favourite content of the book they have read most recently. This correlation is robust to inclusion of controls for school quintiles (column 2) and districts (column 3) as well as the learner's self-reported interest in reading (column 5).

Possibly the strongest indicator of the increased access to books is the responses to the question about how many books children have taken home in the past 14 days. As is shown in figure 11, for learners in the control group, almost half of the learners indicated that they have not taken any books home in the past two weeks compared to 12% in the treatment group. The difference is likely to be an underestimate given socially desirable responses. At the other end of the spectrum, 41% of learners reported having taken home three or more books in the past 14 days in the treatment schools compared to 18% in the control group.

FIGURE 11.

How many books have you taken home in the past 14 days
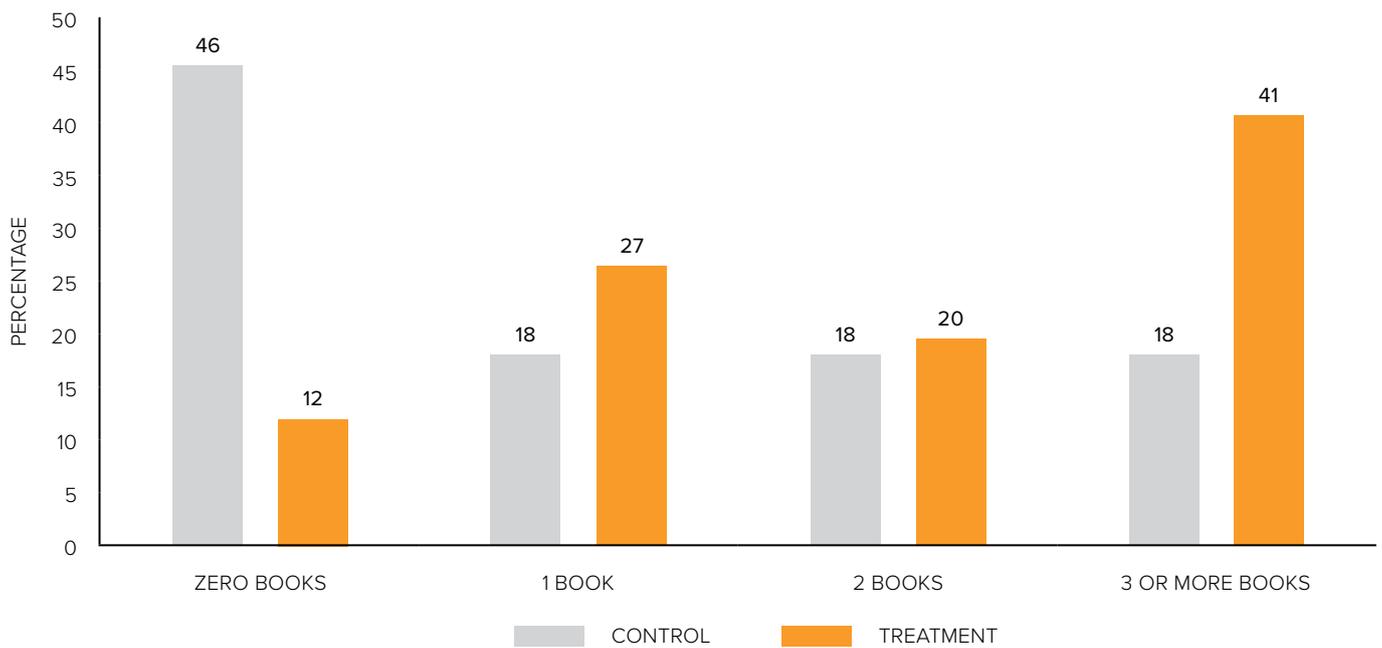
Based on the findings in Table 8, learners in schools that were provided with a classroom library during phase 1 report to have taken on average an additional 0.65 of a book home over the two-week reference period compared to learners in schools that were not given a classroom library. This enjoyment of reading.

TABLE 8.

Poisson regression of Number of books taken Home during the last 2 weeks/ 14 days

VARIABLES	1. BOOKS TAKEN HOME (RAW/ UNADJUSTED)	2. BOOKS TAKEN HOME (ADJUSTED FOR MEMORY)	3. BOOKS TAKEN HOME (ADJUSTED FOR MEMORY)	4. BOOKS TAKEN HOME (ADJUSTED FOR MEMORY)	5. BOOKS TAKEN HOME (ADJUSTED FOR MEMORY)
TREATMENT	0.563***	0.648***	0.651***	0.650***	0.623***
	(0.0910)	(0.101)	(0.106)	(0.106)	(0.104)
LIKES READING					0.296***
					(0.0458)
CONSTANT	0.0806	-0.0240	-0.0258	0.0232	-0.762***
	(0.0788)	(0.0900)	(0.115)	(0.213)	(0.246)
ADDITIONAL CONTROLS					
SCHOOL QUINTILES	No	No	Yes	Yes	Yes
DISTRICTS	No	No	No	Yes	Yes
OBSERVATIONS	1,968	1,968	1,968	1,968	1,968

Cluster adjusted, robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Note: Specifications in columns (1) and (2) include only the classroom library as the explanatory variable but use the unadjusted and adjusted number of books taken home as the DV. Columns (3) – (5) show the inclusion of additional controls including schools quintiles (column 3), districts (column 4) and the learner's affinity for reading (column 5).

Notwithstanding the compounding problem of socially desirable responses, these results provide compelling and consistent evidence that access to Classroom Libraries dramatically increased children's access to storybooks both for use in the classroom and particularly to take home. Given that the intervention period was short – a little over two months from training to data collection - and that the project was implemented at the height of the Covid 19 third wave and immediately following the looting events in KwaZulu-Natal of June/July 2021, these differences are that much more remarkable.

One possible explanation for the success of the classroom libraries is the element of learner choice. Given the range of titles and the ability to access them all, this may have had an impact on the extent of both access and enjoyment.

FIGURE 12.

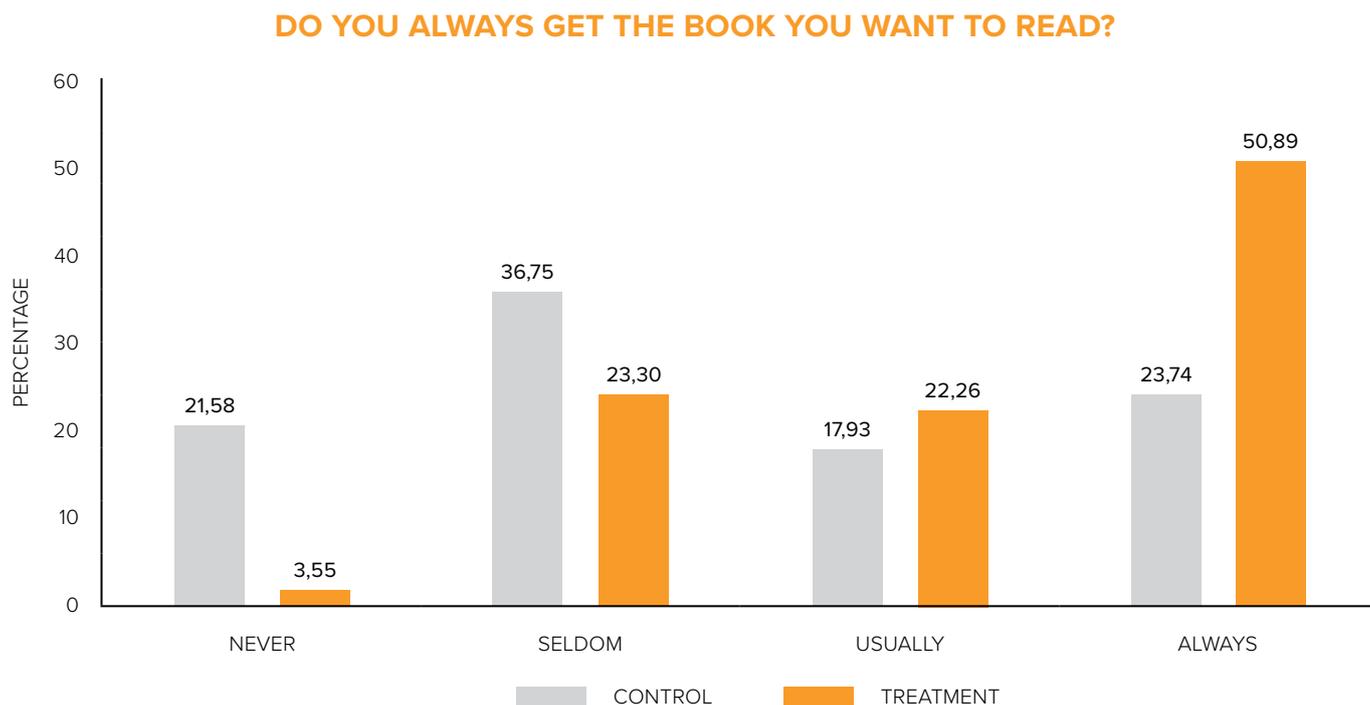*Learners reporting on availability of book choice*

DO YOU ALWAYS GET THE BOOK YOU WANT TO READ?

