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PAQE II-RIGHT TO PLAY MALI AN ENDLINE EVALUATION

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ABSTRACT

The following endline evaluation assesses the impact of the Right to Play (RtP) Mali programming at the close of the project. The evaluation report provides analysis of key indicators including student literacy and life skills, teacher training and confidence in the use of Play-Based Learning (PBL) curriculum. The evaluation also examines the RtP programming's effectiveness in improving enrollment and educational outcomes for girls and students with disabilities. Findings demonstrate that students in Right to Play schools outperform peers in comparison schools across multiple assessment categories including phonemic awareness, fluency and reading comprehension, as well as life skills including teamwork, communication and participation. Areas needing improvement consist of reductions in teacher use of corporal punishments, students' use of conflict resolution tactics, addressing gender norms in the classroom, and enrollment for students with disabilities. Recommendations address the following topics: improving current programming, educational environment, support for underserved students, and evaluation-related practices.

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ACRONYMS

CAP	Centre d'Animation Pédagogique
CWD	Children with disabilities
EGRA	Early Grade Reading Assessment
GISSE	Le Groupement d'Intérêts Scientifiques des Statisticiens Économistes
NORAD	Norwegian Agency for Development Cooperation (NORAD)
PAQE II	Partenaire pour l'Amélioration de la Qualité de l'Éducation
PBL	Play-Based Learning
RtP	Right to Play

EXECUTIVE SUMMARY

BACKGROUND AND PURPOSE

The Norwegian Agency for Development Cooperation (NORAD) as part of the Education Quality Improvement Partnership Project (PAQE II), funded Right to Play Mali. This five-year project — started in 2017 and ending in 2021 — is rooted in the intervention of utilizing play-based learning as a child-centered learning approach to improving educational outcomes. The project aims to improve the teaching environment through using play-based learning to ameliorate student reading comprehension and life skills. The program focused on support for underserved student populations: girls and students with disabilities.

This report follows a 2018 baseline study (Macina et al, 2018) and a 2020 midline study (Macina et al, 2020). All studies analyzing the Right to Play Mali program use qualitative and quantitative methods to assess key indicators and the impact of the program on intervention areas. This end-line evaluation analyzes the effectiveness of the PAQE II program intervention by Right to Play for primary school students and teachers.

The evaluation occurred during COVID-19, which strained the Malian educational sector. The challenges from the pandemic occurred in tandem with various social issues that also disrupted educational outcomes. Thus, this evaluation also examines how Right to Play Programming contributed to students' ability to weather these shocks as well as the ways these disruptions affected marginalized groups (girls and students with disabilities). This includes direct program initiatives as well as community programs from the broader schooling community (parents, community leaders).

EVALUATION QUESTIONS

This evaluation explores the effects Right to Play programming had on the students enrolled in participating schools. In order to discuss the efficacy of the play-based learning in Mali, the following questions guide the evaluation:

- 1) Whether or not the Right to Play program has helped to increase students'*
 - a. reading competencies equivalent to a minimum proficiency 4th grade level*
 - b. life skills*
- 2) If the program was able to improve the learning environment in schools*
- 3) Whether the program was able to increase enrollment including girls and students with disabilities*
- 4) Whether the community is able to respond to challenges facing access and learning for girls and students with disabilities*
- 5) Whether the program was able to help students build resilience in achieving educational goals in the face of multiple disruptions including school strikes and COVID-19. In this context, we think of resilience as the ability to stay in school and/or continue studies outside of the school setting if not available.*

In addition, this evaluation will report on the key indicators listed in the Request for Proposals, disaggregated as necessary. We will reference these indicators by indicator number.

METHODS

The analysis plan to answer the questions applies a mixed-methods approach. Quantitatively, teachers and students were surveyed from both schools that used Right to Play programming and schools that have no such programming. Students were assessed using the Early Grade Reading Assessment (EGRA) and completed a survey about their experiences in school. Teachers completed a survey about their background, training, and practices in the classroom. The research team collected data on school facilities during school visits and in consultations with school directors. While classroom observation was initially planned, school strikes prevented us from observing teachers in the class.

In this final evaluation, we adopt a quasi-experimental design by identifying comparison schools to assess differences between learners in the program and those not in the program. Ten schools have been selected by RtP staff as comparable due to their presence in the same zone, their use of the same curriculum (mother tongue or French), and their status as either government-run or community run schools to mirror treatment schools. Students from these schools serve as a comparison group to compare with outcomes of students enrolled in schools participating in the program.

Qualitatively, 56 interviews were conducted with key informants including school directors and teachers from Right to Play and comparison schools as well as Ministry of Education staff. In addition, the research team conducted 19 focus groups with 179 parents and members of the school management committees from Right to Play schools.

For the focus groups, sampling was done using a snowball method, while the key informant interviews relied on purposive sampling of key stakeholders. All interviews and focus groups were recorded and then transcribed, and if in local language - translated to French. The research team used these transcripts to assess a subset of indicators, to better understand mechanisms driving results, to understand the schooling context, and to collect ideas about future programs.

This study faces several limitations which affect our ability to draw conclusions from the findings. First, a comparison group was included at endline only. Second, data collection occurred during school closures which affected both sampling strategy and the ability to conduct classroom observations. The sample size limits our statistical power to detect small differences between treatment and comparison groups. There are likely issues of response bias, due to both recall and social desirability. And finally, there are some issues of comparability of indicators over time. These issues are described in more detail in the body of the report. Findings should be considered in light of these limitations.

FINDINGS

We confirm that the students in RtP schools had greater exposure to play-based learning. More than double the number of students in treatment schools report that their teachers used play-based learning than in comparison schools. Teachers in RtP schools are more likely to have received training from RtP, can explain a concept from that training, and even trained another teacher on the RtP pedagogy than peers in comparison schools. They are also about two times more likely to have used a play-based learning technique in their classroom.

The baseline report stressed the importance of life skill development as a critical aspect of the school's function.¹ At the endline, students in Right to Play schools realized similar results in comparison to the midline study but also better outcomes relative to comparison schools in several key program areas. Students in Right to Play demonstrated higher reading capabilities and life skills when compared with students in non - RtP schools, along several metrics:

- Literacy:
 - Phonemic Awareness (6.3 more letter sounds read per minute)
 - Familiar Word Reading (6.8 more correct words read per minute)
 - Words Read from a story (7.8 more correct words read per minute)
 - Reading Comprehension (14 percentage points higher score)
- Life skills:
 - Teamwork (18 percentage points)
 - Communication (12 percentage points)
 - Participation (14 percentage points)

In RtP schools, students report that they receive more support in the home for reading, and this difference is particularly driven by girls, who are almost thirty percentage points more likely to report having support at home when it comes to reading as compared to girls in comparison schools. In addition, students in RtP schools are more likely to report that they have access to a tutor, that they are a member of a reading club, and that they participated in a reading activity.

In regards to the learning environment, a majority of students surveyed in both RtP and non-RtP schools reported positive feelings and high satisfaction with both their classes and their schools, so it was not possible to identify an effect of RtP through the student survey data. Additionally, students reported multiple factors that contribute to positive learning, with a small but statistically significant amount of students in RtP schools reporting the use of positive disciplinary practices. While students in both RtP and non-RtP schools reported high levels of corporal punishment being used, students in RtP schools report higher rates of positive discipline tactics in the classroom and lower rates of use of the whip. There were few reported differences in other aspects of teacher performances between Right to Play and comparison schools. All teachers (both RTP and non-RtP) reported engaging in at least one form of communication that resulted in a positive learning environment. On average, teachers met the targets set forth by the program in terms of creating a positive learning environment and use of gender sensitive and inclusive play-based learning methods.

As for enrollment, little information can be provided on changes in enrollment rates for girls and students with disabilities. The results from the qualitative key informant interviews and focus group discussions demonstrate some community responses to support the under-served student populations. CAP officials that were interviewed did not have good data on trends related to these sub populations. Despite efforts to oversample students with disabilities, we were not able to identify sufficient numbers of students to provide quantitative analysis on this subpopulation.

Consistently in interviews, education officials affirmed Right to Play's theory of change. By making students feel more welcome and excited about school and by providing them a better relationship with their teachers and classmates, students were more motivated, participated more, and were better able to learn and master the material. We asked a counterfactual question about how things

¹ Original French: <<Dans cette perspective, le développement des compétences de vie doit être inséré dans une dynamique fédératrice dans laquelle la communauté scolaire [...]>>

might be different without the RtP program, and most school directors and education officials attributed a causal role to the RtP program in improving student attendance, participation, and their reading and writing skills.

The differences detected are even more striking considering the significant hurdles facing students and teachers during these last two academic years. During the period of the endline study's data collection, teachers and students were faced with two major disruptions to normal educational processes: a teacher strike and the COVID-19 pandemic. In order to ensure that students were still able to receive some educational lessons, teachers provided an array of options to ensure students' education could be continued. RtP and non-RtP teachers similarly reported options for students to continue their education outside of the school in the face of school closures.

CONCLUSIONS

As the Right to Play program reaches its end, the results of this report demonstrate the positive aspects of the program. Students in RtP schools scored higher than comparison students on various literacy indicators and on the life skills of teamwork and communication. There were no significant differences in students reporting of conflict resolution skills. Without a rigorous study design and pre-treatment data on comparison schools, it is difficult to attribute this difference to the RtP intervention. Comparing these indicators with baseline and midline values, we observe modest improvements in the life skills areas of teamwork and communication. However, we see no improvements on literacy or conflict resolution. Qualitative data from school directors and Ministry of Education personnel suggests that the program works as intended and consistent with the theory of change. By creating a benevolent and welcoming educational environment, students are more motivated to attend school and to participate; this has a positive impact on their ability to learn material presented in class. These positive findings demonstrate the potential for impact of the RtP program, if it is studied more rigorously in the future. Teachers have an array of resources yet still have room for improvement on training topics of inclusivity and gender sensibility, as well as use of positive discipline methods. Recommendations are described further in the report, with the principal recommendations revolving around improving teacher training on inclusivity and gender sensitivity, support for improving positive learning environments, and some comments on the evaluation/assessment design.

RECOMMENDATIONS

We offer recommendations across the following themes:

CONTINUE CURRENT PROGRAMMING AND MAKE IMPROVEMENTS

RtP programming showed success in several key areas such as literacy and life skills, and reductions in use of some types of corporal punishment. We recommend that RtP continue activities focused on literacy, life skills, and positive discipline. However, they have achieved minimal gains in the life skill area of **conflict resolution**. We advise a deeper focus on this topical area in future programming. Qualitative data also indicate a strong desire for continued training for teachers. One way to achieve this is through **coaching visits**, or **Train the Trainer/refresher workshops**. These modalities can allow teachers to discuss the application of pedagogies more regularly, share best practices, and teach new teachers about PBL in the context of high teacher turnover.

We also recommend that RtP provide **incentives for high-performing teachers**. As part of their programming, RtP can implement awards, public recognition or leadership opportunities to encourage teachers to stick to the pedagogy. These incentives can help them keep the PBL practice in the face of these competing needs.

School officials also noted that the PBL materials were not well-aligned with the Malian national curriculum. RtP had conducted contextualization at the beginning of the activity, which respondents noted had improved the level of adaptation; yet this issue was raised during focus group discussions. Therefore, we recommend that RtP **engage a Malian curriculum committee** who can review the existing materials to provide practical guidance on a) which games were most useful (and when) b) how the games can continue to be adapted to the Malian classroom, and c) evaluating how the games could support the Malian curriculum to provide more context-specific training and materials to participants. This committee could be engaged during the extension phase.

Lastly, education officials noted the current challenge they were facing in sustaining the program after its closure. Future programming can improve on planning for sustainability after project close. The extension phase could be used as a time to create such sustainability plans and enter into agreements with school officials.

RESILIENCE IN THE FACE OF SCHOOL CLOSURES

Future RtP programming could better equip teachers to support students during closures by assisting them in the creation of school closure contingency plans. Such contingency plans should be careful to provide equitable access to out-of-school youth.

During the extension phase of this project, we recommend that RtP support teachers in the implementation of supplementary activities to help students catch up to the correct grade level. RtP should look to learn from best practices that were deemed to be inclusive and effective in designing programming for out of school students.

EDUCATIONAL ENVIRONMENT

The results from the endline evaluation highlight several critical facts related to discipline. Given the high rates of the use of corporal punishment reported by students, as well as the low rates of positive discipline being used, we recommend **focusing on reducing the use of corporal punishment** in the classroom more deeply in future iterations of programming. Achieving such a change involves a deep cultural or normative change. RtP may begin this process by adding an indicator on the incidence of corporal punishment to the measurement plan.

Qualitative findings indicated that school infrastructure is often so poor that it is difficult to create a positive learning environment. The program should consider **conducting school infrastructure assessments** and coordinating classroom upgrades and new materials to try to meet a basic threshold that would facilitate learning.

SUPPORT FOR UNDERSERVED STUDENTS

Next, we observe contradictory impacts on the topic of **equal status in the classroom**. We note that it is still very common for boys and girls to have special roles in RtP classrooms. We recommend that RtP tackle this issue by offering training on non-gendered classroom roles and responsibilities. Coaching visits can help to monitor the success or failure of such training.

Girls and students with disabilities were the two groups that RtP aimed to serve through their programming. Due to school closures and issues with study design, the impact of the RtP programming on enrollment rates of these two groups is mainly unclear. A future study could

carefully look at enrollment rates across all RtP schools, or conduct a community-level assessment which could help quantify the number of out-of-school youth in these categories.

EVALUATION-RELATED RECOMMENDATIONS

First, we recommend that RtP identify an external evaluator who can commit from the start to conduct all three rounds of data collection. This can allow that evaluator to take a proactive role in determining a rigorous study design, and help with consistency in analysis and reporting to RtP. Second, we strongly urge RtP to support an external evaluator who can ***design an experimental or quasi-experimental study from the start*** of a new intervention. This can help RtP to quantify the impact their programming is having on students, and where improvements are needed.

The threshold for reading at grade level in Mali appears to be an unattainable target for many Malian students currently. If possible, we advise RtP to focus on other goals for literacy outcomes. RtP could adopt three literacy goals--one for ***phonemic awareness*** (letter sound identification per minute), one for ***fluency*** (correct words read per minute), and a third for ***high level reading skills*** (reading comprehension). Targets could be developed from a baseline study.

In the absence of the opportunity to conduct classroom observations, or the resources to develop more detailed tools, this study mostly relied on self-reported data. Self-reported assessments of life skills often suffer from social desirability bias. In the future, assessments should ***rely more heavily on teacher reports, classroom observations or the ISELA tool***.

Future studies should explore how to capture more information on students with disabilities or enrollment data. We recommend that future evaluations utilize the Washington Group questions for categorizing disability across various domains. The WG group question sets have been utilized in international education and humanitarian settings, so they would be appropriate for the Malian context (Corby, 2019).²

² The question sets are either written for administration directly to the respondent (if the respondent is an adult), or to the caregiver (if the respondent is a child). If they are used in the classroom they may require adaptation. RtP should follow best practices in this regard.

BACKGROUND AND PURPOSE

The Education Quality Improvement Partnership Project (PAQE II), implemented by Right To Play Mali, is funded by the Norwegian Agency for Development Cooperation (NORAD). This intervention utilized play-based learning as a child-centered learning approach. The five-year project supports 476 teachers in initial training including 238 women. The project aimed to provide quality education for approximately 69,101 children including 34,665 girls aged 6-12 years from levels 1 to 6 of basic education I. The project commenced in August 2017 and was planned to close in June 2021. The project is implemented in four regions of the country, namely Koulikoro, Ségou, Bougouni and the district of Bamako. The project was implemented by 4 civil society organizations (OMAES, ALED, RARE and RED), with the support of the Malian Ministry of Education (DNP, DNEN, DNEF, DNEPS).

The project aims to enable more children (girls, boys, from 1st to 6th grade) in targeted schools to acquire basic skills and be equipped to face the challenges of life as adults. It has four (04) central axes: (i) Development of children's reading skills, (ii) Development of children's life skills, (iii) Game-based and gender-sensitive teaching method and (iv) Creation of a positive learning environment. The project aims to improve students' reading comprehension and life skills, but also to improve the broader learning environment by equipping teachers, education officials, and community members with the tools to foster positive learning environments, including through play-based learning. The program underscores the additional support that may be needed to support girls and students with disabilities.

A baseline study was conducted in May 2018 (Macina et al, 2018), and a midline in May 2020. These studies employed qualitative and quantitative methods to assess key indicators for students in a sample of schools in the intervention areas. This end-line evaluation seeks to assess the effectiveness of the PAQE II program intervention by Right to Play for primary school students and teachers in Bamako, Sikasso, Koulikoro, and Segou in Mali.

The education sector in Mali has faced tremendous challenges during the period of the project, including political instability and increasing insecurity, school strikes, as well as closures related to the COVID-19 virus. Given the tremendous challenges facing students and educators due to these disruptions, this study will also seek to understand the extent to which the Right to Play Program contributed to students' ability to weather these shocks as well as the ways these disruptions affected marginalized groups (girls and students with disabilities). This includes direct program initiatives as well as community programs from the broader schooling community (parents, community leaders).

EVALUATION QUESTIONS

This evaluation builds and expands upon baseline and midline evaluations of the 20 schools involved in the program. The proposed research project seeks to evaluate the following questions:

- 1) *Whether or not the Right to Play program has helped to increase students'*
 - a. *reading competencies equivalent to a minimum proficiency 4th grade level*
 - b. *life skills*
- 2) *If the program was able to improve the learning environment in schools*
- 3) *Whether the program was able to increase enrollment including girls and students with disabilities*
- 4) *Whether the community is able to respond to challenges facing access and learning for girls and students with disabilities*

- 5) *Whether the program was able to help students build resilience in achieving educational goals in the face of multiple disruptions including school strikes and COVID-19. In this context, we think of resilience as the ability to stay in school and/or continue studies outside of the school setting if not available.*

As noted above, throughout the evaluation special attention will be paid to the experience of girls and students with disabilities in order to understand the unique challenges that they confront, as well as the program's effectiveness for these groups of learners. While we do not anticipate having statistical power to compare student experiences across these groups, we will provide descriptive data, when available, and probe more fully into marginalized student experiences using qualitative data.

RESEARCH METHODS

SELECTION OF COMPARISON SCHOOLS

In this final evaluation, we re-sampled students from the same 20 schools included in the midline study. We adopted a quasi-experimental design to identify comparison schools to assess differences between learners in the program and those not in the program. Ten schools have been selected by RtP staff as comparable due to their presence in the same zone, their use of the same curriculum (mother tongue or French), and their status as either government-run or community run schools to mirror treatment schools. Students from these schools serve as a comparison group to compare with outcomes of students enrolled in schools participating in the program.

Note that three schools were replaced during the data collection process. Two comparison schools were replaced due to a lack of sufficient enrolled fourth grade students. One treatment school was replaced due to a refusal to participate by the principal. These were replaced with similar schools. The field report from GISSE (included in the appendix) provides additional information.

SAMPLING METHOD OF STUDENTS

The survey team sampled 26 4th grade students per RtP school and 30 4th grade students per non-RtP school. In each school, they sampled an equal number of boys and girls. If any student was identified to have special needs, that student was automatically included in the sample. According to power calculations calculated prior to the start of the study, a sample of this size will allow us to detect differences of 21.5 percentage points or larger.

Note that our data collection plan specified a random sample of the students present in the classroom on the day of data collection; however, schools were closed during data collection due to strikes. Therefore, students were sampled using a snowball method—enumerators went to the schools to acquire the student roster, and then proceeded to the nearby areas to locate students in their homes. They sought support from students who were located, in finding other students from the classroom. Because the enumerators were working in teams, they occasionally exceeded the desired sample. Below, we depict the counts and average number of students sampled per school, by school type and gender of student.

TABLE 1: STUDENT SAMPLE

	RtP SCHOOLS		NON-RtP SCHOOLS		TOTAL
	Count	Average Per School	Count	Average Per School	
Girls	249	13	154	15	403
Boys	281	14	169	17	450
Total	530	27	323	32	853

Note: Numbers may not add up due to rounding

SAMPLING METHOD OF TEACHERS AND SCHOOL CHECKLISTS

Each of the sampled schools had only one teacher per grade. Six teachers were surveyed at each school, for a total of 120 teachers in RtP schools, and 60 teachers in non RtP schools. In addition, the head teacher or school leader in the school completed a short checklist about the school. One of these checklists was completed per school.

SAMPLING METHOD FOR QUALITATIVE DATA COLLECTION

The role of the qualitative data is to explore trends identified in the quantitative data as well as trying to understand the specific experience of marginalized student populations (girls and children with disabilities). We rely on two primary qualitative approaches:

1. Key informant interviews (AE, CAP, School Director, Community Leaders, NGOs) (Purposive sample)
2. Parents and community member focus groups in areas with the Right to Play Program. We will target active members of the CGS.

We aimed to conduct 10 focus groups with parents whose children participate in the Right to Play schools. Additionally, we conducted interviews with local leaders, school administrators, and Right to Play Staff. For interviews, we worked with Right to Play to construct a purposive sample of key actors in the program.

These interviews and focus groups focused on perceptions of the program as well as experiences during educational disruption. We worked with school staff to select a cross-section of parents of boys, girls, and students with disabilities. We also strove to be inclusive of relevant sub-communities (ethnic groups, religious groups, economic groups). Particular attention was paid to the ways that students of different genders and students with disabilities have been affected by the program, in addition to interruptions to learning and attempts to compensate for those disruptions. We also elicited information about community-level interventions (e.g. reading clubs) that were implemented in response to school disruptions.

TABLE 2: QUALITATIVE SAMPLE

	RtP SCHOOLS		NON-RtP SCHOOLS	
	Count of Interviews	Count of Participants	Count of Interviews	Count of Participants
Key Informant Interviews, Directors	20	20	9	9
Key Informant Interviews, Leader Mairie	7	7	0	0
Key Informant Interviews, CAP	11	11	0	0
Key Informant Interviews, NGOs	5	5	0	0
Focus Group Discussions, APE	19	179	0	0

EVIDENCE OF THEORY OF CHANGE

In the qualitative data collection, we sought to identify respondents' causal claims about the impact of the program consistent with newer causal approaches that attempt to trace mechanisms of cause and effects using respondent testimony (Goertz 2017). In addition to asking directly about the effects of the program, we used counterfactual questions to understand how respondents thought things would be different in the absence of the program. Analysis of their accounts of the program reveals that they consistently confirmed that, in line with the theory of change; Right to Play's play-based curriculum was effective in making students more motivated at school, making a more welcoming school environment, and, then ultimately, increasing student performance. We include some illustrative quotes below:

As a Ministry of Education Official explained, the process starts by making the school environment better for students - starting with the teachers' orientation. "Even outside of the games, Right to Play has done lots of things for the teachers (and) discipline at school...A welcoming school ...we have taught a lot of things to the teachers."³

A school director in Bamako explained that the program led to improved performance and lower rates of absenteeism among students. "With RtP, there have been a lot of improvements like I've explained many times. Now, what I can say is that without RtP, the students would be a lot worse off - especially in reading and writing and the rate of absenteeism would have increased. Since their intervention, the rate (of absenteeism) has gone down compared to other years. In addition, with RtP, the children have achieved a good level (of performance)."⁴

Another Ministry of Education official from Bamako: "The arrival was really beneficial because we understood that children learn better by playing than in other theories on group work. Now when RtP came up with the method of child-centered play-based learning, children were in awe(of that

³ Original French: <<En dehors même des jeux, Right to Play a fait beaucoup de choses aux enseignants, la discipline à l'école. Une école bienveillante, donc on a enseigné beaucoup de choses aux enseignants >> (91006_ID DCAP BKO).

⁴ Original French: << Avec RtP, il y a eu beaucoup d'améliorations comme je l'ai dit plusieurs fois. Maintenant ce que je peux dire, est que sans RtP les enfants allaient avoir beaucoup de mal surtout côté lecture, écriture et le taux d'absence allait être croissant. Depuis leur intervention, le taux à beaucoup baissé par rapport aux autres années. En plus avec RtP les enfants ont eu un bon niveau >> (92009_ID DIRECTEUR BKO).

type)of education. Imagine the schools that did not benefit from the RtP program. For example,... if school group A benefits from the program and school B does not benefit from the program, most often, the students of school group B seek to go to school group A only because of these games. The results even take children away. They learn easily with these games. Well, that's a problem with continuing education/training. We no longer do training and only those partners who did refresher training each time. The inclusive school is always taken care of by RtP even before the state itself took an interest in it, the state had trained educational advisers but it did not go far in training teachers. RtP did this. With RtP we really had a lot of (new) techniques between students and teachers such as the benevolent teacher, the benevolent class. These are concepts that have pushed the teacher to understand early childhood and to give up altogether the whip in favor of consensual rules.⁵

In the absence of play-based learning, some students struggle to pay attention or to have confidence at school as this quote from a School director in Sikasso illustrates, “Yes, perfectly, it improves the ambiance at the same time the seriousness (of the environment) because when the child is tired or upset by inserting the game in the subject or lesson, all of a sudden he is smart and that gives him the courage to pull himself together and concentrate.”⁶

In addition to the elements described in theory of change - some respondents also highlighted other beneficial interventions by the Right to Play team including student recruitment. In responding to the counterfactual question, a Ministry official from Bamako describes the impact of RtP has had in recruiting children to school, “(Without RtP) frankly, we wouldn’t have gotten to this point. The presence of RtP has done us a great deal of good in general, so it is difficult to imagine the case where RtP did not come to Mali. Today what concerns us is the sustainability of this program, after RtP what we will undertake? They went door to door to identify children from poor families by offering to (help them get) birth certificates, school kits and registrations. Like I said, if RtP wasn’t here, what would become of all these kids? Question mark!⁷

⁵ L’arrivée a été vraiment salubre parce qu’on a compris que les enfants apprennent mieux en jouant que dans certaines théories sur le travail de groupe. Maintenant quand RtP est venu avec la méthode de l’apprentissage basé sur le jeu centré sur les enfants, les enfants étaient émerveillés par cet apprentissage. Imaginez les écoles qui n’ont pas bénéficié du programme RtP. Par exemple, quand on prend un groupe scolaire si le groupe scolaire A bénéficie du programme et que le scolaire B ne bénéficie pas du programme, le plus souvent, les élèves du groupe scolaire B cherchent à partir dans le groupe scolaire A uniquement à cause de ces jeux. Les résultats emmènent même des enfants. Ils apprennent facilement avec ces jeux. Bon vraiment c’est un problème au niveau de la formation continue. On ne fait plus de formation et que ces partenaires qui faisaient chaque fois des formations de mise à niveau. L’école inclusive est toujours prise en charge par RtP avant que l’État même ne s’intéresse à ça, l’État avait formé des conseillers pédagogiques mais il n’est pas allé loin dans la formation des enseignants. C’est RtP qui a fait ça.

Avec RtP on a eu vraiment beaucoup de technique entre élèves et enseignant comme par exemple l’enseignant bienveillant, la classe bienveillante ce sont des concepts qui ont poussé l’enseignant à comprendre la petite enfance et à abandonner carrément le fouet avec les règles consensuelles de base.

⁶ Original French: << Oui parfaitement ça améliore l’ambiance en même temps que le sérieux parce que quand l’enfant est fatigué ou mécontent en insérant le jeu dans la matière ou la leçon, tout de suite il est dégourdi et ça lui donne le courage de se ressaisir et de se concentrer >> (92019_ID DIRECTEUR ECOLE, SIK).

⁷ Original French: << On n’allait pas arriver là franchement. La présence de RtP nous a fait un grand bien de façon générale donc on ne peut pas imaginer le cas où RtP n’était pas venu au Mali. Aujourd’hui ce qui nous préoccupe c’est la pérennisation de ce programme, après RtP qu’est ce qu’on va entreprendre ! Ils ont fait du porte à porte pour recenser des enfants des familles démunies en leur offrant des actes de naissance des kits, des inscriptions. Comme je l’ai dit, si RtP n’était pas là qu’est ce que tout ces enfants allaient devenir! Point d’interrogation!>> (91004_ID DCAP, BKO).

A school director from Segou explains how they can directly observe the increased level of engagement: “When we walk down the hallway and see a teacher with the students and the way they are infatuated (with the games), it is really undeniable and heartwarming.”⁸

KEY INDICATORS

The key indicators used to respond to the evaluation questions are defined below, and are organized by Evaluation Question (EQ).

EQ 1: WHETHER OR NOT THE RIGHT TO PLAY PROGRAM HAS HELPED TO INCREASE STUDENTS’ READING COMPETENCIES EQUIVALENT TO A MINIMUM PROFICIENCY 4TH GRADE LEVEL AND LIFE SKILLS

Student Literacy Rates

Student literacy was assessed using the Early Grade Reading Assessment (EGRA). For consistency, the research team used the same version of EGRA that was used in the midline (EGRA 2009). This version of the assessment contains 5 sections—Initial sound recognition, letter names recognized or sounds per minute, familiar words read per minute, listening comprehension, reading words from a story, and reading comprehension. This assessment was programmed using Tangerine Software, and conducted by an assessor with each student individually. Most sections included an auto-stop, or a timed component. See Appendix 4 for the EGRA assessment, including instructions and notes on auto-stops.

Student Life Skills

Student life skills are assessed through a self-reported survey. Responses to all questions in this section are on a four point likert scale, with values ranging from one, which indicates “strongly agree” to four “strongly disagree.” For all of the below sub-modules, we define a student as demonstrating a competency in the skill if s/he answers “Agree” or “Strongly agree” to all of the questions. We assessed four components of students’ life skills:

Communication: Communication is assessed through four statements (“I ask a lot of questions in class”, “I listen well to others” “Other students listen while I am speaking”, “I do not participate a lot in class (reverse coded)”, and “I think that others listen to me when I speak.”)