TABLE 9.

Ordered Probit of getting the book the learner wanted

VARIABLES	1. BOOK CHOICE	2. BOOK CHOICE	3. BOOK CHOICE	4. BOOK CHOICE	5. BOOK CHOICE
CLASSROOM LIBRARY	0.821***	0.850***	0.895***	0.888***	0.870***
	(0.134)	(0.136)	(0.104)	(0.114)	(0.115)
LIKES READING					0.125***
					(0.0384)
/CUT1	-0.836***	-0.489***	-1.409***	-1.554***	-1.398***
	(0.108)	(0.129)	(0.296)	(0.310)	(0.317)
/CUT2	0.213**	0.560***	-0.321	-0.464*	-0.297
	(0.0999)	(0.121)	(0.246)	(0.263)	(0.272)
/CUT3	0.765***	1.140***	0.311	0.169	0.341
	(0.106)	(0.132)	(0.229)	(0.246)	(0.254)
ADDITIONAL CONTROLS:					
SCHOOL QUINTILES	No	Yes	No	Yes	Yes
DISTRICTS	No	No	Yes	Yes	Yes
OBSERVATIONS	1,968	1,968	1,968	1,968	1,968

Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1 Note: Specification in columns (1) includes only the classroom library as the explanatory variable. Columns (2) – (5) show the inclusion of additional controls including schools quintiles (column 2), districts (column 3 and combined in column 4) and the learner's affinity for reading (column 5).

ANALYSIS OF THE CLASSROOM MANAGEMENT CHARTS

One of the critical sources of information on the impact of the Classroom Library Project has been gleaned from analysis of the Classroom Library Management Charts. These charts were designed to assist teachers to manage and track the check-out and retrieval of storybooks in the classroom library. The titles of the books for each grade were pre-populated on the y axis of the A0 laminated chart. The teacher was required to handwrite the names of all the children at the top of the column (x axis). The Chart provided sufficient space for up to 50 learner names. If the class had more than 50 learners, teachers were provided with a second chart.

Each time a learner checked out a book, the teacher (or learner monitor) would place a sticker on the Chart. Once the storybook was returned, either the teacher, learner or learner monitor would record the return by making a cross on the colour sticker on the chart. To get an accurate estimate of the actual number of books taken out, the fieldworkers photographed each chart. The photographs were verified and duplicates removed. Each colour sticker was then counted and the total number of books for the Grade 3 classes was recorded.

TABLE 10.
Data collection from Classroom Library Charts

DISTRICTS	SCHOOL DAYS BETWEEN TRAINING AND COLLECTION	NUMBER OF LEARNERS	NUMBER OF BOOKS CHECKED OUT
AMAJUBA	50	840	1757
HARRY GWALA	53	490	1639
UMKHANYAKUDE	52	1053	2550
ZULULAND	50	911	2491
TOTAL		3294	8437

Table 11 shows that for the average of 51 school days between the time teachers received the training and did the classroom set-up, and the day the data collectors visited the classroom, almost 8 500 storybooks were recorded as having been taken out from the schools that received the libraries in Phase 1. This translates into over two and a half books per learner over this period or an average of one book per month. In informal discussions with Room to Read South Africa, any large-scale low-cost intervention in development country contexts that achieves more than 10 books taken-out per year would be considered a successful.
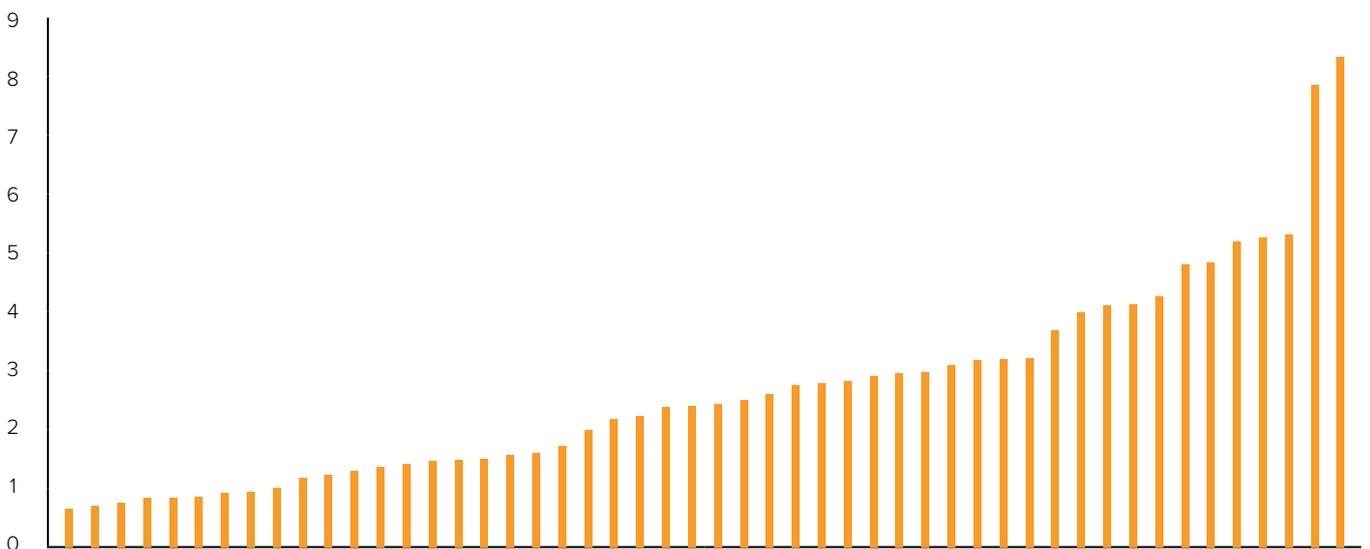
TABLE 11.
Averages of books taken out from Management Charts

DISTRICTS	AVERAGE BOOKS/LEARNER
AMAJUBA	2.15
HARRY GWALA	4.06
UMKHANYAKUDE	2.61
ZULULAND	2.65

FIGURE 13.

Average number storybooks per learners by school

There is considerable variability across the 50 schools.   In the bottom seven schools, Grade 3 learners on average borrowed less than one book over the study period, compared to the top seven school where the average learner borrowed more than four books, almost one a week. In the top two schools, learners borrowed more than eight books over the period, equal to about two per week.

ANALYSIS OF THE TEACHER INTERVIEWS

Grade 3 teachers in Phase 1 schools were interviewed to gather insights into their experience of using the classroom libraries and their assessment of how learners engaged with the storybooks. The 83 teachers interviewed had an average class size of 41 learners, but 27% reported having above 45 learners in their class (similar to finding in Spaull, 2016).

More than half of the teachers interviewed reported that they began to use the classroom library the day after the training, while the remaining teachers starting a day or two later. Almost 80% of the teachers reported that either they or another teacher in the grade sent a letter to parents about the classroom library. These letters were part of the Kit provided to schools. Less than a quarter of the teachers reported hosting a parent-teacher meeting to introduce the parents to the classroom library, an outcome attributed to the challenges of Covid 19.

FIGURE 14.

Parent participation in the classroom library
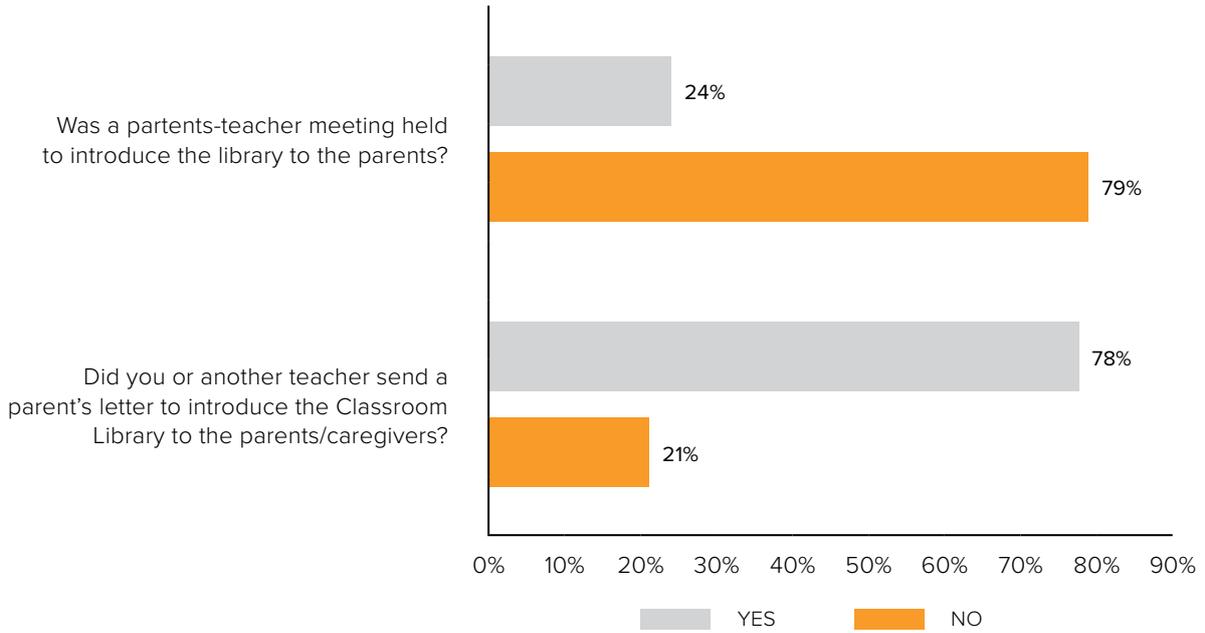
Teachers were asked to report on their use of the various components of the Classroom Library Kit. Some 36% of teachers indicated that they did not use the 5 Finger Rule chart, a key component designed to help teachers assess the level of storybook appropriate for each learner's reading ability. Of those who used the 5 Finger Rule Chart, more than half said they found it either helpful or very helpful. One possible interpretation of the response to this question is that about half of the teachers not only used the classroom library books, but appreciated the critical assessment tool that would guide learners to read storybooks at the right level.