Teamwork: Teamwork is assessed through four statements on the topic: I work well together in a group, It is difficult to work together in a group (reverse coded), I share roles and responsibilities with my colleagues, I learn well with others.

Conflict Resolution: three statements determine Conflict resolution: “I don’t respond to the provocation of others.” I work with cooperation and compassion, and I know how to work with others.

Participation: four statements define Participation: “I ask a lot of questions in class”, “I don’t participate much in class” (reverse coded), “I participate more or less than my classmates” and “I participate actively in class.”

⁸ Original French: <<Quand on passe dans la cour et voit un maître avec les élèves et l’engouement que les enfants ont, c’est vraiment indéniable et réconfortant>> (92014_ID DIRECTEUR SEG).

EQ 2: IF THE PROGRAM WAS ABLE TO IMPROVE THE LEARNING ENVIRONMENT IN SCHOOLS

To assess a positive learning environment, we assess how much students report appreciation of school, if students report that they play games in school. We also assess teacher use of positive discipline methods and rates of corporal punishment in schools. We also assess supplemental support for reading and equal participation in schools.

Student Appreciation of School

For this indicator, we created a summary statistic if students responded positively (agree or strongly agree) to all of the following statements:

- How much do you like school;
- Are you satisfied with the state of your school;
- Are you satisfied with the state of your class;
- Are you content to go to school; are your friends content to go to school; and
- Coded response to the open-ended question: why are you content to go to school (if response was coded as “I like school” as opposed to other factors).

Discipline Methods in the Classroom

Another aspect of a positive learning environment is the use of positive discipline methods. To measure this, we report on students’ responses on the use of corporal punishment in the classroom and the use of positive discipline methods. For corporal punishment, we measure the proportion of students who respond with either “whipped” or “another physical punishment”⁹ to the question “What types of punishment does the teacher apply to discipline a student?”. To measure positive discipline we report on the proportion of students who respond to that question with “positive discipline.” Multiple responses were possible for this question.

Teachers’ Respect of a Positive Learning Environment

We present several variables from the teachers’ surveys to address teachers’ respect of the positive learning environment. According to RtP, a positive learning environment has to meet the following criteria: child protection, equal treatment of both boys and girls, inclusion, and positive discipline. Our enumerators asked each teacher surveyed the following questions:

- Do you take gender into account in your teaching practice?
- Do you take child protection into account in your teaching practice?
- Do you take inclusion into account in your teaching practice?
- Can you maintain discipline in your classroom? (if yes) Can you do this without resorting to corporal punishment?

Each question was followed by second question asking the teacher to explain how they took the topic into account. The enumerator then classified their answers as correct or incorrect. A teacher was categorized as maintaining a positive learning environment if the teacher provided a satisfactory response to all four follow-up questions.

⁹ It should be noted that corporal punishment is illegal in Mali; however, it is a common cultural practice that has been demonstrated to be difficult to eradicate in Malian schools (Dembélé et al, 2020). Therefore, we inquired about this practice.

EQ 3: WHETHER THE PROGRAM WAS ABLE TO INCREASE ENROLLMENT INCLUDING GIRLS AND STUDENTS WITH DISABILITIES

Given the scope of this evaluation, it was not possible to calculate enrollment rates of these subgroups. We provide data on the breakdown of our sample according to these sub-groups in the balance test section; however, due to the non-probabilistic sampling method used, these should not be considered enrollment rates. Therefore, to analyze RtP's impact on increasing enrollment for girls and students with disabilities, the assessment conducted interviews and focus groups. These qualitative methods provide insights on the efficacy of the programming in improving enrollment for these underserved groups.

Beyond enrollment, we want to explore if students are able to take on equal roles in the classroom. Therefore, we also include responses to student questions on roles in the classroom in this section.

EQ 4: WHETHER THE COMMUNITY IS ABLE TO RESPOND TO CHALLENGES FACING -ACCESS AND LEARNING FOR GIRLS AND STUDENTS WITH DISABILITIES

Again, in reporting on this outcome, we rely on the qualitative responses from community members. These qualitative findings offer opportunities for greater understanding as to the factors that impact enrollment between girls and students with disabilities. When relevant, we also point to differences in the qualitative data related to education support for these sub-groups.

EQ 5: WHETHER THE PROGRAM WAS ABLE TO HELP STUDENTS BUILD RESILIENCE IN ACHIEVING EDUCATIONAL GOALS IN THE FACE OF MULTIPLE DISRUPTIONS INCLUDING SCHOOL STRIKES AND COVID-19

We present findings from this evaluation question from both the teacher surveys and the qualitative data. This helps us provide a rich picture of the challenges facing students due to multiple disruptions in education, and the tactics teachers have identified to help students overcome these challenges.

FIELDWORK

The field team met first with the principal investigator to discuss the research questions and understand the purpose of the evaluation. Afterwards, a team of 15 enumerators was trained from August 8 to 15, 2021. The training included the following topics:

- Presentation of the PAQE II project, its objectives and its implementation.
- The importance of the survey methodology for the relevance of the results
- The distribution of the sample: RtP schools vs comparison schools
- The different types of questionnaires, assessments and discussion guides
- Structure and understanding of questionnaires
- Understanding of the translated questionnaires
- COVID procedures such as mask wearing and hand sanitizer
- Paired survey practice (role play)

- Corrections of the programmed questionnaire on the tablet
- Pilot survey at SOGONIKO GROUPE I school.
- Adjustments to field plan due to strike and school closures.

Data collection occurred from August 20 to September 10, 2021. Due to challenges with school closures due to strikes, fieldwork followed a two-step process. First, enumerators met with teachers and school leadership at the school. There they access the student roster to select the proper number of boys and girls to be sampled. They then located the students in the neighboring community, and brought them to the school grounds to be assessed there. At this time they also conducted interviews with teachers and completed the school checklist.

We note that there was some variation in closures. It was reported by respondents that community schools were closed less frequently than government schools.

CONTEXT

School closures due to teacher strikes and to COVID created major disruptions to the school calendar. Schools directors and Ministry of Education officials all discussed that this limited their ability to get through the required content. As a result, student performance was likely weaker than would be normally expected. In addition, teachers and school directors reported that school disruptions also led to more permanent disruptions for some students who were forced to drop out during these closures, but also due to economic hardships created by COVID¹⁰.

Nationally, Mali continues to suffer from protracted intercommunal conflict, jihadist presence, and banditry. The specific areas included in the study are most affected by banditry (and other forms of criminal activity). However, this did not appear to directly affect students in their pursuit of their studies during the period of the study.

One major concern that school directors raised is students that have transitioned to the next grade without having acquired the necessary knowledge of curriculum. Since the disruptions have now continued over multiple years, they anticipate that this is going to have a cumulative impact on student performance.

ANALYSIS

In the presentation of results, data are weighted by the total number of boys and girls in the 4th grade classroom, as reported in the school checklist. All data are presented as tests of means between RtP and non-RtP schools. In calculating the means, we account for the survey design, including stratification by region, and clustering by school.

We also present results by subgroups, namely by the sex of the student, disability status of the student, or sex of the teacher.

¹⁰ Some students looked to make money, while others parents' could no longer afford school fees.

LIMITATIONS

SURVEY DESIGN

There are several limitations which can affect our ability to draw conclusions from these findings. First, comparison schools were selected at the endline, meaning that we cannot say with confidence that any differences we observe at the endline are due to the RtP intervention. It could be that, had we conducted a baseline study, we would have observed the same differences at that time. In the future, we can overcome this by determining evaluation design before the start of the program and conducting a baseline data collection to determine balance between treatment and comparison students.

Teacher strikes closed down schools during the period of research, which made data collection much more challenging. Due to school strikes, we were unable to engage in teacher observation in the classroom. We have attempted to adapt key indicators from the observation tool to the teachers' survey, but note that these measures are more vulnerable to social desirability bias (since they are self-reported). Where possible, we attempted to include test questions to see whether respondents can provide further information and give specific examples of the practices that they have engaged in. Also, we do not include interviews with IFM directors as IFMs were closed due to strikes.

Next, we cannot consider the student-level data to be representative of all fourth grade students in these schools, due to the sampling method. Due to school closures, rather than being able to survey randomly selected students in schools, the research team had to work with teachers and the school management committee to find students at their homes. They then worked with students to locate other classmates. This type of sampling method could introduce bias into our study, because through this method, our field team may have been more likely to find students who are located in more central areas, more easily accessed by road, more well-known by the teacher or fellow students. These types of students may be systematically different from the “average” fourth grade student in these schools. This bias would likely affect treatment and comparison students in a similar way; therefore it does not affect our interpretation of differences between treatment and comparison groups. Future studies can prioritize data collection while school is in session, to enable a proper random sampling method to be employed.

Finally, we face issues with statistical power that limit our ability to be certain that a finding of “no difference” truly indicates a lack of programmatic effect. Our statistical power calculations, conducted prior to the launch of data collection, indicated that we would have power to detect a difference of 21.5 percentage points or larger. Therefore, for differences that are smaller than 21.5 percentage points, we cannot be certain if there is truly no difference between treatment and comparison schools, or if we simply do not have sufficient power to detect it. Future studies should aim to have a larger sample of treatment and comparison schools, in order to have statistical power to detect smaller differences.

RESPONSE BIAS

There is a high potential for recall bias, particularly for questions which determine dosage (how often students experienced play-based learning in the classroom). To understand dosage, we asked the students to recall how often their teachers played games up to 4 years ago. Even adults would face problems in recalling something from so long ago, but children in particular are likely to have problems in response reliability over such a recall period. Our field team attempted to validate

these questions by conducting focus groups during survey piloting. They specifically asked the students to provide examples of games that their teacher played, and then cross-checked those games with teachers who were aware of the types of games played by students in each grade. They confirmed that the students were indeed recognizing the games that would have been played during the reference period. Despite this testing, it is still possible that the students faced issues with recall bias on these questions with long recall periods.

Lastly, we see evidence of social desirability bias. We observe that the rates of reporting on questions like “I attend school every day” and “reason for attending school—because I love school” are very high. These types of responses to valuation questions indicate that students may be feeling pressure to answer positively about school, perhaps due to social desirability bias or fear of punishment. Therefore, we should exercise caution in interpreting positive responses to questions that require the students to make a value judgement.

COMPARISON ACROSS STUDIES

Since this is an endline study, we hoped to make comparisons with the baseline and midline reports of the PAQE-II project. However, there are some aspects of the baseline and midline studies that limit our ability to make these comparisons. For the baseline and midline study, the sampled population was smaller than the pre-analysis plan required both for teachers and students (Macina et al, 2018 p. 9 and Macina et al, 2020 p. 12). Another important factor to note is that the schools sampled in the midline survey and endline survey were different (see Macina et al, 2020 p. 71 and Bleck et al, 2021 p. 8-9). Given these limitations it is important to note that the context varied and impacted sampling. These differences can introduce bias when comparing across time points.

In addition, we face a challenge in comparing endline data with midline and baseline data collected by other evaluation teams. Our evaluation team was provided with the baseline and midline data, but we did not have access to codebooks or analysis files to understand how previous variables were calculated. In some cases, we were able to determine the way the variable was calculated using the midline and baseline reports, but in other cases, we cannot be sure if our calculations are perfectly comparable to those conducted at baseline and midline. In other cases we deliberately included new survey items to delve further into a topic than the baseline or midline study did. In these cases we have richer data to report; however, these changes render the data not perfectly comparable across time periods. Therefore, we will reference baseline or midline findings in the finding section only when the data points are comparable.

The issue of comparability is particularly problematic for the EGRA scores. We noted that the baseline and midline studies define proficiency in an EGRA sub-skill as either a 100% correct score in a sub-section, or a score over the mean value in that sample. In this study, we choose to report EGRA scores as continuous values (e.g., number of words read per minute) or percent correct (e.g., percent of reading comprehension questions answered correctly). We believe this follows the global standards on reporting EGRA (RTI International, 2016). However, it limits our ability to make comparisons with baseline and midline EGRA scores. An exception to this is our calculations for key indicator 1.1 (% of students reading at grade level), which is calculated in a similar fashion as in the midline report. Therefore, for the section on literacy outcomes, we reference midline data only as they pertain to this indicator.

FINDINGS

BALANCE TESTS

In order to determine if the two groups (RtP and non-RtP schools, teachers and students) are comparable, we test for balance between the two groups. The first table below presents student-level variables. We observe that the two groups are balanced on average on demographics such as age, gender and proportion of children with disabilities (CWD). We note that of the students with disabilities, a higher proportion in the RtP schools have motor-related disabilities—however, since this is such a small subgroup of the overall population, the difference is not statistically significant. Students report that there is someone in the family who can read at similar rates. There is also a similar proportion of the student body who has been in the same school since the 1st grade or ever repeated a grade. In addition, there is no statistical difference between the two groups on the number of school days missed in the last year.

We also asked a series of questions which can help us confirm exposure to treatment (play-based learning from the RtP program). A large and statistically significant difference exists between the treatment and comparison groups on the proportion of students who report that their teacher plays games. More than double the number of students in treatment schools report that their teacher plays games. We also inquired how many games the student's teacher played in past years. The proportion of students who report that their teacher played many games in all four years of their schooling is again higher for treatment versus comparison schools. These balance tests help us understand that the two groups of students are indeed comparable on most qualities, with the important exception of the treatment itself--exposure to game-based curriculum.

TABLE 3: STUDENT BALANCE TESTS

	RtP SCHOOLS	NON-RtP SCHOOLS	DIFFERENCE
Student Demographics			
Age	11.0	11.1	0.1
% female	50.0	48.1	1.9
Students with Disabilities (%)	3.8	7.4	3.7
Mobility-related disability (% of subgroup)	53.2	13.8	39.5
Other type of disability (% of subgroup)	46.8	86.2	39.5
Someone in the family can read (%)	94.9	86.4	8.5
Attendance			
% of students who have been in the same school since 1st grade	77.9	68.7	9.2
Has ever repeated a grade (%)	43.9	41.3	2.6
Number school days missed this school year	1.9	2.8	0.9
Exposure to Treatment			
Reports that teacher plays games (%)	92.0	44.8	47.1*
Reports that teacher played a lot of games in all grades (%)	14.5	1.4	13.1*

* $p < .05$

Next, we turn to the teacher survey. We note that our sample is fairly balanced on teacher gender, age, level of education, and status as a government (versus community) teacher. Comparing RtP and non-RtP schools, the two groups of teachers also have similar years of experience teaching and similar years in the same classroom. Turning to indicators which can measure exposure to treatment (RtP training), we see that teachers in RtP schools are more likely to have received a training from RtP, can explain a concept from that training, and even trained another teacher on the RtP pedagogy. They are also about two times more likely to have used a play-based learning technique in their classroom. In addition, a number of teachers in both RtP and non-RtP schools received another training on play-based learning. The majority of these trainings were led by SIRA and focus on the topic of life skills (not shown). Both teachers in RtP schools and non-RtP schools intend to continue or start using PBL techniques in the future, indicating a strong interest in this type of pedagogy.¹¹

TABLE 4: TEACHER BALANCE TESTS

	RtP SCHOOLS	NON-RtP SCHOOLS	DIFFERENCE
Gender (% female)	61.6	51.3	10.4
Age	41.1	38.4	2.7
Highest Degree: Less than BAC	45.2	43.6	-1.6
Highest Degree: BAC and similar	16.4	25.6	9.2
Highest Degree: University	38.4	30.8	-7.6
Government teacher	89.0	89.7	0.7
Number of years teaching	14.6	12.7	1.8
Number of years with the same class	2.9	2.2	0.8
Exposure to Treatment (RtP Training)			
Received training from RtP (%)	83.6	17.9	65.6*
Can explain a concept from RtP training (%)	68.5	10.3	58.2*
Trained other teacher on RtP (%)	31.5	7.7	23.8*
Received another training on Play-based learning (%)	47.9	33.3	14.6
Plans to continue or start using PBL in the future (%)	95.7	79.5	21.1

* $p < .05$

Next, we turn to school-level variables. We observe that for many indicators of size, infrastructure, school closing, and materials available, RtP schools and non-RtP schools are comparable.¹² Similarly, in terms of student support, balance is demonstrated between the two groups in terms of financial support from the government, and presence of a program for integrating out-of-school youth.