FIGURE 15.

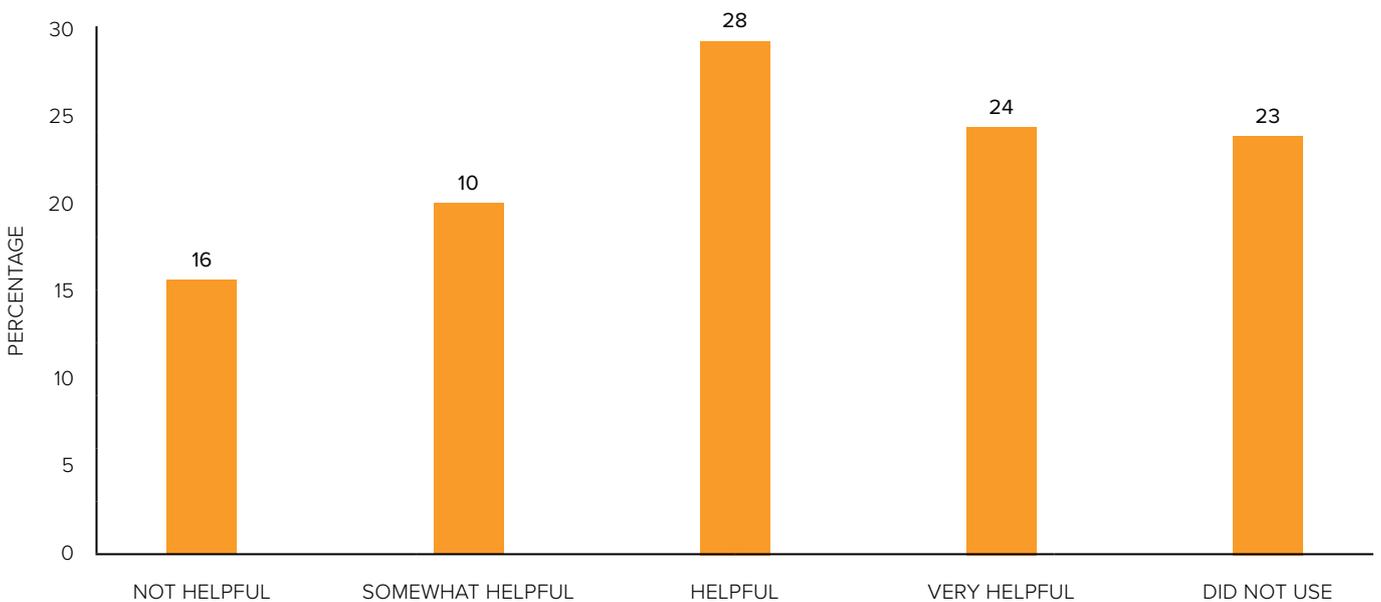*Teachers' reported view of the helpfulness of the Five Finger Rule*

TABLE 12.

When do learners select and check out books in your class?

Last period	1
After School	30
After School, Anytime	1
After School, Last period	1
Anytime	9
Anytime, If finished their work they allowed to take book to read & can take home Those who do not have time in class take home a book that I choose for them.	1
During Breaks	2
During Breaks, After School	1
During Breaks, During Literacy Periods	1
During Literacy Periods	30
During Literacy Periods, Anytime	1
Each break alternate girls & boys	1
Last period before learner leave school.	1
Maths lesson as I am the class teacher.	1
Reading period	1
Reading period after lunch	1
Wednesday to keep for at least five days	1
When children have finished work. & when I do the marking use the dolls	1

Teachers report either allowing children to select and check out books after school or during the reading or literacy period. A small number of teachers allow children to access the classroom library at any time of the day.

FIGURE 16.

Teachers' attitudes towards the implementation of the classroom library
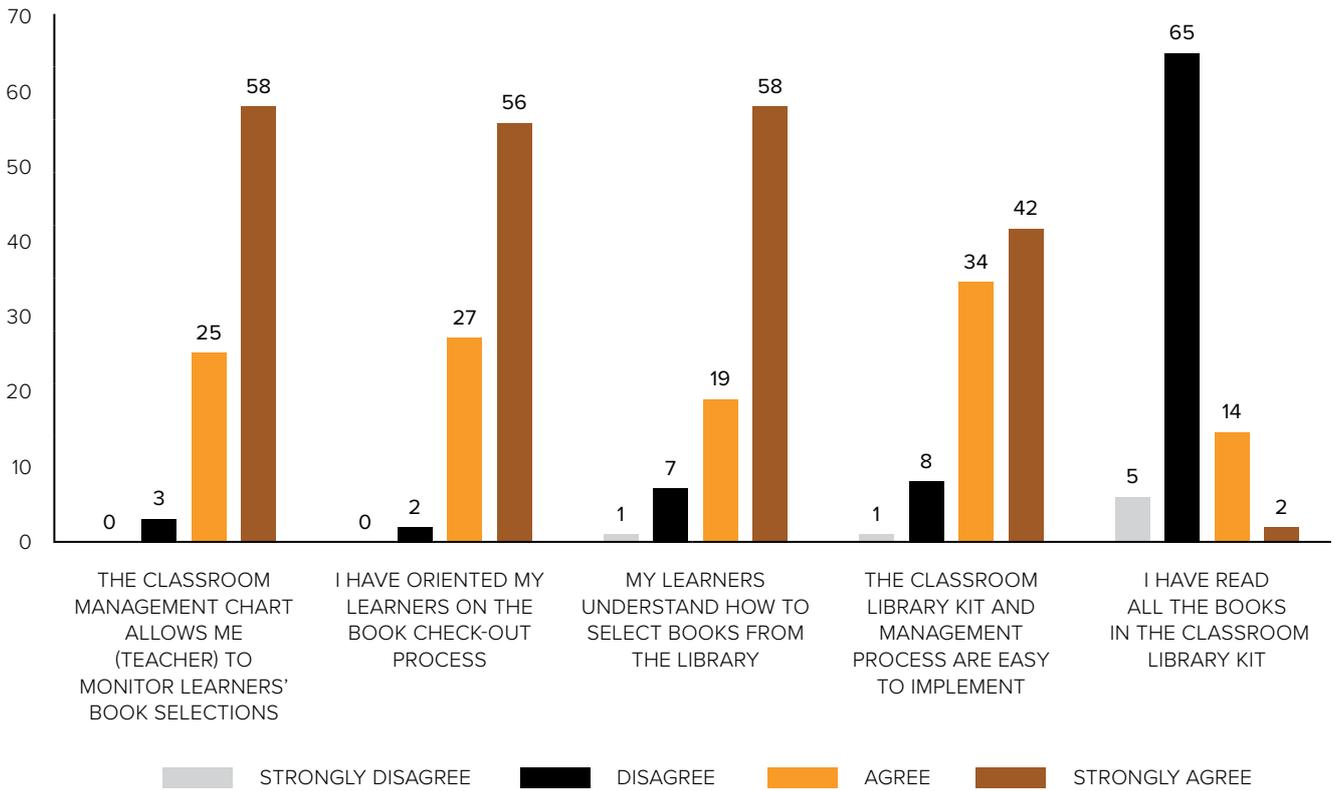

Figure 16 shows that teachers hold strongly positive beliefs about the ease of implementation and the usefulness of the components of the classroom library. The teachers strongly agreed that the chart allowed for monitoring of book selection, that they could orient learners in the use of the check-out process specifically, and that their learners understood how to select books. Overall, they strongly agreed about the overall ease of implementation. That said, the teachers acknowledged that they had not read all the books in the classroom library.

FIGURE 17.