¹¹ 97% of teachers who participated in a RtP training indicated that they would continue using the techniques in the future.

¹² We observe several large but insignificant differences in terms of WASH indicators, which seem to indicate that the RtP schools have better infrastructure in these areas. RtP schools are about 20 percentage points more likely to have separate bathrooms for boys and girls, and handwashing stations. These differences are not statistically significant, likely due to small sample size of schools. The difference is large enough in magnitude that it should be noted.

However, we note that the regional education official (Conseiller pédagogique , or CP) visits RtP schools more frequently. Teachers in RtP schools also were more likely to receive training on teaching literacy and RtP programming.

TABLE 5: SCHOOL BALANCE TESTS

	RtP SCHOOLS	NON-RtP SCHOOLS	DIFFERENCE
Total Student Body	307.3	280.2	27.1
Boys	156.3	137.7	18.6
Girls	151.0	142.5	8.5
Materials for students			
Number of reading books available	79.4	57.2	22.2
Number of math books available	88.3	63.5	24.9
Total supplies available in the school (range 0-11)	7.8	7.5	0.2
Total supplies available to each student individually in the school (range 0-8)	6.5	6.6	0.2
Physical Infrastructure Checklist			
Teachers' bathrooms (%)	75.0	90.9	15.9
Students' bathrooms (%)	100.0	90.9	9.1
Separate bathrooms for boys and girls (%)	70.0	50.0	20.0
Water source in bathrooms (%)	90.0	81.8	8.2
Hand-washing station (%)	95.0	72.7	22.3
Library (%)	15.0	9.1	5.9
Canteen (%)	0.0	9.1	9.1
Support for students			
Youth Club (%)	50.0	18.2	31.8
Program for integrating out-of-school youth (%)	10.0	0.0	10.0
Financial support from the government (%)	50.0	36.4	13.6
Number of Visits from the CP in the last year	5.0	3.2	1.8*
Teacher Trainings			
Number of teachers trained on Curriculum	2.7	2.3	0.4
Number of teachers trained on reading pedagogy	3.8	1.3	2.5*
Number of teachers trained on RtP	5.2	0.4	4.8*
Number of days closed in the past year	9.3	9.3	0.0

* $p < .05$

EQ 1: WHETHER OR NOT THE RIGHT TO PLAY PROGRAM HAS HELPED TO INCREASE STUDENTS' READING COMPETENCIES EQUIVALENT TO A MINIMUM PROFICIENCY 4TH GRADE LEVEL AND LIFE SKILLS

LITERACY: EARLY GRADE READING ASSESSMENT

In the first section of EGRA, assessors read 10 words to students and asked them to repeat the initial sound of the word. In RtP schools, students could correctly identify the initial sounds of six words, and about 10% could not identify a single initial sound. Scores were slightly lower for non-RtP schools but this difference is not statistically significant. Further, no statistical differences were observed by gender. A small difference is observed by disability status, indicating that students with disabilities in RtP schools score higher than their counterparts in non-RtP schools. However, caution is advised in the interpretation of this finding, since the number of students with disabilities is quite small.

TABLE 6: EGRA SECTION 1: INITIAL SOUND RECOGNITION

	AVERAGE [RANGE=1-10]			ZERO PERCENT		
	RtP SCHOOLS	NON-RtP SCHOOLS	DIFFERENCE	RtP SCHOOLS	NON-RtP SCHOOLS	DIFFERENCE
Average	6.3	6.0	0.3	10.4	15.9	5.5
Girls	6.6	6.5	0.1	8.0	12.2	4.2
Boys	6.0	5.5	0.6	12.9	19.4	6.5
CWD	6.8	3.7	0.3*	2.5	21.2	18.8

* $p < .05$

In the next section, students were asked to identify letters or phonemes, which are groups of letters that produce a sound (for example “ou” or “on”). Assessors marked the student’s response as correct if the student said the name of the letter (for example, “T”) or produced the sound that the letter would make (for example, “ttttt”). This section was timed, so results are presented in the number of correct answers provided per minute. For this section, we observe a statistically significant difference between students in RtP schools compared with students in non-RtP schools. RtP students are able to read about 6 more letter names or sounds. This difference is fairly consistent in terms of size and significance for subgroups (boys, girls, and students who do not have a disability). For students with disabilities, the difference is much larger in magnitude but not statistically significant, likely due to small sample size in this subgroup.

TABLE 7: EGRA SECTION 2: LETTER NAMES OR SOUNDS READ PER MINUTE

	AVERAGE			ZERO PERCENT		
	RtP SCHOOLS	NON-RtP SCHOOLS	DIFFERENCE	RtP SCHOOLS	NON-RtP SCHOOLS	DIFFERENCE
Average	35.4	29.1	6.3*	0.6	2.0	1.4
Girls	35.5	30.2	5.3*	0.6	0.0	0.6
Boys	35.4	28.2	7.2*	0.6	3.9	3.3
CWD	33.2	21.2	12.0	3.0	17.6	14.6

* $p < .05$

In the next section, students were asked to read from a grid of familiar words. Students in the RtP schools read on average 18 words per minute. Less than 10% of students failed to read a single word. For this indicator, we observe statistical differences between RtP and non-RtP schools. Students in non-RtP schools read approximately seven fewer words per minute. This difference was consistent for all sub-groups.

TABLE 8: EGRA SECTION 3: FAMILIAR WORDS READ PER MINUTE

	AVERAGE			ZERO PERCENT		
	RtP SCHOOLS	NON-RtP SCHOOLS	DIFFERENCE	RtP SCHOOLS	NON-RtP SCHOOLS	DIFFERENCE
Average	17.5	10.8	-6.8*	8.0	11.6	3.6
Girls	17.3	10.3	-7.0*	7.7	3.3	-4.4
Boys	17.7	11.2	-6.6*	8.3	19.2	11.0
CWD	18.8	9.6	-9.2*	3.0	27.9	25.0

* $p < .05$

Next, we report on key indicator 1.1 (*% and number of children in target schools that have attained the minimum score in reading for the 4th grade level (disaggregated by sex and physical disabilities)*). The national standard for reading at grade level in Mali is 61 words per minute for classique (French only) schools, and 41 words per minute for curriculum (mother-tongue) schools. We calculated the percent who are reading at grade level for each school, depending on the type of school. We observe that there are few students reading at grade level regardless of school type. In both cases, over 90% of the students are reading below the grade level. No differences are observed in this indicator by sex of student, disability status of student, or treatment status. Comparing these scores to the midline report, we observe a slight decrease in the proportion of students in RtP schools reading at grade level (which at midline was 7.2% on average, and 6.6% for girls and 7.8 % for boys). The target set by the program was 15%, therefore this goal was not met.

TABLE 9: EGRA SECTION 3: PERCENT OF STUDENTS READING AT GRADE LEVEL

	AVERAGE				
	RtP SCHOOLS	NON-RtP SCHOOLS	DIFFERENCE	TARGET	MET?
Average	6.4	3.1	-3.3	15	No
Girls	6.2	2.5	-3.8	15	No
Boys	6.6	3.7	-2.9	15	No
CWD	8.2	2.7	-5.6	15	No

* $p < .05$

To assess listening comprehension, enumerators read a short story in French to the students. The students were then asked six questions about the story, and their responses were scored as correct, or incorrect/no response. On average, students in RtP schools could answer three questions correctly. The rate of correct response for non-RtP schools was slightly lower in magnitude, but the difference is not statistically significant. In RtP schools, only 25% of students could not answer a single question correctly, compared with 40% of students who did not provide a correct response in non-RtP schools. No statistically significant differences were observed among sub-groups. Differences in reading at grade level in RtP schools between boys and girls were not statistically significant (see appendix 5, table A1). This is consistent with the baseline study which also did not find differences between boys' and girls' literacy scores (Macina et al, 2018, p. 25-28).

TABLE 10: EGRA SECTION 4: LISTENING COMPREHENSION

	AVERAGE [RANGE 1-6]			ZERO PERCENT		
	RtP SCHOOLS	NON-RtP SCHOOLS	DIFFERENCE	RtP SCHOOLS	NON-RtP SCHOOLS	DIFFERENCE
Average	2.7	2.1	0.7	24.6	40.2	15.7
Girls	2.8	2.1	0.7	25.7	38.8	13.0
Boys	2.7	2.1	0.7	23.4	41.6	18.2
CWD	3.6	4.0	0.4	4.7	6.7	2.0

* $p < .05$

In the next section, students were asked to read words in a short story in French. This section was timed, results are presented as words read from the story per minute. For this indicator, students in the RtP schools performed better than in comparison schools, reading on average 8 more words in the story. This difference is statistically significant. Differences were consistent in terms of size and significance for boys and girls. For students with disabilities, the difference was larger (12 words per minute) and statistically significant.

TABLE 11: EGRA SECTION 5A: WORDS READ PER MINUTE FROM A STORY

	AVERAGE			ZERO PERCENT		
	RtP SCHOOLS	NON-RtP SCHOOLS	DIFFERENCE	RtP SCHOOLS	NON-RtP SCHOOLS	DIFFERENCE
Average	19.5	11.7	7.8*	9.8	15.6	5.8
Girls	19.5	11.9	7.6*	9.8	8.0	1.8
Boys	19.5	11.5	8.0*	9.7	22.7	12.9
CWD	18.9	6.5	12.3*	22.4	27.9	5.6

* $p < .05$

After students finished reading the story, they were asked a series of questions to assess their comprehension of the story. The number of questions asked varied, depending on how much of the story that the student was able to read. Therefore, we present results as a percentage answered correctly, out of relevant questions. Again, we observe higher performance for RtP students. They were able to answer about 28% of the relevant questions correctly. In non-RtP schools, comprehension scores were about 14 percentage points lower. Results were fairly similar for both boys and girls, with the difference for girls being 2 percentage points larger than the average difference, and for students with disabilities being 6 percentage points larger. It should be noted that a large proportion of the students could not answer a single reading comprehension question correctly. But again we observe large and statistically significant differences between RtP and non-RtP students. Less than half of the RtP students failed to answer a single question correctly—this figure is much higher for non-RtP students (73%). Again, results are consistent, and differences are statistically significant, for all sub-groups.

TABLE 12: EGRA SECTION 5B: READING COMPREHENSION, % CORRECT

	AVERAGE			ZERO PERCENT		
	RtP SCHOOLS	NON-RtP SCHOOLS	DIFFERENCE	RtP SCHOOLS	NON-RtP SCHOOLS	DIFFERENCE
Average	27.5	13.2	14.4*	46.4	72.6	26.1*
Girls	27.6	12.1	15.5*	46.9	73.2	26.3*
Boys	27.5	14.2	13.3*	46.0	72.0	26.0*
CWD	25.6	4.7	20.8*	59.1	91.5	32.4*

* $p < .05$

Literacy Context

We provide additional information from previous studies on literacy outcomes. The midline report noted that access to reading materials was a critical factor for reading competency among students (Macina et al, 2020, p. 74). Access to reading materials is one aspect of the intervention; teachers also have their own teaching materials needed to conduct class. Thus, in order to improve student literacy, educational materials are of the utmost importance.

For this evaluation, the survey explored what materials teachers noted they had to teach students. Teachers were asked if they conducted guided readings, with responses showing that a minority of

teachers in RtP schools, only 4.6 percent, use guided readings as a lecture technique. The survey also asked if the students had reading materials. We observe that 53 percent of teachers in RtP schools note that most to all of the students in the classroom had the reading materials. When taking into account the gender of the teachers we see no statistically significant difference in teachers from the RtP schools, but we do see a significant difference in teachers who instruct at Non-RtP schools. In Non-RtP schools, men have a higher average than women of using reading materials in their classrooms (see appendix 5, table A2). Given this, the use of guided reading is difficult since only a slight majority of classrooms are equipped with the necessary materials for such an activity.

Literacy outcomes can also be related to the adequacy of reading materials (teaching guides and reading materials for students). We observe that only about one third of teachers report that everyone in their school has a reading guide. No differences are observed by treatment status or gender of teacher for this indicator. Even fewer teachers report that all students in the school have reading materials. For this indicator, teachers in RtP schools are more likely to report that all students have reading materials; this difference appears to be driven by women. Lastly, teachers in RtP schools are no more likely than their counterparts in non-RtP schools to indicate that they lead a reading club.

TABLE 13: SUPPLEMENTAL READING SUPPORT, TEACHERS

	RTP SCHOOLS	NON-RTP SCHOOLS	DIFFERENCE
All teachers in the school have a guide (%)	34.2	30.8	3.5
Men	32.1	31.6	-0.6
Women	35.6	30.0	-5.6
All students in the class have reading materials (%)	24.7	10.3	14.4*
Men	25.0	15.8	9.2
Women	24.4	5.0	19.4*
Directs a reading club (%)	19.2	7.7	-11.5
Men	28.6	10.5	-18.0
Women	13.3	5.0	-8.3

* $p < .05$

Data were collected on support activities for reading that occur at home. In particular, supplemental reading activities were a component of RtP programming that aimed to ameliorate student engagement in learning. In terms of supplemental reading support, we detect consistent differences

between RtP and non-RtP schools. Students in RtP schools report that they receive more support in the home for reading than students in non-RtP schools, and this difference is particularly driven by girls, who are almost 30 percentage points more likely to report having reading support at home. In addition, students in RtP schools are more likely to report that they have access to a tutor, that they are a member of a reading club, and that they participated in a reading activity. Differences in these indicators are fairly consistent across student gender and the sub-group of able-bodied students. However, they fluctuate among students with physical disabilities, most likely because of the extremely small portion of the sample who falls into this subgroup.