Teachers' attitudes to positive impact of classroom library on learners
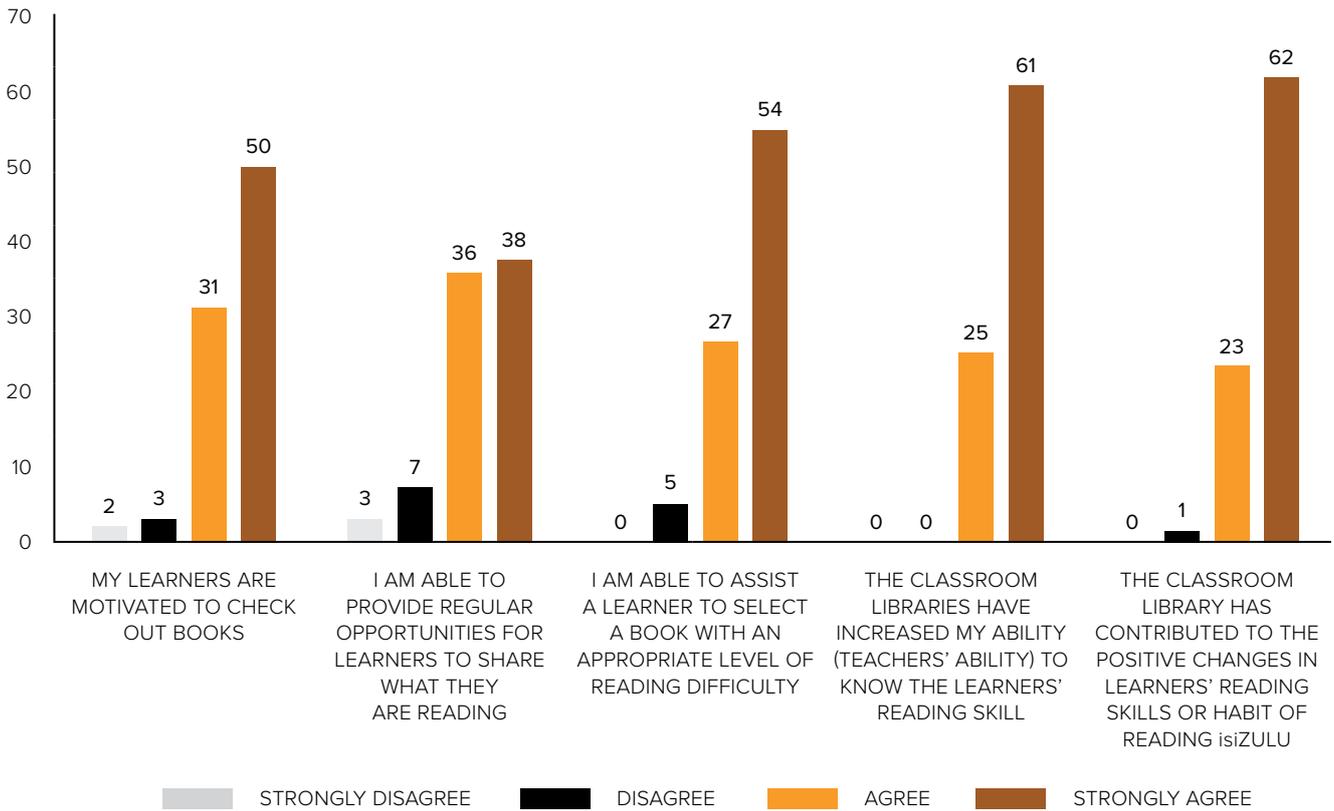
The answers in Figure 17 reveal teachers' strong agreement that the classroom library has a positive impact on learners. They noted that the library motivates children to take out books, provides regular opportunities for children to share what they have read, improved their reading skills and has had a positive impact on the habit of reading.

OPEN-ENDED QUESTIONS FROM THE TEACHER INTERVIEWS

The teacher interview instrument included a number of open-ended questions:
What, if any, are the changes you made in this class in order to set up the library? What changes (if any) in learners' reading skills or habit of reading in isiZulu have you observed since the inception of the Classroom Library Kit? What barriers/challenges (if any) have you (teachers) encountered with respect to implementing the Classroom Libraries? What is your overall perspective on the impact of the Classroom Library in regard to learner's habits of reading? What recommendations do you (teachers) have to improve the Kits and/or guidance/support for Classroom Libraries?

In response to the first question, the teachers gave the following answers:

More parental involvement.
I put up charts, I made space for the box on a table that I had already.
Provide us with more books, more visit from the district.
I need to have more space like the library class.
Moved desks around to create room for the library.
Provide us with more books, more visit from the district.
Needed to create time for library session.
I have added few books. I have added the other books with more readers books.
There were major changes other than creating room for the corner library as there are 50 learners in the class.
Had to move desks to accommodate the classroom library.
More parental improvement.
Moves desks to accommodate the corner library.
Added other books for English and IsiZulu.
I made space for corner library.
Had to create space to accommodate classroom library.
Library corner, Rules of reading and taking care of books.
Had to move desk around to accommodate the library in the classroom.
I had no extra tape to put them back I had to use what I have.
Created room in the classroom to accommodate the library.
Learners who arrive early in the morning are occupied them by giving them reading books.
I have added two boxes of books which we given by the education department they are all isiZulu boxes.
Made space for the corner library, created rules to motivate learners to read.
I have separated the list of learners from the books so that the learners can check out books first.
I have added books. I have used my table with books to the Centre instead of corner so they can all access the books easily.
I had to move class desks to accommodate the corner library.

I haven't done any major changes because of the space I have. In my class I added a few books to what we were originally given.
Some learners take the books for long time and the books end up being lost or stolen.
Put charts on the wall, also tell us chart how to care for the books, book box is in cupboard for safety.
I keep them in the box on cupboard bring it down when they choose. Charts on wall.
I put charts on the wall + I write some phonics chart + put on the wall next to library management chart.
No changes beside the few English readers books that I have added.
I moved tables to the back to accommodate Book Boxes. Removed exercise books from back to create a clear space. I put up charts.
The educator added other books for English and IsiZulu.
I would make more shelves for books.
Books for those who are struggling to read must be grouped together.
Added other reading books apart from the provided by the Kit.
There don't have reading difficulties, could take a book for one day, read it and comeback by following day to explain for the whole class.
Green books wasn't that easy,
I moved the desks away from the wall so that the charts are easy to access on Tuesday I put the boxes on 2 desks & call the children in groups.
I moved all the desks to make space for them to come to the chart. I put the Box with the other books on display.
Put up charts I have to keep the Box in the cupboard. My classroom is also a store room but they are building.
Put up charts. Made space for box.
They read the book at home & come & re-tell the story. Put up posters & made some space for box.
I have added a few more readers books from the Department.
I have added a few Jiki Mfuno books
Added readers provided by Department of Education.
I have added a few books (readers) from our library corner.

Three themes emerged from the initial open-ended question. First, the problem of overcrowded classrooms with constraints on space for both posters and boxes was a very common theme. The second relates to teachers' innovative inclusion of existing resources into the classroom library. The third relates to the perceived need for additional reading material, particularly in English.

In response to the questions about learners' reading skills or habit of reading in isiZulu, the teachers answered as follows:

Most of them can now pronounce words.
They like the books because of the pictures, they are small, they can take them home. The struggle like to take the books, read to the doll.
The children love reading more. Those who are unable to read use pictures and are improving, with involvement of their parents.
It has improve their reading abilities, most of them they can now read fluently.
It promotes the learning and they enjoy a lot.
Interest in reading books in IsiZulu has increased, some learners want to read all the books quickly and has created positive competition amongst learners and some learners that were shy are now brave to speak to class.
There is eagerness to read and more motivated to read storybooks. They handle books in a respectful way.
Motivate the learners. Encourage them to do more on reading and to keep on trying.
Some learners are becoming fluent in reading in isiZulu. Learners show interest in reading books.
Interest in reading IsiZulu books has increased. Learners who were shy are coming forward to borrow books.
Learners can read more fluently. The interest in reading also increased, leaners remind me to issue them with the books. The learners are more encouraged to read , take every opportunity to read.
Reading skills have improved - use of punctuation marks. More learners are confident in reading now.
Most learners can now read fluently and faster in IsiZulu. They have also developed confidence in reading IsiZulu.
Fluency in reading-not counting words/one word at a time. Learners are more confident in reading.
Improvement in their reading skills.
Learners are interested in reading books during class time and borrow books to take home, some learners who were shy come up and borrow book.
They are trying to read instructions and storytellers.
Learners are reading in isiZulu more fluently. Writing in isiZulu has also improved - spelling, punctuation, paragraphs, grammar.
They are pronouncing more words now. The big changes have come from those are really struggling with reading before they are reading more.

In isiZulu they are now fluent readers. They are reading with more understanding, I can tell that they are having fun when reading, it become easy for them when they link the pictures with words.
They are talking often on the stories they read.

They are interested and like to dramatise the story while telling about it, the learners are more confident and their interaction with educators has improved positively.

Learners' comprehension skills have improved and they can share stories / books they read with their classmates.

Level of reading has improved. Reading skills have improved a lot. Parents' involvement have increased.

The children who had reading difficulties have given a lot from this and their confident, they are very eager to go to the library corner and select books for themselves since they started borrowing the books they have been getting better, they present every day.

Most of the learners have improved their reading skills, there is health competition on how many books a learner has read.

I had learners who could not even read one letter, since the inception of this program, they have been reading more. The level of the section of books have helped a lot, learners are reading the right books as per their level of reading.