TABLE 14: SUPPLEMENTAL READING SUPPORT, STUDENTS

	RtP SCHOOLS	NON-RtP SCHOOLS	DIFFERENCE
Someone in the family helping the student read (%), Average	76.8	55.3	21.6*
Girls	78.3	50.6	27.7*
Boys	75.4	59.6	15.8*
CWD	59.9	21.8	38.1
Access to a tutor (%), Average	21.6	7.3	14.3*
Girls	23.5	9.4	14.2*
Boys	19.7	5.4	14.2*
CWD	28.3	0.0	28.3
Member of a reading club (%), Average	26.1	11.9	14.2*
Girls	24.0	10.4	13.7
Boys	28.1	13.3	14.9*
CWD	40.1	9.8	30.3
Has participated in a reading activity (%), Average	19.4	4.7	14.7*
Girls	19.1	5.5	13.6*
Boys	19.7	4.0	15.7*
CWD	0.0	0.0	0.0

* $p < .05$

LIFE SKILLS

Next, we turn to key indicator 2.2 (*% and number of children in 4th grade in target schools who demonstrate specific life skills: teamwork, communication, and conflict resolution (disaggregated by life skills, sex, and children with disabilities)*). On average, all students scored quite high on life skills components: communication, participation, teamwork, and conflict resolution. Students surpassed all targets set by the program for endline.

For the sub skill of **conflict resolution**, no difference was observed between RtP and non-RtP students. This is consistent for all sub-groups. However, differences were observed for communication, teamwork, and participation.

On the sub skill of **communication**, a 12 percentage point difference was observed between RtP and non-RtP students. This difference is quite large for the small subset of students that have disabilities- suggesting that RtP may have improved communication competency for students with disabilities.

For **teamwork**, there was an 18 percentage point difference in rates of success on this life skill. The difference is also statistically significant for able-bodied students, and seems to be mainly driven by girls in RtP schools, who scored an average of 25 percentage points higher than their counterparts in non-RtP schools.

For **participation**, the difference was about 14 percentage points, and was fairly consistent among boys and girls. A large difference is observed between students with physical disabilities in RtP versus non-RtP schools in terms of participation. However, it is important to note that any statistically significant values and averages as they relate to disability should be considered with caution since only 37 participants have disabilities. Nevertheless, such findings warrant the need for further testing in future studies.

TABLE 15: LIFE SKILLS

	RTP SCHOOLS	NON-RTP SCHOOLS	DIFFERENCE	TARGET	MET?
Communication, Average	78.5	66.2	12.3*	57	YES
Girls	74.0	61.6	12.4	55	YES
Boys	83.1	70.5	12.5	62	YES
CWD	92.5	40.7	51.8*	20	YES
Teamwork, Average	86.3	68.5	17.8*	50	YES
Girls	87.2	62.2	25.0*	55	YES
Boys	85.4	74.4	11.0	50	YES
CWD	81.6	67.6	14	20	YES
Conflict Resolution, Average	75.8	73.5	2.3	58	YES
Girls	75.1	75.5	0.5	62	YES
Boys	76.6	71.7	4.9	58	YES
CWD	81.7	66.9	14.8	20	YES
Participation, Average	79.9	65.9	14.1*	NA	
Girls	76.8	60.7	16.1*	NA	

Boys	83.1	70.6	12.4*	NA
CWD	78.2	23.2	55*	NA

* $p < .05$

Context from prior rounds of data collection

The results shown in the above table demonstrate some consistency with prior rounds of data collection. For example, students score fairly similarly at midline on the items related to communication (76%), teamwork (82%), and conflict resolution (77%) (Macina et al, 2020, p. 47-49). In the baseline report, teamwork was noted as a key indicator, since the intervention promotes team oriented activities such as reading competitions (Macina et al, 2018, p. 45). In particular, the baseline report noted that group work through reading sessions was an important teaching tactic and a good tool for promoting inclusivity and gender sensitivity among the students (Macina et al, 2018, p. 47).¹³ See Appendix X for a comparison of these indicators over time. As such, the statistical significance of teamwork in the RtP schools at the endline report provides additional evidence that the intervention may have caused an impact in students' ability to work together as a team.

EQ 2: IF THE PROGRAM WAS ABLE TO IMPROVE THE LEARNING ENVIRONMENT IN SCHOOLS

POSITIVE ASSOCIATION WITH SCHOOL

To assess positive learning environment, we assess how much students report appreciation of school, if students report that they play games in school, and rates of corporal punishment and positive discipline methods in schools. This serves to report on Key Indicator 3.2 (*Percent and number of girls and boys that have positive associations with school*). Overall, we see high rates of appreciation for school among students in both RtP and non-RtP schools. This is consistent with the midline report, where 71% of students on average indicated a positive association with school (Macina et al, 2020, p. 59). We observe higher rates of game playing in RtP schools, particularly for girls; however, this difference is not statistically significant.

We observe extremely high rates of corporal punishment in the schools in this sample. Almost all the students, in both RtP and non-RtP schools, report that teachers use corporal punishment. When we break corporal punishment down to two categories, we note that in RtP schools, students report less usage of the whip than in non-RtP schools. This difference appears to be driven by a lower rate of reporting by boys. Lastly, we do observe some differences in reported use of positive discipline tactics. Students in RtP schools are more likely to report that their teachers used a positive discipline method. This difference appears to be driven by boys' responses.

TABLE 16: POSITIVE LEARNING ENVIRONMENT, STUDENT RESPONSES

	RtP SCHOOLS	NON-RtP SCHOOLS	DIFFERENCE	TARGET	MET?
Appreciation for School, Average	73.9	75.5	1.6	45	YES
Girls	74.7	76.8	2.2	55	YES

¹³ The tools teachers use to ensure inclusive and gender sensitive learning environments are discussed in more detail in section E.2 of this report.

Boys	73.1	74.3	1.1	50	YES
CWD	74.0	41.2	32.8	30	YES
Plays games with friends in school, Average	94.4	81.3	13.2		
Girls	95.1	71.1	24.0		
Boys	93.8	90.7	3.1		
CWD	96.5	94.1	-2.4		
Corporal Punishment practiced, Average	93.1	96.0	2.9		
Girls	92.9	97.0	4.1		
Boys	93.4	95.1	1.7		
CWD	75.3	74.5	-0.8		
Whip, Average	77.9	92.2	14.4*		
Girls	77.5	90.9	13.4		
Boys	78.2	93.5	15.2*		
CWD	75.3	62.7	12.6		
Other physical punishment, Average	64.4	61.0	3.4		
Girls	60.4	60.1	0.4		
Boys	68.4	61.9	6.5		
CWD	12.2	27.3	15.1		
Positive Discipline practiced, Average	15.5	8.0	7.5*		
Girls	15.2	6.8	8.4		
Boys	15.9	9.1	6.8*		
CWD	12.8	19.5	6.7		

* $p < .05$

TEACHER COMMUNICATION AND POSITIVE DISCIPLINE

The creation of a positive learning environment is heavily dependent upon how teachers navigate instructing and interacting with students. The endline survey contains nine communication topics ranging from multiple types of group teaching styles (role playing, drama, clubs, group work), to standard teaching practices (individual work, student leadership), to factors specific to the instructor (positive discipline, student awareness), and collaborating with parents. Of the listed communication options which create a positive learning environment, all 112 teachers surveyed reported using at least one and up to four communication practices (see appendix 5, table A3).

In creating a positive learning environment, there is a need to maintain a disciplined space. As the table shows above, **corporal punishment** is the form of discipline reported most frequently by students. The qualitative data provides a context for the disciplinary environment in the schools.

The communities, parents and teachers expressed expectations that corporal punishment be used in the schools. One parent describes how “our grandparents and parents used a lot of corporal punishment, excessively so.”¹⁴ Similarly, a director of a school noted “positive discipline is hard to enact, although schools do state that children are not to face corporal punishment or be blamed, there is a sentiment that the only way to discipline a child is through corporal punishment.”¹⁵ The comments demonstrate that corporal punishment persists as a social norm in Malian school culture.

NGOs are well aware of the limited resources for teachers in Mali. This lack of resources is related to corporal punishment. One NGO official commented “corporal punishment is necessary because there is no way for one teacher to take control of 60 chatty kids.”¹⁶ The use of such discipline and its repercussions are recognized. The same official stressed “when the safety of children is not taken into account, they no longer want to come to school.”¹⁷ Thus, corporal punishment appears to be recognized as having a negative impact on student experiences, but is still seen as a necessary tool due to the limited resources teachers have to control a classroom. In both RtP schools and non-RtP schools, teachers overwhelmingly report that they can maintain order in their classroom without the use of corporal punishment. This response appears to contradict the student reports on corporal punishment use in the classroom. Teachers in RtP schools are less likely to report that they can keep order without corporal punishment tactics.

Despite the persistence of corporal punishment as a practice in the sampled schools, our study also provides some evidence of successful positive interactions and relationship building between teachers and students. For example, we investigate teachers’ ability to identify communication tactics. When exploring the differences between teachers who implement one of the communication practices compared to those who use two or more, the averages show no statistically significant difference among teachers based on gender, or school type.

We also asked questions to teachers about practices after RtP training which can contribute to a positive learning environment, or can enrich students’ reading experience. Teachers in RtP schools are more likely to use PBL techniques in their classrooms than teachers in non-RtP schools. On average, RtP teachers use about three PBL techniques per week compared to about two for teachers in non-RtP schools. Differences vary by gender, but seem to be driven by high frequencies of women in non-RtP schools reporting to use a PBL technique, not by major differences between men and women in the RtP sample.

In terms of two key indicators for RtP, we examine respect for the positive learning environment and integration of gender sensitive and inclusive play-based learning methods into teaching practices.

¹⁴ Original French: <<Pendant le temps de nos pères et grands-pères, l’enseignement était accompagné du châtime corporel exagéré. Il y’a des élèves qui sont décédés suite à des châtime corporels>> (93012_FOCUS APE (KATIBOUGOU A) KK).

¹⁵ Original French: <<Elle est prise en compte à beaucoup de niveaux. Le premier responsable de l’école qui est le directeur et tous les enseignants savent que le châtime corporel est interdit et même blâmer les enfants est interdit. L’enseigner doit avoir des formes pour sanctionner l’enfant et faire aimer le travail aux enfants sans passer par le fouet. Chaque fois on fait passer ce message. Il y a certaines ONG qui travaillent aussi dans ce sens. Il faut reconnaître que ce n’est pas un travail facile. En Afrique et surtout au Mali la mentalité est que «seul avec le fouet que les enfants Maliens peuvent travailler »>> (91010_ID DCAP (CAP BOUGOUNI) SIK).

¹⁶ Original French: <<Par rapport au genre et à la discipline positive, les enseignants pensent que le rendement n’y est pas sans le châtime corporel. Quand tu prends la classe, tu trouveras que quarante ou soixante élèves sont en train de bavarder par-ci et par-là donc il est difficile de les maîtriser sans le fouet. Il faut encore multiplier les sessions de renforcement. Il faut former les enseignants par rapport à comment tenir les classes qui ont un effectif pléthorique>> (95004_ID ONG OMAES (SEGO)).

¹⁷ Original French: << C’est le non-respect de la discipline positive, c’est-à-dire le châtime corporel. Ces genres d’actes peuvent décourager les enfants. Quand la sauvegarde de l’enfant n’est pas respectée, ce sont des pratiques qui découragent les enfants à venir à l’école>> (95004_ID ONG OMAES (SEGO)).

First, we find no difference between RtP and non-RtP teachers on the key indicator of respect for a positive environment. We note that overall the target is met; however, men in particular did not meet the target. Next, we find a large and statistically significant difference between RtP and non-RtP teachers on the integration of gender sensitive and inclusive play-based learning methods into teaching practices. The target for this goal was met overall, and for each subgroup.

TABLE 17: CREATING A POSITIVE LEARNING ENVIRONMENT, TEACHER RESPONSES

	RtP SCHOOLS	NON-RtP SCHOOLS	DIFFERENCE	TARGET	MET?
Number of Communication Tactics Identified, Average	1.71	1.67	0.04		
Men	1.79	1.53	0.26		
Woman	1.62	1.8	0.18		
Uses a PBL technique (%)	87.7	43.6	44.1*		
Men	92.9	31.6	61.3*		
Women	84.4	55.0	29.4*		
Count of PBL technique used, per week	3.5	1.9	1.6*		
Men	3.4	1.3	2.1*		
Women	3.6	2.5	1.1		
Respect for a positive learning environment (%)	65.8	74.4	8.6	57	YES
Men	50.0	73.7	23.7	58	NO
Women	75.6	75.0	.6	55	YES
Implement gender sensitive and inclusive play-based learning methodology into their teaching practices (%)	84.9	38.5	46.5*	55	YES
Men	89.3	31.6	57.7*	50	YES
Women	82.2	45.0	37.2*	60	YES

* $p < .05$

USE OF GENDER SENSITIVE PLAY-BASED LEARNING METHODS

As part of the process in promoting equal participation in the classroom, teachers were asked if they received training from Right to Play. Recall from Table 3 that 84% of teachers in the RtP schools report that they received at least one training. We see below that among those trained, about 88% report using something they learned in the classroom. We also ask about their confidence in training, to assess Key Indicator 2.2.3 (*% and number of technical personnel in the Academies, CAP, schools, and IFM who state being better informed about play based learning after having followed a RTP training (disaggregated by sex)*). More RtP-school teachers report high levels of confidence in their ability to implement play-based learning approaches, compared with teachers in non-RtP schools. Interestingly, the differences shown are statistically significant for men, with men in RtP reporting confidence at more than double the frequency of men in non-RtP schools.

In non RtP schools, women exhibit statistically significant higher rates of confidence on such training compared to men (see appendix, table A4). This is consistent with women's higher use of PBL techniques in the classroom in non-RtP schools (see previous table). However, when comparing teachers in the RtP schools with teachers in comparison schools, there is no statistically significant difference in their confidence levels.

We also report on the use of methods learned from the training. RtP schools have a much higher rate of leveraging such resources compared to the non-RtP schools. When comparing the results for the RtP teachers, there is no significant difference between men and women in their use of such training (see appendix, table A5).

TABLE 18: TEACHERS' CONFIDENCE AND USE OF INCLUSIVE AND GENDER SENSITIVE TRAINING IN CLASS

	RtP SCHOOLS	NON-RtP SCHOOLS	DIFFERENCE
Confidence in Training, Average	79.5	43.3	36.2
Men	85.7	31.6	54.1*
Woman	73.3	55.0	18.3
Average Use of Training	88.7	43.3	45.4*
Men	92.9	31.6	61.3*
Women	84.4	55.0	29.4*

* $p < .05$

EQ 3: WHETHER THE PROGRAM WAS ABLE TO INCREASE ENROLLMENT INCLUDING GIRLS AND STUDENTS WITH DISABILITIES

GIRLS

Gender differences in enrollment were similar to previous studies. To start, there exist similar sampled population sizes based on gender. In this endline study, as per Table 4 the percentage of female students in RtP schools was 49.1% of the student body. This percentage is slightly lower than the 51% reported in the baseline study (Macina et al, 2018, p 25), and the 49.3% reported in the midline study (Macina et al, 2018, p 71). Furthermore, it is important to note that the schools sampled in the midline survey are different from the endline. However, caution should be exercised in generalizing the sampled population to enrollment rates. As noted in the inception report, obtaining enrollment data from the schools for the endline study was difficult due to school closures (Bleck et al, 2021 p. 14). Given this inability to secure the necessary enrollment data, discussions of the overall trend of enrollment for students cannot be discussed beyond the baseline/midline comparison.