The learners love to read and share what they have read. I have notice that there is noise from the classroom as learners are busy reading books.

Learners enjoy reading isiZulu books - glued to books. They also enjoy sharing what they have read.
Friends tend to want to read the same books.

They like to read. Reading and the level of reading has improved a lot. When they returned the books they are always taking the new ones home. They are reading for fun.

They are now fluently in reading.

I have noticed that learners' curiosity in learning new words has increased. The interest of reading books in isiZulu has increased.

Reading what understanding parents takes a leading role, learners are reading more. They are sharing books. They are quick readers

My learners are reading fluently. They are able to retell a story. They share stories by telling to other learners outside of our class.

Learners are improving in reading in isiZulu. They even ask me as the teacher for permission to return book stories they have read the previous day. They have gained more confidence in reading and speaking out letters and words.

At first or before the library kits arrived the learners could not read at all, but now they have a new habit of reading and they are reading more and more.

IsiZulu vocabulary has increased. The learners being able to express themselves in isiZulu has improved. They are motivated to read more they remind me to give them more.

Most of them cannot pronounce the words clearly.

Learners interest in reading books has increased. The learners are able to take care of books.
Learners are more confident in reading in isiZulu.

Reading skills have improved. They are able to handle book in a batter way. Some are motivated to read books.

They read + talk about the pictures. I used to make copies for them to take home. Now they take read books.

Phonics words knowledge increased (teacher would / love to know more on phonics), vocabulary has improved, some are so fluent & not shy in speaking, will stand up in assembly.

I gave them more books now they like it. Some are struggling bit are now taking books improving. Their parents are helping them.

Noticed that we have the kits + we have competitions, in assembly v some learners are becoming competitive abut reading more books.

Most of them love to read- love of reading has improved drastically. Their parents are more involved helping them. Their vocab increased & reading ability improved.

My learners respect of the books, e.g. commas and full stop etc. From the beginning when my learners were counting words, to being fluent readers. There is more of a competition towards each other.

Reading is much more fluent. Slow learners are trying very hard to reach targets of read well. Grade 3s who are good in reading are now writing short stories The parents are also reading books. One parents came to tell me (mother of Keswa Mcebisi) she has borrowed the child's books. Can I lend them books?

Reading skills are improved. Comprehension skills are improved and are capable of re-telling the story to their classmates.

Learners have acquired vocabulary, sound and developed learning skills.

There is an improvement in learner communication skills, and all want to get a chance to show what their book talks about.

They can now punctuate and are now able to change a tons while reading.

Yes they is an improvement in their pronunciation.

Some of them they now understand punctuation and this reading tones.

Improvement in pronunciation.

It improve learners fluency.

There is great improvement in IsiZulu reading skills in the learners, and they all enjoy reading the books.

Learner reading skills have improved.

They can now punctuate, when reading.

Learner are interested and enjoy reading these books.
Learner have improved in fluency in IsiZulu and can also read faster.

Learners are displaying positive attitude towards reading.
Built learner self-confidence as they share stories they have read in class.

Learner enjoy reading stories and relating the stories to others.
They like to read stories in groups.

Most learners are able to read fluently and confidently in isiZulu.
Most learners can read the sound (phonic).
Learner enjoy reading and eager to ask for books.
Most learners can re-tell the story to the class and that improves there confidence and self-esteem.

Improvement in their pronunciation.
They now read for understanding.
Changed a lot, even the strugglers when they ask me to help with their difficulties. These children want to read they finish books & want new ones. I have monitors which I have trained. I have started giving on Friday. Yesterday at PTA meeting the parents said they were happy with programme.
There are a few learners who did not understand the sound & pronunciation. We asked the parents not to sign until the children get it right. Ask the siblings for help. They know how to hold the book, self-esteem while reading. They are reading more. Parents asking for English books
Peer pressure/ competition comes in to play. They all want to read well. We still have strugglers. They take books their parents read to them They can re-tell. Reading aloud has improved with some learners& they read more books. They are taking home for the first time.
They like reading more. They ask me if they can take a book & read. They were bored with the others.
One who cannot read, now tries.
Builds confidence in children.

Teachers' responses to the second set of open-ended questions demonstrate that they believe that the libraries have a positive impact on their learners' reading skills and motivation to read.

COSTS

What is the cost of the Classroom Libraries? To calculate the cost of the library resources, not including the delivery, training, set-up and ongoing on-site support, the total cost of the tender for the printing was divided by the total number of Kits ordered and the average number of learners we anticipate per class. Note that the actual number of Kits ordered was around 10% more than the schools in the project. These additional Kits were used for training and for sharing with partners and the provincial department. The overall cost of all the printed materials including the books, the boxes and dividers, book bags, charts and posters and stickers was R917 755 or 51 394€. In Euros, this converts to 71€ per classroom or approximately 2€ per learner (assuming 40 learners per class). The unit costs were driven by the scale of the project. With the printing of 720 Kits, the printers were able to offer a substantially discounted cost. These costs included delivery to the four district offices, but not to the schools.

TABLE 13.
Cost of the Classroom Library Kits in Rand and Euros

	RAND	EURO
TOTAL (720 CLASSES)	R917 755	51 394 €
PER CLASSROOM LIBRARY	R1 270	71 €
PER LEARNER	R32	1,8 €

Source: VVOB project administrator
Note: ZAR:€ calculated at 1:0.0056.

6. CONCLUSION

SUBSTANTIAL PROGRESS HAS BEEN MADE IN THE JOURNEY TOWARDS ACHIEVING THE GOAL OF ALL TEN-YEAR-OLDS READING FOR MEANING BY 2030 IN SOUTH AFRICA.

Many initiatives are underway from within government, NGOs and private sector to support the improvement of the teaching of early grade reading, in both children's home language and English as a second language. That said, without providing children with extensive opportunities to practise and enjoy reading on their own, many children's pathway to reading proficiency will be difficult. What is needed is consistent and compelling evidence of intervention models that support independent reading and which are cost-effective and scalable.   This study reports on the impact of one such model, the Classroom Library.

The Classroom Library impact study was implemented over a short duration - only 51 days on average between the time of delivery, training and set-up to the point of endline data collection. It was also implemented at a challenging moment immediately following the peak of the Covid 19 third wave in South Africa and following violent looting in Kwazulu-Natal, the location of the study. Despite these serious limitations, the study showed strong and consistently positive impact on children's access to isiZulu storybooks.

The data collection in the study provides a number of important insights. There is evidence that some children are reading in the schools and schools are providing many children with storybooks in both isiZulu and English. While controlling for socially desirable responses, the learner interviews reveal that not only did children in the control group take out storybooks to read, but a significant portion of these children were able either to recall the title of the books or some aspects of the stories they had read. When this evidence is triangulated with the open-ended question data from the teacher interviews, (teachers reported adding additional titles to the Classroom Library), it reveals that at least some rural schools have access to appropriate level storybooks.

That said, the main finding from the study is that the Classroom Libraries substantially increase both the number of storybooks children take out to read and dramatically increase the number of books children actually take home. This is the key finding of the counterfactual component of the study. When we compared learners in two

very similar groups of schools, learners in the intervention schools reported higher levels of access to isiZulu storybooks both to check out and to take home. This finding is confirmed from analysis of the data drawn from the Classroom Management Charts.

In the latter, we have a reliable estimate of the approximate number of books we could expect children to take out when such a model is implemented at scale. Although there will undoubtedly be variability, on average the Classroom Library model would enable children to access one storybook a month or 10 storybooks in an academic year. From the experience of this study, the unit cost of this would be around R1 250 or 71€ per Classroom Library Kit, excluding training and support costs. The data also provides insight into the mechanism that makes the model work. From the

teacher interviews, we can observe that teachers found the Classroom Library system easy to learn to use and believed that it was an effective way to help children develop the habit of reading.

There are, however, several caveats that need to be noted. First, there is a serious challenge with the large number of classrooms with over 45 learners. This is a problem both for the constraint it places on the space in the classroom and the ability of the teacher to provide personalized support to get children going with reading in the classroom library. Second, the delivery/support system is expensive. It relied on NGOs to deliver the Kits, conduct the teacher training, assist with setting up the libraries in each classroom and providing two ongoing support visits to the teachers. Careful consideration needs to be given as to how this would be sustainable. This however is beyond the scope of this report.