Qualitatively, discussions of enrollment from key informant interviews and focus group discussions yielded minimal results. Respondents often focused on the issue of retention, not enrollment. For example, girls face domestic responsibilities that differ from those of boys. From a focus group interview, one of the respondents noted:

For girls, one can target mothers that use their daughters a lot in house chores. I saw a school where the girls that frequented 90 percent of their courses are recompensed at the end of each trimester through oil donations.¹⁸

This is one example of a cultural norm which may result in girls missing school at higher rates than boys. In this anecdotal instance, the importance of targeting parent support is seen as a necessity to allow girls to be sent to school as opposed to staying at home. The qualitative findings demonstrate that since girls are expected to work at home, they are not expected to attend school and be educated. Other factors cited in the qualitative reports were early marriage, pregnancy, discouragement girls face in attending school, and teachers engaging in predatory romantic relationships with older students.¹⁹ All of which lead some girls to drop out of school. Other respondents placed blame on the girls themselves when it came to the reason why they were not attending school. Respondents cite a lack of interest in schools and wearing certain clothing as reasons for why girls were not attending school. Such reports demonstrated community members' biases when it comes to girls' attendance at school.

¹⁸ Original French: <<Pour les filles, on peut cibler les mamans qui utilisent beaucoup leur fille dans les tâches ménagères. J'ai vu une école où les filles qui fréquentent à 90% les cours sont récompensées à la fin de chaque trimestre à travers des dons d'huile>> (Focus group: 93014_FOCUS APE (Bagadadji sud 1er cycle) SEG).

¹⁹ see 92001_ID_DIRECTEUR_N_Mandela_B_BKO, 92003_ID DIRECTEUR (ISMAILA DIAWARA B) BKO, 92015_ID DIRECTEUR (SEBOUGOU B) SEG, 92016_ID DIRECTEUR (TH KONTAO A) SEG, 92021_ID DIRECTEUR (KALABAN COURA D) BKO, 92025_ID Directeur (Massala A) KK, 92030_ID DIRECTEUR (ECOLE DE KELEYA) SIK, 93004_FOCUS APE (YACOUBA SIDIBE A) BKO, 93008_FOCUS APE (MAGNABOUGOU PROJET A) BKO, 91001_ID DCAP (CAP HYPODROME) BKO, 93019_FOCUS APE (Torokabougou C) SIK, 93020_FOCUS APE (Koudougou) SIK, 93012_FOCUS APE (KATIBOUGOU A) KK, 93017_FOCUS APE (Bougoulafara) SIK for references to early marriage; 92001_ID_DIRECTEUR_N_Mandela_B_BKO, 93008_FOCUS APE (MAGNABOUGOU PROJET A) BKO, 93017_FOCUS APE (Bougoulafara) SIK, 93019_FOCUS APE (Torokabougou C) SIK for pregnancy; 92025_ID Directeur (Massala A) KK, 93016_FOCUS APE (TH KONTAO A) SEG for discouragement of girls, 93016_FOCUS APE (TH KONTAO A) SEG, 93010_FOCUS APE (1er cycle centre A) KK for reference on predatory relationships.

In regards to the enrollment levels of girls, many respondents in the interviews and focus group discussions noted that girls make up a majority of the student body in some cases. One director stated “there are no obstacles for girls' education.”²⁰ Although there are indeed obstacles that persist for girls' enrollment, the number of respondents noting increased enrollment levels of girls attending school demonstrates a positive trend in the sampled schools.

STUDENTS WITH DISABILITIES

The increased enrollment was also noted for students with disabilities, who face a different set of issues as it relates to their enrollment in educational programs. To start, the baseline and midline surveys report a very small number of surveyed students with physical disabilities. In the baseline survey, 25 students were sampled (Macina et al, 2018, p 25), whereas the midline survey only sampled 21 students with physical disabilities. The midline survey also notes that over the lifespan of the project 76 students with disabilities participated in the program (Macina et al, 2020, p. 47). The number of students with a physical disability surveyed in the endline study (across all schools) amounts to 12 students, and the number of students with another disability was 25 students. Given these numbers, quantitative analysis on the sampled students with disabilities provide little additional information as to the efficacy of the RtP programming for this population. Additional information was obtained on students with disabilities through KIs and FGDs.

When discussing the enrollment dynamics of students with disabilities among parents, teachers, and school administrators, several common themes emerged: peers, parents, and inclusive programming. Each of these topics holds a different relationship with enrollment. They could either be a catalyst or inhibitor of enrollment among students with disabilities.

Social engagement with peers offers students with disabilities opportunities for inclusion. Fellow students offer students with disabilities opportunities to engage and socialize in a way that allows for their integration into social circles. In one case, an NGO staff member said “a child in a play environment thrives regardless of their disability. They are comfortable with other students. These play activities obtained with PAQE-II are very attractive to the students.”²¹ Responses about peer engagement were positive, in that this engagement was a catalyst for enrollment.

However, failure to enroll students with disabilities was tied to parent hesitation and inclusive programming. Interview and focus group respondents consistently reported that parents should become aware of the needs of students with disabilities and not be afraid to let their children go to school. Similar to the case with girls, child labor was also identified as a factor of not attending school. “There are parents who prefer to send their blind children to ask for money instead of going to school since the future of the child is uncertain if they go to school.”²² This uncertainty highlights the lack of confidence regarding how effective an education is for students with disabilities in lifting them towards better positions in life. Ultimately, if a parent does not believe their child will benefit from an education, the child will not attend school.

²⁰ Original French: <<Je dirais oui. Comme j'ai eu à le dire précédemment en ce qui concerne la scolarisation des filles, il n'y a pas d'obstacles>> (92011_ID DIRECTEUR (EDC C) KK).

²¹ Original French: <<On enfant, quand tu le mets dans un milieu de jeu, il s'épanouit toute de suite quel que soit son handicap, il est à l'aise avec ses collègues. C'est l'aspect ludique qui fait l'attrait des activités du PAQEII pour les enfants et sans compter aussi les environnements de lecture ; c'est-à-dire les concours de lecture qui se faisaient et tout ça>> (95003_ID ONG RARE (BOUGOUNI)).

²² Original French: <<[...] ces parents préfèrent que les enfants aillent quêmander, retourner avec 1000 F ou 1 500 F qui est plus rentable que laisser son enfant aveugle aller à l'école où le sort ou l'avenir est incertain.>> (91001_ID DCAP (CAP HYPODROME) BKO).

In order to mitigate any possible negative assessments parents might have of education, inclusive programming is paramount. When exploring the impact of the RtP programming on students with disabilities, two common tactics were described: specialized schools and increasing awareness of disabilities. In the case of specialized schools, respondents stated that students with disabilities require specific education tailored to their needs. Hence, special facilities and specific training for teachers is seen as a requirement for some respondents.²³ However this is not a universally agreed upon sentiment.

One education consultant noted that “we want to integrate children into normal schools that are not specialized. Parents want to bring their children to the local schools, but there is a need for necessary materials to teach students.”²⁴ In this case, the question of increasing enrollment for students with disabilities becomes one of resources, what are the limitations that students face and what can be provided to overcome those limitations in the schooling environment. What are the resources required to help students get to school, but also to be able to flourish in the classroom. The more practical issues that students with disabilities face are related to mobility issues and transportation to school. In order to overcome all the aforementioned challenges RtP provided training on disability awareness and offered tricycles to help students with mobility and/or transportation issues.

A major barrier to enrollment appears to be the perception of students with disabilities. Multiple respondents noted the need to raise awareness about the issues faced by students with disabilities and the abilities they have. Such outreach can overcome notions that prevent them from attending school. Respondents also noted a lack of contact with students with disabilities suggesting more targeted recruitment efforts are necessary.

EQUAL ROLES IN THE CLASSROOM

Related to the question of enrollment is equal treatment in the classroom. RtP aims to improve equal participation and treatment in the classroom for boys and girls. In terms of equal participation, students report conflicting information. First, they overwhelmingly report that everyone is treated equally in the school, and no differences on this reporting were detected by treatment status or student gender. Students with disabilities respond positively to this question at much higher rates in RtP schools, compared with their counterparts in non-RtP schools. This indicates a potential effect of the program on feelings of inclusion for children with disabilities.

However, in contrast to their previous responses, students next confirm, in quite a consistent manner, that both girls and boys have special roles in the classrooms. No differences are observed by treatment status, gender or disability status of the respondent.

²³ see 93014_FOCUS APE (Bagadadji sud 1er cycle), SEG, 93009_FOCUS APE (ECOM Sogoniko) BKO

²⁴ Original French: <<Ces enfants en situation de handicap oui, parce que souvent il y a des enfants en déficience mental et qu'on veut intégrer dans les écoles normales qui ne sont pas spécialisées. C'est une des premières difficultés, il y a des parents qui ne peuvent pas les amener à l'AMALDEM mais qui préfèrent que l'enfant intègre l'école publique du quartier alors que l'enfant à une déficience mental. Ensuite les considérer dans leur handicap, en leur donnant le matériels nécessaires>> (91002_ID DCAP (CAP BOZOLA) BKO).

TABLE 19: EQUAL PARTICIPATION BY GENDER

	RtP SCHOOLS	NON-RtP SCHOOLS	DIFFERENCE
Everyone is treated equally in this school, Average	86.7	83.9	2.8
Girls	88.1	87.0	1.1
Boys	85.3	81.0	4.2
CWD	84.5	50.6	33.9*
Girls have special roles, Average	92.2	84.5	7.7
Girls	92.4	83.5	9.0
Boys	92.0	85.5	6.5
CWD	80.8	40.4	40.3
Boys have special roles, Average	92.2	84.5	7.7
Girls	92.4	83.5	9.0
Boys	92.0	85.5	6.5
CWD	80.8	40.4	40.3

* $p < .05$

RtP had a focus on improving the educational situations of both girls and students with disabilities. Equal access to education can be driven by two factors: social and structural. In terms of the social factors, equal enrollment can help students feel comfortable and a sense of belonging in their school. As one parent describes “our daughters are happy to go to school and see more girls than boys.”²⁵ The representation of a similar peer group is an important factor for social inclusion. The social aspects of equal access are complemented by structural needs, with focus on creating equity through more inclusive school infrastructure. Bathrooms and access to adequate hygiene facilities while at school are a major factor in creating an equitable school infrastructure. Interview and focus group data highlights how the programming was able to create such equity. For girls, parents described how their daughters were able to receive sanitation kits that allowed them to attend school and maintain hygiene.²⁶

Similar to the experience of girls, students with disabilities also faced social and structural issues that impact their enrollment. In the case of students with disabilities, the key factor is exposure. One director describes how “students with disabilities need to be brought to school. When they are in school they interact with children and they improve.”²⁷ CWD’s exposure to education was repeatedly noted as an aspect of RtP’s programming. In particular, raising parent awareness about

²⁵ Original French: <<Nos filles aiment l’école car à chaque fois que tu te rends à l’école, tu vas trouver plus de filles que de garçons>> (93015_FOCUS APE (Seboukou 1er Cycle B) SG).

²⁶ Original French: <<Le programme Right To Play a offert des kits sanitaires aux écoles pour assurer l’hygiène au niveau de l’école. Avant l’arrivée du programme Right To Play les enfants buvaient tous dans le même gobelet sans prendre des mesures sanitaires. Grâce aux activités de sensibilisation du programme Right To Play, les élèves ont plus d’engouement pour les études>> (93009_FOCUS APE (ECOM Sogoniko) BKO).

²⁷ Original French: <<Pour moi, quand on amène un handicapé, le plus souvent, au fil des années, ça s’améliorera et il a tendance à épouser le comportement des autres enfants et comment se comporter dans sa vie. Il s’améliore>> (92024_ID DIRECTEUR (MAFEYA) KK).

disability and the educational needs of their children was well received. One parent expressed that they received training on how children with disabilities were being excluded from schools and after that training the children were sent to school.²⁸ Thus, through raising awareness of the educational exclusion students face, their opportunities for social interactions can increase.

Similar to the experience of girls, students with disabilities also faced structural barriers to enrollment. For example, a teacher noted how students with disabilities were able to have access to restrooms after RtP put in a ramp.²⁹ In addition, multiple respondents noted how tricycles improved access for students with disabilities and addressed the mobility issues that they faced.³⁰ Such structural improvements result in tangible strides towards a more equitable learning environment through providing resources that address areas where inequalities emerge due to the limitations of the school environment.

EQ 4: WHETHER THE COMMUNITY IS ABLE TO RESPOND TO CHALLENGES FACING - ACCESS AND LEARNING FOR GIRLS AND STUDENTS WITH DISABILITIES

The previous section of this report described several issues that girls and students with disabilities face in their enrollment in school. In the case of community responses to address obstacles in education, respondents noted community support to improve educational access for girls and students with disabilities. This section is meant to provide information on Indicators 6.1 and 6.2 (*% of community members and leader who can easily identify at least 3 ways to overcome the obstacles to education facing girls and children with disabilities, and % of community members and leaders who state an increase in knowledge of ways to eliminate obstacles to education for girls and students with disabilities*). Referring to the qualitative data, we find that in 57% of the discussions, respondents stated that their knowledge of how to remove obstacles for girls had increased, and in 33% of the discussions, respondents could identify at least 3 ways to overcome the obstacles to education facing girls and children with disabilities.

GIRLS

Focus group participants most commonly identified the following ways to overcome barriers to girls' education: awareness of the importance of a girl's education (28%) and parental and community support (20%). One director stressed that parents of girls and the community need to change the way in which they view educating a girl.³¹ The next two most common topics were girls' behavior (14%) and marriage (12%). Looking at the quantitative data, we observe that girls in RtP schools were more likely to have someone read with them at home as compared with girls in non-RtP schools, suggesting potential increases in parental support for girls in RtP areas.

²⁸ Original French: <<Nous avons eu une formation sur l'exclusion des enfants handicapés de la sphère scolaire. Grâce à cette formation les enfants en situation d'handicap ont commencé à fréquenter les écoles>> (93015_FOCUS APE (Seboukou 1er Cycle B) SG).

²⁹ Original French: <<Il y ait eu une amélioration des connaissances sur l'élimination des obstacles liés à l'éducation des filles et enfants handicapés dans votre communauté, depuis les 5 dernières années car de nos jours nous constatons que dans les écoles, il existe des rampes d'accès devant les salles de classe et devant les toilettes. Les handicapés avaient des soucis pour aller dans les toilettes avant l'intervention du programme Right To Play>> (93018_FOCUS APE (Almamy Timbo A) SIK).

³⁰ see 91002_ID DCAP (CAP BOZOLA) BKO, 91007_ID CAP (CAP FALADIE) BKO, 93003_FOCUS APE (Ismaila DIAWARA B) BKO, 93004_FOCUS APE (YACOUBA SIDIBE A) BKO

³¹ Original French: <<Pouvez-vous me dire au moins 3 façons de surmonter les obstacles à l'éducation des filles ?D'abord il faut une reconversion des mentalités des parents ensuite il faut qu'il y ait l'adhésion de ces mêmes communautés pour l'école et pour la scolarisation des filles à l'école parce qu'on nous dit en jargon éduquer une femme c'est éduquer toute une communauté et qu'en troisième facteur que les filles elles-mêmes éprouvent le goût de l'école et ça dépend de l'enseignant, faire en sorte que la fille ait goût à l'école>> (91010_ID DCAP (CAP BOUGOUNI)).

STUDENTS WITH DISABILITIES

For students with disabilities, focus group and interview participants most commonly identified the themes of awareness (23%), transportation (19%), support (19%), and comfort (15%). In particular, students received various forms of support in addressing mobility limitations. One instance of particular importance occurred when a village chief's wife paid for tricycles for students with disabilities.³² The community was also able to assist students with disabilities in more day-to-day mobility issues beyond the support that RtP was able to provide. For example, an educational consultant described how after RtP provided carts, "parents no longer needed to bring their children to school, instead a classmate would be seen pushing their peers to class, so they would go to and from school together."³³ In this case, there is a twofold benefit for such interactions. One is that parents are able to focus their attention on other tasks. The second is opportunities for comradery between students, which aids in the process of integrating students with disabilities into the school community.

The qualitative data provide evidence that communities are making positive strides towards addressing the challenges in both enrollment and retention faced by students with disabilities. It is important to note, that in both cases the community was able to provide support after receiving initial support from RtP or from leaders in the community. These gains in increased educational access are noted in certain contexts.

EQ 5: WHETHER THE PROGRAM WAS ABLE TO HELP STUDENTS BUILD RESILIENCE IN ACHIEVING EDUCATIONAL GOALS IN THE FACE OF MULTIPLE DISRUPTIONS INCLUDING SCHOOL STRIKES AND COVID-19

Despite the positive points on educational access for girls and students with disabilities, the COVID-19 pandemic and teacher strikes brought an additional barrier to access that the community alone was not able to resolve. As such, the importance of the program's capabilities to address the challenges the pandemic and strikes brought about was explored in the survey, both quantitatively, and qualitatively.

During the time that this program was implemented, school was closed for a significant amount of time due to the global COVID-19 pandemic and teacher strikes. Because of this, teachers faced major barriers to teaching, and students also faced additional challenges in terms of attendance and learning. We inquired about these problems, and the factors of resilience that are helping the students during school closures. In this context, we think of resilience as the ability to stay in school and/or continue studies outside of the school setting if not available. Below we present teachers' responses on these topics. We do not observe any statistical differences between teachers from RtP and non-RtP schools in terms of barriers or resilience factors. Therefore, we have no evidence from the quantitative data that would indicate that the RtP program helped students build resilience in achieving their educational goals in the face of school closures. Similarly, no differences were

³² Original French: <<Comme l'a dit la femme du chef de village, le service du développement social a réuni tous les chefs de villages pour offrir des vélos tricycles aux handicapés, certains ont même des tricycles à moteur, en plus leurs collègues les assistent en poussant leurs vélos>> (93003_FOCUS APE (Ismaila DIAWARA B) BKO, p. 8).

³³ Original French: <<Oui, il y a eu des améliorations surtout les handicapés moteurs. Grâce à RTP ils intègrent, il y a même certains d'entre eux où ce n'est plus aux parents de les amener mais l'un de leur camarade pour les pousser grâce aux chariots ou tricycle et ils retournent ensemble >> (91002_ID DCAP (CAP BOZOLA) BKO).

detected based on the gender of the teacher--both male and female teachers reported the factors of resilience at similar rates (not shown).

TABLE 20: SCHOOL CLOSURE CONTEXT

	RtP SCHOOLS	NON-RtP SCHOOLS	DIFFERENCE
Issues facing students			
Lower level students	93.2	94.9	1.7
Incomplete education	84.9	76.9	8.0
Dropping out(students)	46.6	33.3	13.2
Dropping out (teachers)	17.8	10.3	7.6
Factors of Resilience			
Distance learning	39.7	38.5	1.3
Private Lessons	46.6	43.6	3.0
Tutoring	35.6	33.3	2.3
Remedial Courses	11.0	10.3	0.7
Parent follow-up	6.8	5.1	1.7

* $p < .05$

The ability to continue studying during school closures tests the efficacy of RtP programming. It should be noted that the strikes were not an unfamiliar occurrence. As reported in the midline report, a strike led to school closures (Macina et al, 2020, p. 12). As such, interruptions in student instruction is not a completely foreign occurrence to schools in Mali. Similarly, the COVID-19 pandemic was also noted as a source of closures in Mali during the midline assessment (Macina et al, 2020, p. 21). However, the negative impacts of the pandemic were not discussed in the midline report.

The qualitative data suggested that the presence of other donor and government interventions as well as teachers' level of resources and availability to hold supplementary classes at home and communities' willingness to support these additional interventions were all other factors that affected resilience.³⁴ A CAP official in Bamako pointed to distance courses as an inclusive method that supported out of school learners (91003). Some teachers were able to organize free catch-up courses at some RtP schools with support from the Parents Teachers Associations, which helped students make up for months of missed content (School Director, 92002). These factors were present in some RtP schools, but not systematically so. In addition, data on the non-RtP school responses to closures was not collected; therefore, we cannot be sure if these responses were unique to RtP schools. Some teachers suggested that RtP could support at home instruction by teachers during the times when schools are closed. This issue of equity was raised when at home instruction was discussed. If students have unequal access to such opportunities, it can cause jealousy and resentment. Participants one focus group noted how attempts to support some students with "catch up" classes were disrupted by other students who felt left out. Some school directors also reported mixed results with remedial classes or long distance learning (School

³⁴ See 95001_ID ONG RED_BAMAKO for other donor organizations, 93006_FOCUS APE (KALABAN COURA ACI) BKO for government intervention, 93006_FOCUS APE (KALABAN COURA ACI) BKO for teacher interventions.

Director, 92026). At least one respondent suggested the financial pressures on students during the COVID period meant that they were pursuing work options rather than attending remedial classes (Partner NGO, 95001).

ADDITIONAL KEY INDICATORS

In addition to the key indicators listed above, we also report on a few required indicators as requested by RtP. These include:

- 1.3 (Number of play-based learning pedagogical resources developed and distributed to the targeted educational institutions),
- 4.1 (Number of reading activities provided by parents, teachers, and the community (disaggregated by type)),
- 7.1 (cost per child), and
- 7.2 (cost per teacher).
- % of teachers who received a satisfactory score on the training post-tests (across the sub-tasks Knowledge, Skills, Attitudes)

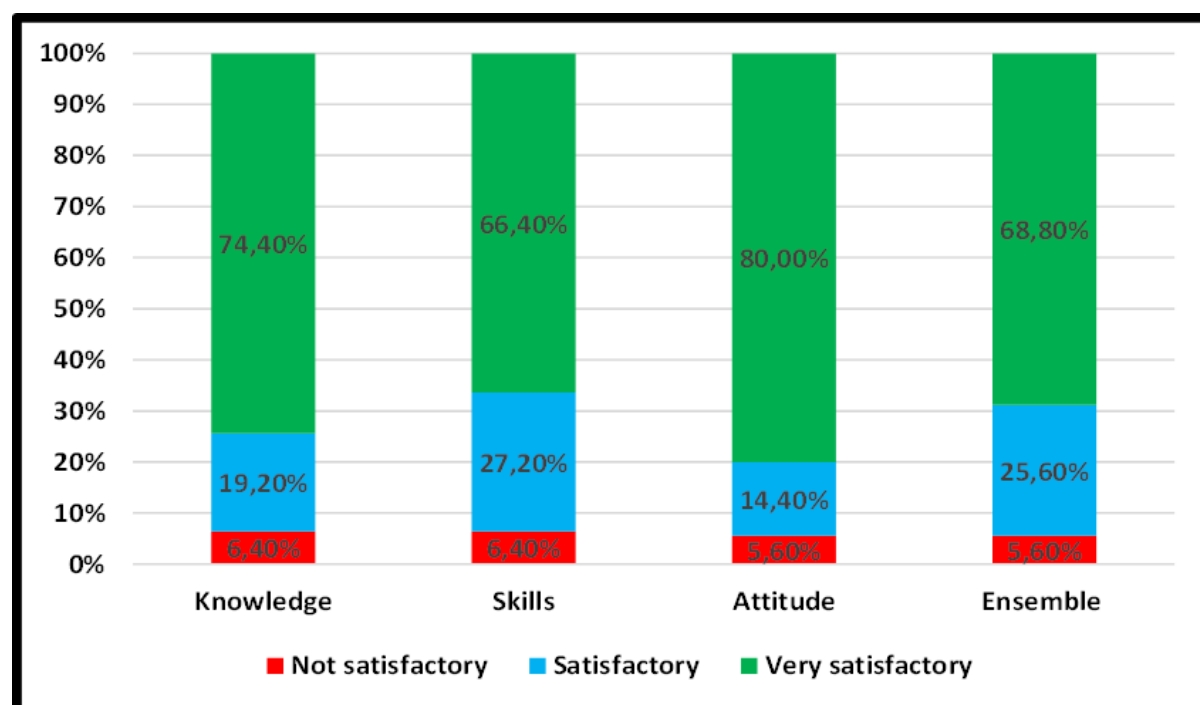
TABLE 21: ADDITIONAL KEY INDICATORS

Number of Teachers trained	1261
Men	640
Women	621
Number of Resources Developed	
Books	4
Pedagogical Guides	1
Curriculum	4
Number of Resources Distributed	
Reading Materials (Gr. 1 and 2)	20,358
Reading Materials (Gr. 3 and 4)	24, 226
Teachers Guides	800
Reading initiatives lead by teacher mentors	
Reading competitions	22
Reading Clubs	200
Cost	
Cost per Student served	8600 CFA
Cost per Teacher served	100, 000 CFA

Lastly, we provide data from the posttests of teachers at the end of their training (COTT). The results of the posttest indicate that, on average, 94% of teachers received a satisfactory score (with 25.6 % receiving a satisfactory score and 68.8% receiving a very satisfactory score). In each sub-category (knowledge, skills, and attitudes), we note the percentage of teachers who have a

satisfactory score surpasses 93%. Therefore, no matter the dimension, we can conclude that the teachers scored well on the posttest.

Figure 1: Teacher Scores on Post-Test, Across sub-Categories



ADDITIONAL FEEDBACK FROM STAKEHOLDERS

Finally, we report on additional feedback from stakeholders regarding the RtP programming. Such feedback does not fit neatly into the evaluation questions, but is still valuable feedback for future programming for RtP.

First, many directors expressed the desire for more regular and continued teacher trainers, particularly in environments where there was a high level of teacher turnover. In some rural schools, directors expressed a desire to be trained in RtP methodology as they had not previously been trained. It was rare that school directors reported Train the Trainer programs at their own schools. RtP could potentially invest resources in providing high-performing teachers with incentives to conduct train the trainer workshops at their own schools. Alternatively, directors could be invited to training more systematically and provided with non-financial incentives to hold Train-the-Trainer workshops when confronted with staff turnover.

Some staff at rural schools stressed that infrastructure problems (inadequate classrooms, materials) limited the effect of RtP. Some respondents stressed that the material shortages, poor instruction, and over-crowded classrooms make it difficult to create a truly welcoming classroom environment and for the teacher to do his or her job. CAP staff thought that it would be a great idea to have competitions and/or awards for particularly well-performing teachers.

A few school directors noted that there were challenges in adapting modules to the Malian context, but noted that Right to Play had actually made a lot of progress in adapting content (School Director, 92009, CAP Official 91003,) There are still some challenges that remain. One major issue

is the size of classrooms in some urban schools (some with more than 100 learners).³⁵ Respondents called RtP to think through how games are adapted to such a large group of learners. Relatedly, some school directors and CAP officials pointed to the need to better harmonize the games with the Malian curriculum and provide tips to teachers on how to specifically integrate games into the existing Malian curriculum because often the systematic integration of games into particular exercises/learning material was challenging (CAP 91001, CAP 91010). Some respondents thought the greatest room for improvement would be following up with teachers to review how they were using the games in class.

Another challenge was how to manage time introducing the game, while still completing the required curriculum. If not already in place, it might be productive to have a local committee review the existing materials to provide guidance on which games might be better adapted to the Malian classroom context/curriculum to provide more context-specific training and materials to participants. Additionally, some school and Ministry officials requested that they be better included in program planning in initial stages to facilitate this adaptation.

There were some requests for more materials in order to execute the games. In many places, Ministry of Education officials pleaded for an expansion of the program so that others could benefit. This was particularly true of rural localities where a minority of schools (within the overall school district) were benefitting, and provision was biased towards schools in more urban areas like regional capitals.

CONCLUSION

The PAQE-II program has achieved some positive results in terms of student reading competencies and life skills, teachers' use of positive discipline methods and provision of supplemental reading support. However, our study has not identified an effect on indicators related to enrollment, corporal punishment, students' liking for school, and students' ability to resolve conflict. Finally, we did not observe an ability to provide additional resources or improve resilience during recent school closures.

EQ 1: WHETHER OR NOT THE RIGHT TO PLAY PROGRAM HAS HELPED TO INCREASE STUDENTS' READING COMPETENCIES EQUIVALENT TO A MINIMUM PROFICIENCY 4TH GRADE LEVEL AND LIFE SKILLS

We observe a positive and statistically significant difference between students in RtP schools and those in comparison schools. These differences are observed across various items in the EGRA which test **foundational skills** (letter names or sounds read and familiar word reading, words read from a story) and more **advanced skills** (reading comprehension). Students in RtP schools performed better, on average, on all the skills listed. They did not perform better on the few skills which focused on listening (listening comprehension and initial sounds recognized). This could demonstrate a ceiling effect, as these skills are more relevant for early grade learners. Without pre-intervention data from comparison schools, we cannot be sure if these higher scores were caused by the program itself or by some other underlying factors. However, these differences give us an indication of a possibility of the impact of RtP programming on literacy outcomes which merits further investigation.

³⁵ A cap official noted how a classroom of 140 students makes it challenging to employ play based learning, but also the regular curriculum (91004).