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APPENDIX A LIST OF BOOKS

GRADE 1		
LEVEL OF COMPLEXITY	**TITLE (PUBLISHER)**	**COMMENTS**
EASY (6)	1. *Bala* (VulaBula) 2. *Izimo* (VulaBula) 3. *Jika* (VulaBula) 4. *Lala* (VulaBula) 5. *Musa!* (VulaBula) 6. *Wenzani?* (African Storybook)	• One or two word phrases per page • Strong visual cues to help with comprehension • Lots of repetition
MEDIUM (7)	1. *Baleka* (VulaBula) 2. *Ekhaya* (VulaBula) 3. *Ibhola lami elibomvu* (African Storybook) 4. *Lalela* (VulaBula) 5. *Ngiyathanda ukufunda* (African Storybook) 6. *Qoqa* (VulaBula) 7. *Vula vala* (VulaBula)	• One or two word phrases per page • Short sentences per page • Visual cues to help with comprehension • Introduce questions • Repetition
HARD (7)	1. *Engijabulela ukukwenza* (African Storybook) 2. *Izilwane zasepulazini* (African Storybook) 3. *Izingubo zami zesikole* (African Storybook) 4. *Sithanda ibhola lezinyawo* (African Storybook) 5. *Umama wami othandekayo* (African Storybook) 6. *Umnikelo* (VulaBula) 7. *Uthisha wami* (African Storybook)	• One or two longer phrases or sentences per page • Visual cues to help with comprehension • Questions • Direct speech

| GRADE 2		
LEVEL OF COMPLEXITY	**TITLE (PUBLISHER)**	**COMMENTS**
EASY (14)	1. *Abangane* (African Storybook) 2. *Elikabanu isondo?* (VulaBula) 3. *Esitolo sezingubo* (VulaBula) 4. *Imibala eyisikhombisa yothingo lwenkosazana* (African Storybook) 5. *Mina nomdeni wami* (African Storybook) 6. *Sidlala ungize* (VulaBula) 7. *Siya ezu* (African Storybook) 8. *Sizani!* (VulaBula) 9. *Uhambo* (VulaBula) 10. *Umdokwe* (African Storybook) 11. *Umhobholo* (African Storybook) 12. *Uphi uZinzi?* (VulaBula) 13. *Usuku lukaHamisi lwenhlanhla* (African Storybook) 14. *Yimuphi umsebenzi obaluleke kakhulu?* (African Storybook)	• Long words- many syllables • Short paragraphs • Direct speech • Questions
MEDIUM (12)	1. *Amakati kaZamo* (African Storybook) 2. *Indlovu eyayithanda izinto* (African Storybook) 3. *Isijeziso* (African Storybook) 4. *Izinyo* (VulaBula) 5. *Liphukile ifasitela* (VulaBula) 6. *OLwesibili benjabulo* (African Storybook) 7. *UKabali noKateera* (African Storybook) 8. *Umoya* (African Storybook) 9. *UMpisi, uNogwaja nezindishi* (African Storybook) 10. *UNkawana nesomiso* (African Storybook) 11. *UNkawu noNgwenya* (African Storybook) 12. *Wohe, ngebhodwe lami!* (African Storybook)	• Long words- many syllables • Short paragraphs • Direct speech • Questions • Some repetition
HARD (14)	1. *Bekela ikusasa* (VulaBula) 2. *Ibhasi elikhulu eliluhlaza* (African Storybook) 3. *Ibhubesi negundane* (VulaBula) 4. *Isitayela sikaRafiki* (African Storybook) 5. *Kungani uMvubu engenaboya?* (African Storybook) 6. *Ngabe ukhona yini ofana nami?* (African Storybook) 7. *Ukuhambisana* (African Storybook) 8. *Umgcini nesikhungo esikhethekile* (African Storybook) 9. *UNozibele nezinwele ezintathu* (African Storybook) 10. *UPalesa uthanda izitshalo* (African Storybook) 11. *UQhude noNgulule* (African Storybook) 12. *Uthisha uZanele* (African Storybook) 13. *UTsheketshe usindisa uJabu* (African Storybook) 14. *Zincane izimpahla zami* (African Storybook)	• Multiple length paragraphs per page • Direct Speech • Questions • Visual cues to help with comprehension • Some repetition

GRADE 3		
LEVEL OF COMPLEXITY	**TITLE (PUBLISHER)**	**COMMENTS**
EASY (10)	1. *Icebo elikhulu likaNtuthwane Omncane* (African Storybook) 2. *Ikati, inja novemvane* (African Storybook) 3. *Intombazanyana eyaba isicebi* (African Storybook) 4. *Isobo lamatshe* (African Storybook) 5. *Izinzawu* (African Storybook) 6. *Ngomunye uMgqibelo ntambama kushisa* (African Storybook) 7. *Umdlalo weChess* (African Storybook) 8. *UNkukhu noShongololo* (African Storybook) 9. *Unogwaja nofudu* (African Storybook) 10. *USikhukhukazi uqilinga uKhozi* (African Storybook)	• Multiple length paragraphs per page • Long words- many syllables • Visual cues to help with comprehension • Direct speech • Questions • Hardly any repetition
MEDIUM (14)	1. *Idolobha lakithi* (African Storybook) 2. *Ikati nenja ziyadweba futhi ziyahlobisa* (African Storybook) 3. *Imbewu encane* (African Storybook) 4. *Imbuzo, inkosi eyayingenalo iqiniso* (African Storybook) 5. *Ingqwele yebhola* 6. *Isihlahla sikaPontshibobo* (African Storybook) 7. *Siyabhaka nogogo* (African Storybook) 8. *Ukucula iqiniso: Indaba ka Miriam Makeba* (African Storybook) 9. *Umkhonto kaThabani* (African Storybook) 10. *Umngani wami uKhokho* (African Storybook) 11. *UMondli noMbali bavakashela ugogo wabo* (African Storybook) 12. *Umoya nelanga* (African Storybook) 13. *Unkosikazi oyisihlahla* (African Storybook) 14. *UZama intombazanyana ekhuluma kakhulu* (African Storybook)	• Long paragraphs per page • Long words- many syllables • Variety of punctuation marks • Visual cues to help with comprehension • Direct speech • Questions • Hardly any repetition
HARD (16)	1. *Amakhehla nezalukazi* (African Storybook) 2. *Amakota kabab' uMkhize* (African Storybook) 3. *Bathunjwe*! (African Storybook) 4. *INingizimu Afrika ngeyethu* (African Storybook) 5. *Inkosi uNdabenhle nendodakazi yayo* (African Storybook) 6. *Inyoni enisa imvula* (African Storybook) 7. *Isipho sikaSisanda* (African Storybook) 8. *Mhlaba ngiyakuhlonipha* (African Storybook) 9. *Silangazelela ugqozi lokubungaza intwasahlobo* (African Storybook) 10. *SIlindele umntwana wethu* (African Storybook) 11. *Siyakwazi ukubala* (African Storybook) 12. *UBonga noNondlili wakwabo- Abangani abakhulu* (African Storybook) 13. *Umndeni wezimo ezingamaPolygon* (African Storybook) 14. *Usuku lukaZinhle* (African Storybook) 15. *UThandeka kanye nezinkukhu ezigeziwe* (African Storybook) 16. *Yehlukaniselanani ngobuqotho!* (African Storybook)	• Long paragraphs per page with complex sentences • Long words- many syllables • Variety of punctuation marks • Visual cues to help with comprehension • Questions • Direct speech • Hardly any repetition

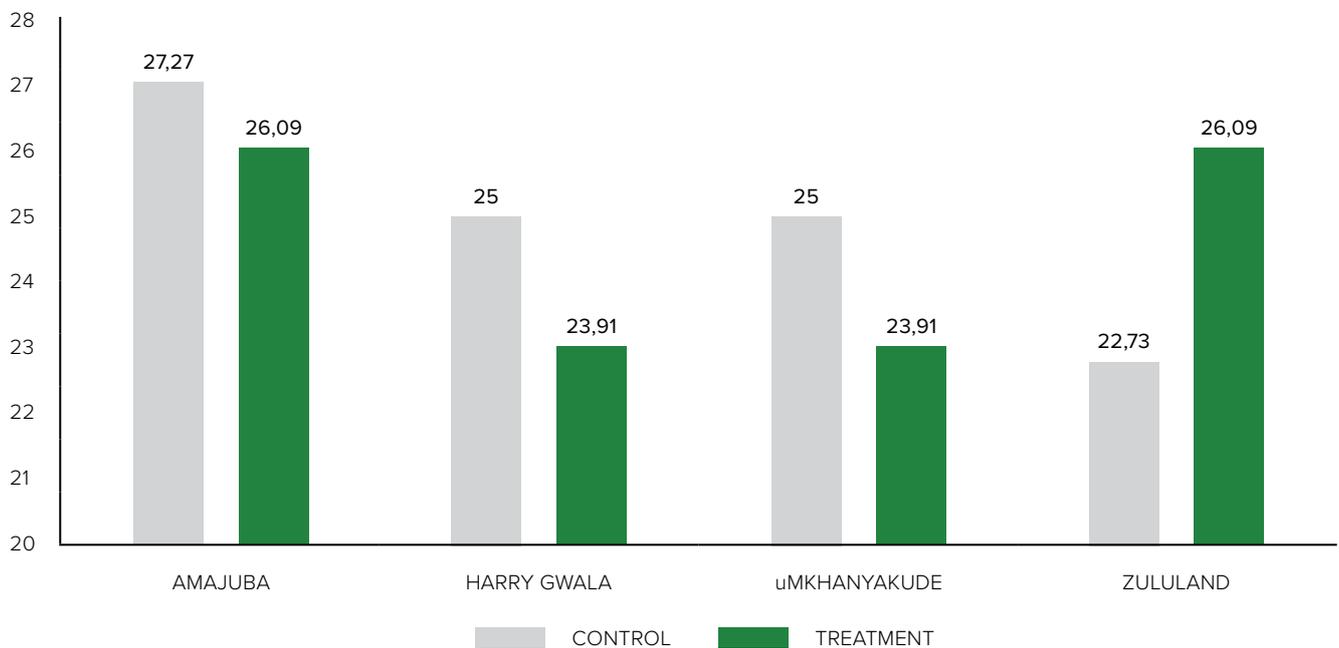# APPENDIX B: BALANCE OF CONTROL SCHOOLS AND TREATMENT SCHOOLS
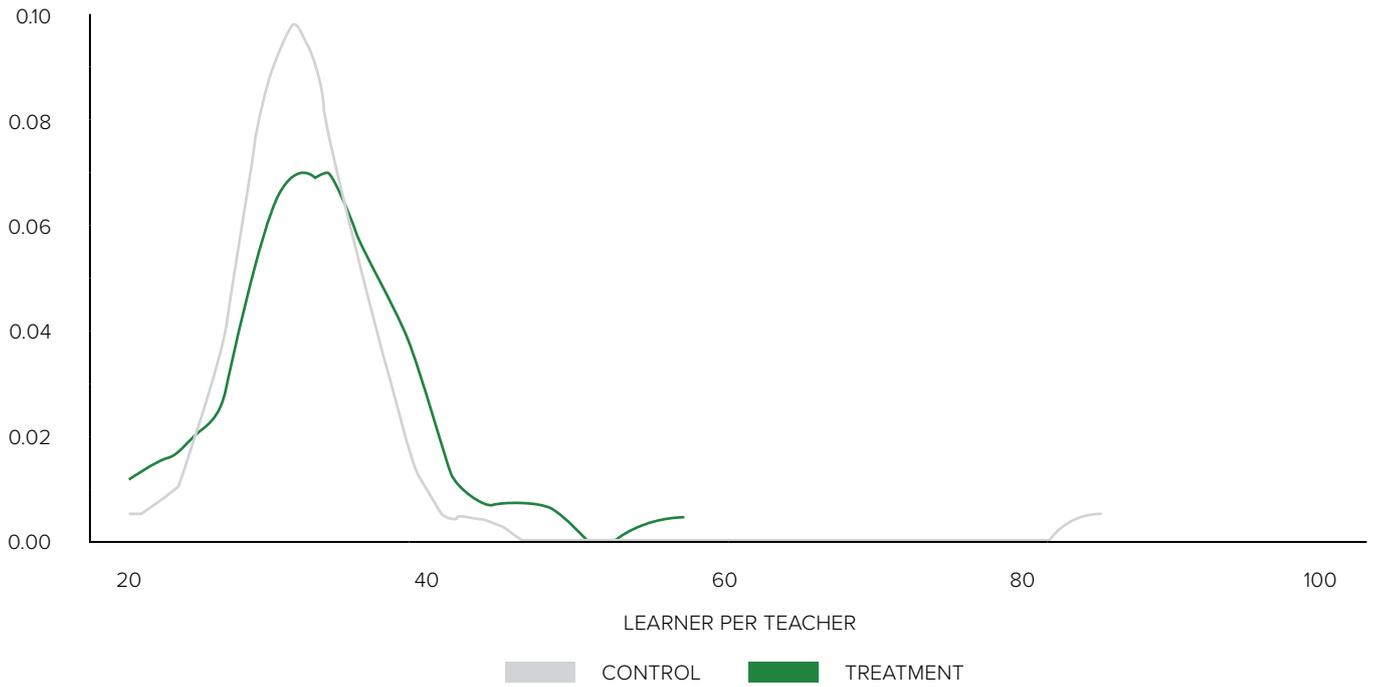
GRAPH 1A.

Treatment assignment by school quintiles (%)
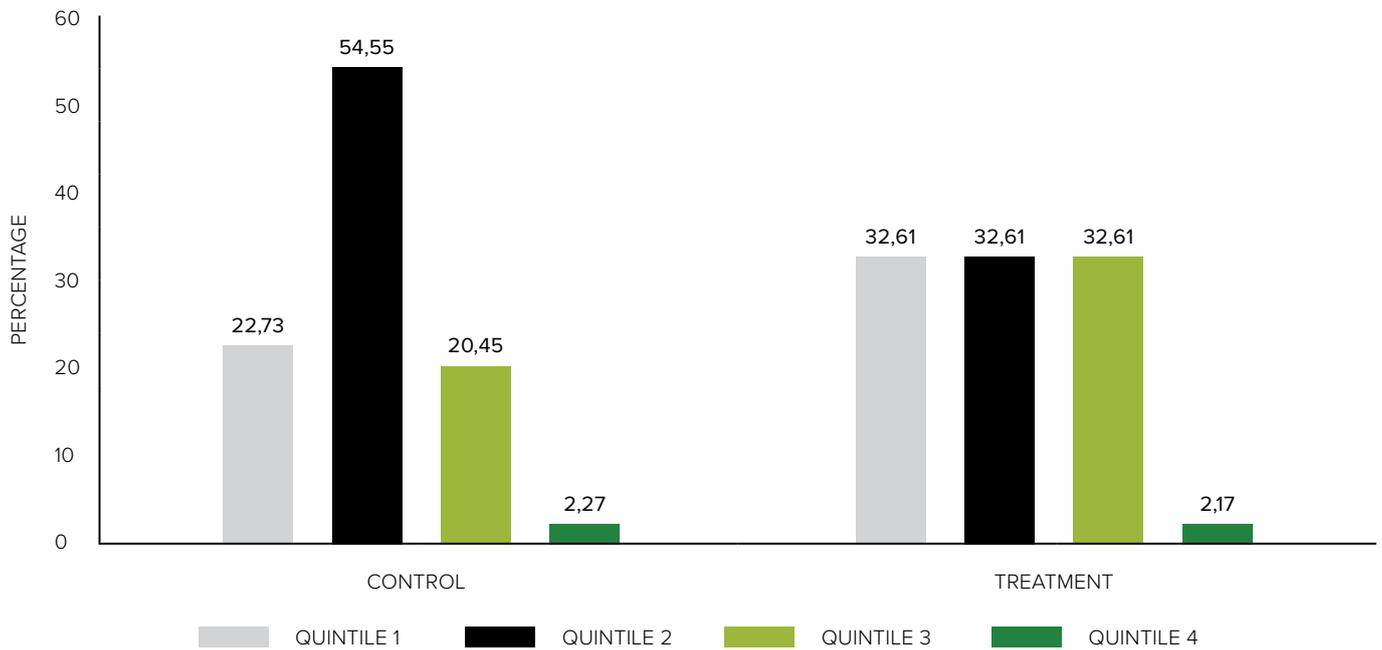
GRAPH 2A.

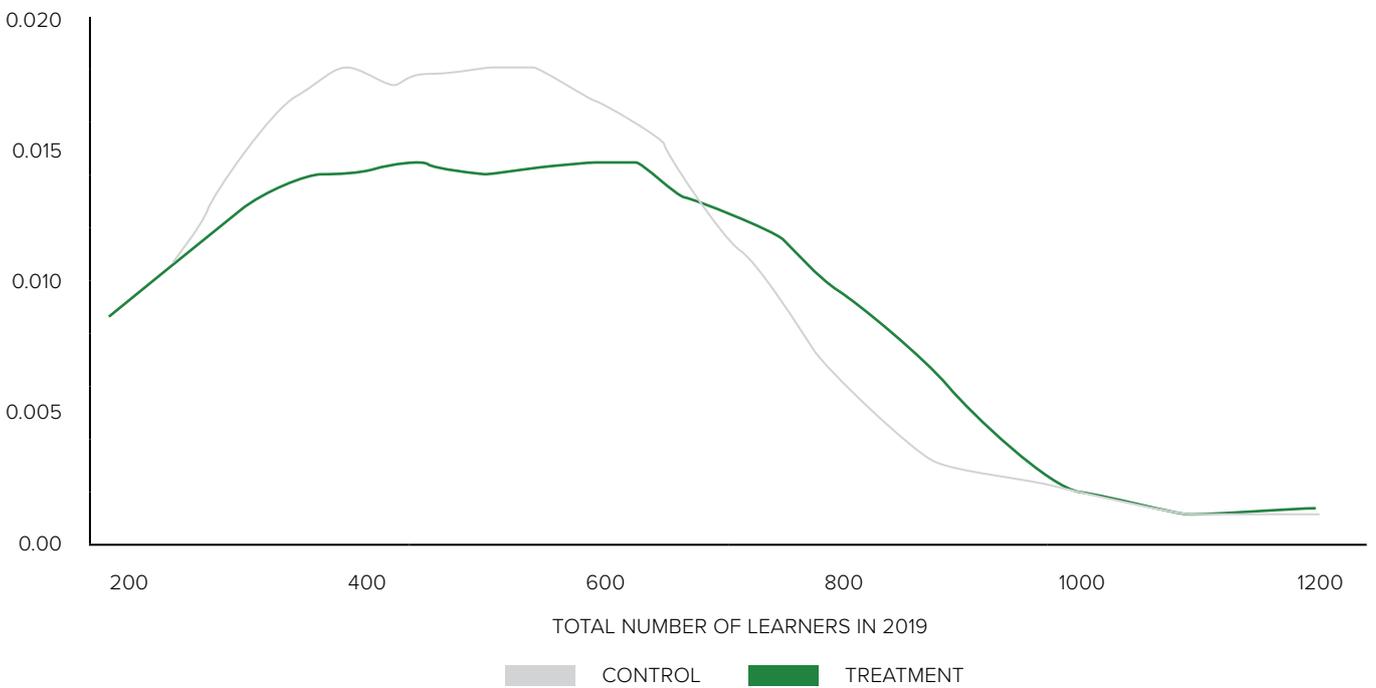*Treatment assignment by districts (%)*

Treatment assignment by learners per educator ratios
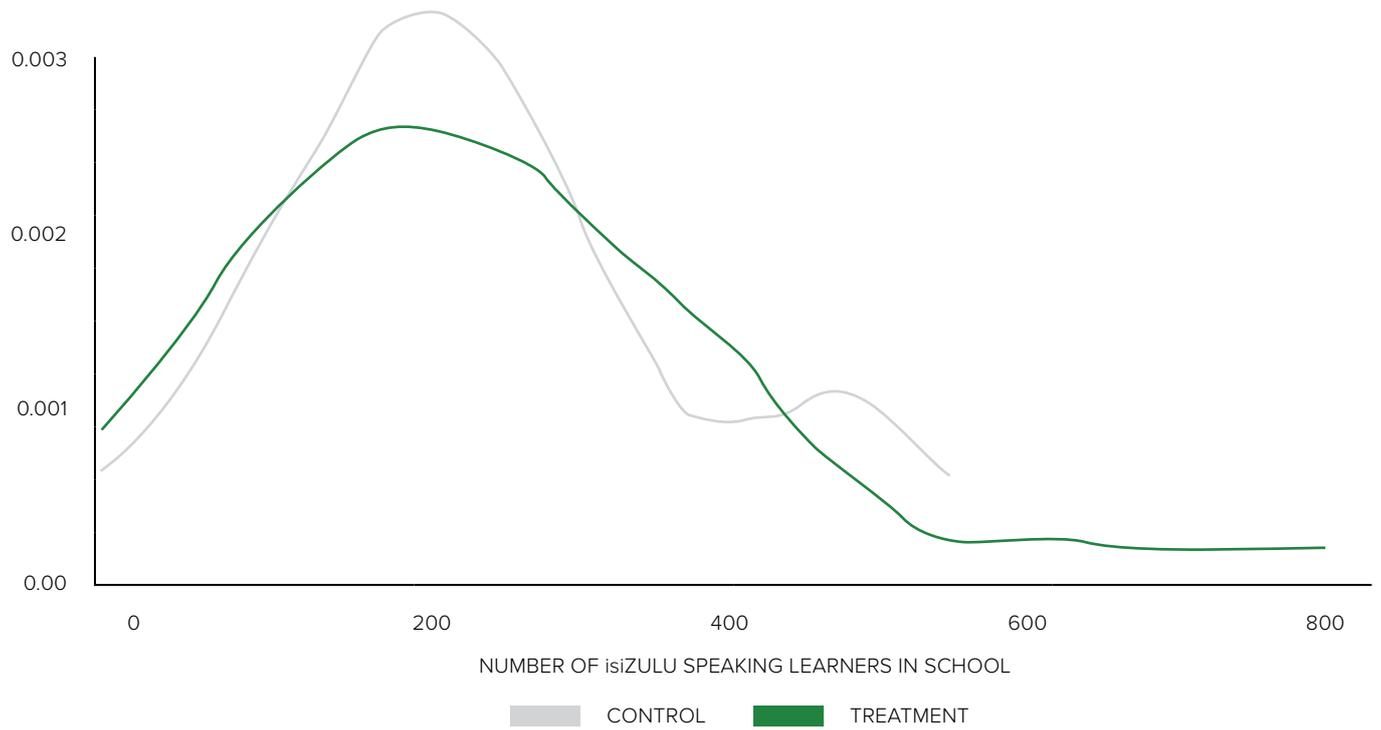

LEARNER PER TEACHER

CONTROL   TREATMENT

GRAPH 4A.

Treatment assignment by total number of learners in the school in 2019

TOTAL NUMBER OF LEARNERS IN 2019

CONTROL   TREATMENT

Treatment assignment by number of IsiZulu speaking learners in school

NUMBER OF isiZULU SPEAKING LEARNERS IN SCHOOL

CONTROL　　TREATMENT

GRAPH 6A.

Treatment assignment by number of English speaking learners in school

NUMBER OF ENGLISH SPEAKING LEARNERS IN SCHOOL

CONTROL　　TREATMENT
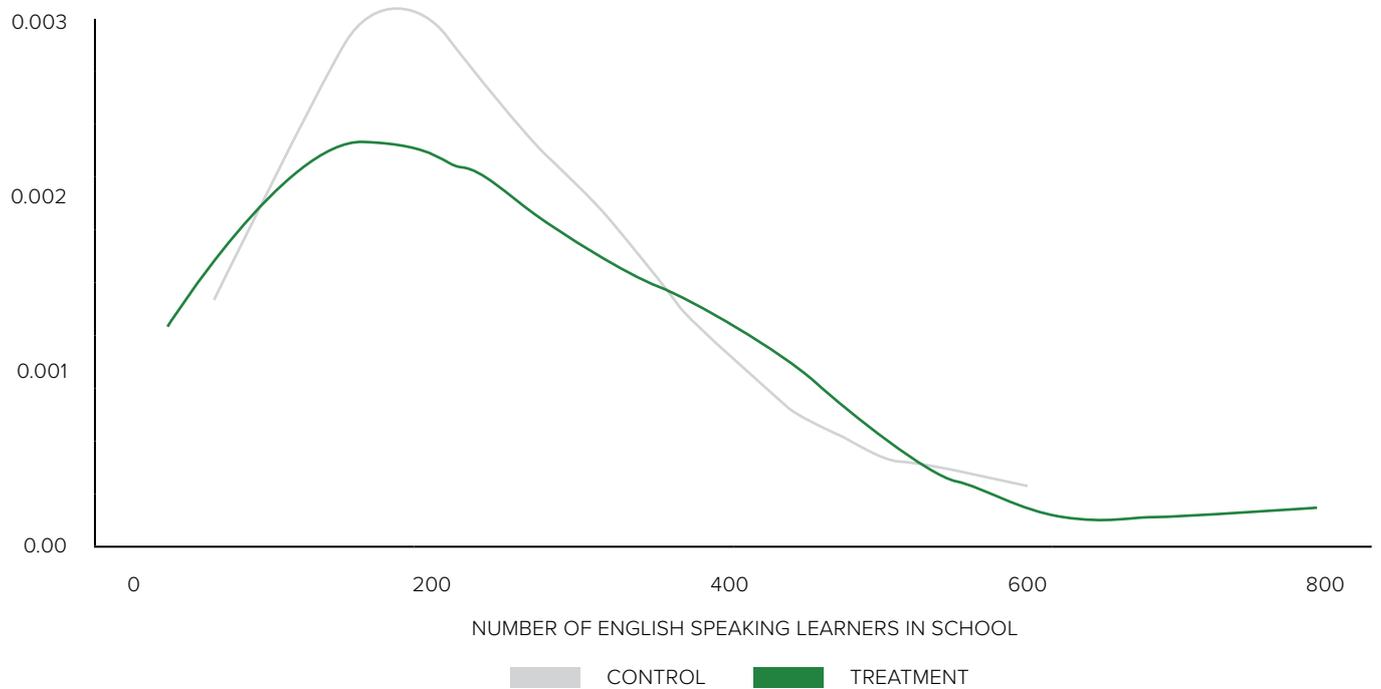
Probit regression of treatment assignment

	1. RECEIVING THE CLASSROOM LIBRARY DURING PHASE 1 (TREATMENT SCHOOLS)
QUINTILE 2 SCHOOLS	-0.824*
	(0.432)
QUINTILE 3 SCHOOLS	-0.245
	(0.532)
QUINTILE 4 SCHOOLS	-0.0145
	(1.342)
NUMBER OF GRADE 3 LEARNERS	0.00335
	(0.0106)
LEARNER PER EDUCATOR RATIO	0.00306
	(0.0200)
ENGLISH SPEAKING LEARNERS (NUMBER)	0.0203
	(0.0189)
ISIZULU SPEAKING LEARNERS (NUMBER)	0.0202
	(0.0192)
TOTAL NUMBER OF LEARNERS IN 2019	-0.0205
	(0.0192)
DISTRICT 2 (HARRY GWALA)	-0.204
	(0.571)
DISTRICT 3 (UMKHANYAKUDE)	-0.0159
	(0.452)
DISTRICT 4 (ZULULAND)	0.214
	(0.447)
CONSTANT	0.150
	(0.896)
OBSERVATIONS	89

Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

NOTES

NOTES

education
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PROVINCE OF KWAZULU-NATAL

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A Reading Nation is a Leading Nation

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