Although we observe many differences between RtP and non-RtP students in terms of literacy, we note a very **low rate of students reading at grade level**. This is consistent for both RtP and non-RtP students. Specifically in RtP schools, this study finds that the target of 15% of RtP students reading at grade level was not achieved. The threshold for reading at a fourth grade level in Mali appears to be a fairly high standard, considering that a recent study of 2nd grade students in Mali found that they can, on average, only read 3 to 4 words per minute, and more than half of them cannot read a single word. Even when teachers were assessed using the EGRA tool, they could only read 27-100 words per minute, meaning that some teachers in Malian schools are not reading at what is considered a fourth grade reading level (Pouezevara, 2015). So it is not too surprising that the fourth grade students in this study fail to achieve this standard.

Another aspect of a positive learning environment is access to **supplemental support for reading**. This includes access to reading clubs, tutors, reading activities, and knowing to ask for help with reading at home. Across all of these indicators, we observe positive and statistically significant differences between students in RtP schools, compared with those in non-RtP schools.

We similarly observe differences between RtP students and non-RtP students on several key indicators for life skills. Students in RtP schools score higher in terms of **communication, teamwork, and participation**. When differences are observed, they seem to apply equally to both boys and girls. We observe quite large differences for students with disabilities in RtP schools, when compared with students with disabilities in non-RtP schools. However, caution should be exercised in the interpretation of these differences, since there are so few students with disabilities in the sample. Therefore this difference could be spurious. No differences are observed between students in RtP schools and non-RtP schools on the indicator of conflict resolution.

EQ 2: IF THE PROGRAM WAS ABLE TO IMPROVE THE LEARNING ENVIRONMENT IN SCHOOLS

From the teacher surveys, we observe that RtP teachers feel **more confident** in their use of PBL techniques than those in non-RtP schools, and that they were more likely to use something from the RtP training in their classrooms. These differences are particularly large for male teachers. Teachers are also more likely to implement gender sensitive and inclusive play-based learning methods into their teaching practices than their colleagues in non-RtP schools. Targets were mostly met for both respect for a positive learning environment and the use of PBL methods.

In terms of student responses, we don't observe many differences in indicators related to students' appreciation of school. This is likely because all students' responses to these questions were quite high, regardless of treatment status. Conversely, students report extremely **high rates of corporal punishment** in schools. Again, this rate does not consistently differ by treatment status; however, we do observe reductions in the use of the whip among boys in RtP schools compared with non-RtP schools. In addition, students in RtP schools were more likely to note that their teacher used some type of **positive discipline method**. This indicates that some RtP teachers, while not completely abandoning their use of corporal punishment, are attempting to use other methods to maintain order in the classroom.

EQ 3: WHETHER THE PROGRAM WAS ABLE TO INCREASE ENROLLMENT INCLUDING GIRLS AND STUDENTS WITH DISABILITIES

Data on enrollment was not available; therefore, we rely on sampled population for some indicator on enrollment. Given that rigorous sampling methods were not used, it is likely that our understanding of enrollment is not exact. However, we observe similar ratios of girls' and CWDs' enrollment as were detected in the baseline and midline studies. Qualitative data indicate the challenge faced by girls in terms of school attendance. In particular, respondents mention girls' responsibilities in the home which inhibit their ability to attend school. We similarly see special roles for girls in schools, indicating that these norms hold both in the school and at home. It is not likely that the RtP intervention had an effect on enrollment rates of girls and students with disabilities.

Our qualitative findings indicate that there has been an increasing trend in the enrollment of both girls and students with disabilities. Multiple respondents describe cases where there are more girls in school than boys. There are also references to the positive benefits of girls' educational access which increase the overall retention of girls in school. Despite the progress there are still limitations that exist in providing girls with educational access. From notions of school "not being for girls" to issues where girls take on a majority of domestic work or are expected to marry young. Moreover, girls also suffer from early pregnancy which limit their educational attainment opportunities.

For students with disabilities the qualitative data demonstrates an increased enrollment in this student population. Reasons for this increase were tied to improved mobility options for students with disabilities and work towards breaking down preconceived notions of what it means to have a disability. However, the data on students with disabilities is limited and there exists instances where individuals interactions with such students are nonexistent. Nevertheless, the qualitative data provides some anecdotal evidence of improved enrollment for students with disabilities.

Beyond enrollment, we explore *equal participation* by all students in the classroom. Here we observe contradictory responses from students, who simultaneously reported that everyone is treated equally in the classroom, but also that boys and girls have special roles. Students in both RtP and non-RtP schools report this at similar rates. This means that RtP was likely not successful in dismantling traditional classroom roles for boys and girls.

EQ 4: WHETHER THE COMMUNITY IS ABLE TO RESPOND TO CHALLENGES FACING - ACCESS AND LEARNING FOR GIRLS AND STUDENTS WITH DISABILITIES

When exploring the community's ability to address the challenges girls and students with disabilities face, qualitative evidence demonstrates a discrepancy in tactics and community activity in addressing educational access issues. In the case of girls, little reference is made to community support. Instead the majority of qualitative data discussing the topic places the discussion within the family setting: parents are the ones who need to address the issues and shortcoming of their daughters' educational obstacles. For students with disabilities, we see mobility issues as the main area where community engagement emerges. Ultimately, in either case, the ability for parents and the community to respond to the issue underserved students face is based upon the support they receive from RtP programming.

EQ 5: WHETHER THE PROGRAM WAS ABLE TO HELP STUDENTS BUILD RESILIENCE IN ACHIEVING EDUCATIONAL GOALS IN THE FACE OF MULTIPLE DISRUPTIONS INCLUDING SCHOOL STRIKES AND COVID-19

Teachers were asked to name barriers to education faced by students when schools are closed, and what modalities are available to help them overcome these barriers even when schools are closed. Teachers in both RtP schools and non-RtP schools name similar barriers for students, and similar ways to support students. No difference is observed between RtP schools and non-RtP schools on these indicators. Therefore, we cannot conclude that the program significantly helped students build resilience in achieving their educational goals during the strikes and closures.

RECOMMENDATIONS

The following recommendations are for future educational programs that aim to use the play-based learning as a tool for ameliorating student outcomes. We focus on four themes: improvement of current programming, educational environment, knowledge on underserved students, and evaluation-related recommendations. The goal of these recommendations is to strengthen the efficacy of RtP programming, but they may also be applicable to similar play-based education programs.

CONTINUE CURRENT PROGRAMMING AND MAKE IMPROVEMENTS

RtP programming showed success in several key areas such as literacy and life skills, and reductions in use of some types of corporal punishment. In particular, RtP students seemed to surpass their counterparts in non-RtP schools in many literacy indicators, and the life skills of teamwork, communication and participation in the classroom. And the RtP teachers have reduced their use of some types of corporal punishment. We recommend that RtP continue activities focused on literacy, life skills, and positive discipline.

Still, we identify several opportunities for improvement. For example, students have achieved minimal gains in the life skill area of conflict resolution. Therefore we advise a deeper focus on this topical area in future programming. For example, in combining positive discipline with conflict resolution, teachers could be trained to make an argument that occurs in the classroom become a teaching lesson for the whole class on how to resolve conflict.

Qualitative data also indicate a strong desire for continued training for teachers. One way to achieve this is through **coaching visits**. RtP could establish a system of coaches who visit trained teachers periodically. Such a deep investment in a school can also help the teachers and school leadership achieve change in terms of more deeply entrenched cultural topics, such as use of corporal punishment or gendered roles in the classroom.

Another reason for the request for continued teacher training was due to high rates of teacher turnover, an issue identified by school officials. Even if their teachers are trained, they are soon replaced by new teachers who are untrained in play-based pedagogy.³⁶ We recommend that RtP create a structure and process for **Train the Trainer/refresher workshops**. These workshops can allow teachers to discuss the application of pedagogy more regularly, share best practices, and teach

³⁶ We did not capture information on the factors driving teacher turnover, which has previously been cited as a problem in Mali (Tietjan, 1999). The problem could be structural or individual.

new teachers about PBL in the context of high teacher turnover. In addition, future research can investigate the causes of such high rates of turnover. Depending on the driving factors of the turnover, RtP could attempt to mitigate or reduce the levels of teacher turnover in their program schools.

A similar recommendation was brought forth in the qualitative data on ***incentives for high-performing teachers***. As part of their programming, RtP can implement awards, prizes, access to leadership opportunities or public recognition to encourage teachers to stick to the pedagogy. Teachers face need to work hard to cover the curriculum efficiently, so offering incentives can help them keep the PBL practice in the face of these competing needs.

While contextualization is an important component of the RtP approach, school officials still noted that the PBL materials were not well aligned with the Malian national curriculum. Therefore, we recommend that RtP work with a ***Malian curriculum committee***, made of partners from the Ministry of Education and experienced teachers who use PBL review. The committee may review the existing materials to provide practical guidance on a) which games were most useful (and when) b) how some might be better adapted to the Malian classroom, and c) to evaluate how the games could support the Malian curriculum to provide more context-specific training and materials to participants. Right to Play has made progress on adapting curriculum, so this committee could build and expand on positive learning based on these previous experiences.

Lastly, education officials noted the current challenge they were facing in sustaining the program after its closure. Future programming can improve on ***planning for sustainability*** after project close. Agreements of what components of the RtP programming could be transferred to Ministry of Education, and what components could be continued by teachers at project close could be created from the beginning of a future project. For the PAQE-II activity, the extension phase could be used as a time to create such sustainability plans and enter into agreements with school officials.

RESILIENCE IN THE FACE OF SCHOOL CLOSURES

A unique challenge identified in this study are the repeated school closures. We provide recommendations for dealing with future closures and for catching up students who experienced interrupted education.

First, because it did not appear that RtP teachers employed any unique tactics in supporting students during school closures, in comparison with non-RtP teachers. Future RtP programming could better equip teachers to support students during closures by assisting them in the ***creation of school closure contingency plans***. Such contingency plans should be careful to provide equitable access to out-of-school youth. For example, providing short recordings via Whatsapp would exclude students who do not easily have access to a data or internet connection. Providing short lessons or activities over local radio stations may be a more equitable way to reach more students.

Second, students who have now missed a significant amount of schooling have automatically passed to the next grade. During the extension phase of this project, we recommend that RtP support teachers in the implementation of supplementary activities to help students catch up to the correct grade level. These activities could include afterschool support, summer programming, rapid assessments, or trainings on differentiated instruction in the classroom. RtP should look to learn from best practices that were deemed to be inclusive and effective in designing programming for out of school students. EDUCO was one of the initiatives reported to be offering remedial courses to students in the period, so staff could follow up on lessons learned from them.

EDUCATIONAL ENVIRONMENT

The results from the endline evaluation highlight several critical facts related to discipline. Given the high rates of the use of corporal punishment reported by students, as well as the low rates of positive discipline methods used in the classroom, we recommend a programmatic focus on **reducing corporal punishment** in the classroom more deeply in future iterations of programming. To accomplish this, RtP may consider linking their educational programming with the child protection thematic area. Achieving such a change involves a deep cultural or normative change. Teachers need to feel empowered to use positive discipline methods; school leadership needs to support and endorse the abolition of corporal punishment in their schools; parents and community members need to agree that such methods are preferable to corporal punishment techniques. In short, the use of corporal punishment is not something that can be easily changed. RtP can work to achieve this goal through targeting training for school leaders, regular mentorship and coaching for teachers, and community outreach activities.

Qualitative findings indicated that school infrastructure is often so poor that it is difficult to create a positive learning environment. The program should consider **conducting school infrastructure assessments** and working with other NGOs or the Ministry of Education to coordinate classroom upgrades and new materials to try to meet a basic threshold that would facilitate learning.

SUPPORT FOR UNDERSERVED STUDENTS

Next, we observe contradictory impacts on the topic of **equal status in the classroom**. We note that it is still very common for boys and girls to have special roles in RtP classrooms. This division of labor by cultural or gendered norms could reinforce the demand for girls to adhere to such norms outside the classroom as well. This could result in an exit from education for girls due to the need to complete chores at home, or practicing early marriage. We recommend that RtP tackle this issue by offering training on non-gendered classroom roles and responsibilities. Coaching visits can help to monitor the success or failure of such training.

We also note that there is not yet a strong understanding of the definition and value of inclusive education among education officials and parents. Future programming could raise awareness on these topics through trainings for school officials and outreach activities for community members. Provision of resources to support CWD should consider the practicality of the needs and the preservation of independence and dignity of CWDs.

Girls and students with disabilities were the two groups that RtP aimed to serve through their programming. Results show girls scored well on literacy and realized some powerful gains in terms of life skills. Students with disabilities were also seen as an important population needing educational services. Due to school closures and issues with study design, the impact of the RtP programming on enrollment rates of these two groups is unclear. Future monitoring efforts could track enrollment of these groups at all RtP schools. A future evaluation could carefully look at enrollment across all RtP schools, or conduct a community-level assessment which could help quantify the number of out-of-school youth in these categories. This data could be collected during the extension phase of the PAQE-II program.

EVALUATION-RELATED RECOMMENDATIONS

The information provided for this endline study was hindered due to extreme circumstances, namely school closures due to teacher strikes and COVID-19. Within the context of the given constraints,

we believe this report sheds some light on the potential impact of the RtP programming. However, we believe that future evaluations can offer stronger evidence on the effects of this programming for students in Mali and elsewhere. We recommend the following to address some of the data quality issues.

This study faced challenges in data analysis because different evaluator teams were used for baseline and midline studies compared with the endline. In the future, RtP could identify an external evaluator consultant or firm who can commit from the start to conduct all three rounds of data collection. This can allow that evaluator to take a proactive role in determining a rigorous study design, and help with consistency in analysis and reporting to RtP.

The threshold for reading at grade level in Mali appears to be an unattainable target for many Malian students currently. This could be due to frequent school interruptions, or because the threshold is quite high. We recommend that RtP lower the target for reading at grade level to 10%. Additionally, we also recommend that RtP track other literacy indicators. RtP could use three indicators which would track students' progress on phonemic awareness (letter sound identification per minute), fluency (correct words read per minute), and high level reading skills (reading comprehension). Targets could be developed from a baseline study.

The inclusion of comparison schools helped us understand how RtP schools compared with other schools in the area, but without pre-intervention data, we cannot confidently say that the differences observed constitute the impact of the intervention. We strongly urge RtP to support an external evaluator who can **design an experimental or quasi-experimental study from the start** of a new intervention. This can help RtP to quantify the impact their programming is having on students, and where improvements are needed.

In the absence of the opportunity to conduct classroom observations, or the resources to develop more detailed tools, this study mostly relied on self-reported data. Self-reported assessments of life skills often suffer from social desirability bias. In the future, assessments could rely on teacher reports, classroom observations or more creative assessments of these skills, such as games or drawing exercises. The ISELA tool includes such activities.

Future studies should explore how to **capture more information on students with disabilities or enrollment data**. For example, a data collection focused on enrollment can include a community-level data collection to more accurately estimate the number of out-of-school youth, and what proportion of those youth suffer from a disability. This is a costly endeavor but could be worth the cost in order to accurately quantify the number of out-of-school youth who are facing problems such as a disability. In addition, our survey tool followed the baseline and midline assessments in order to maintain continuity with previous data collections. We recommend that future evaluations utilize the Washington Group questions for categorizing disability across various domains. The WG group question sets have been utilized in international education and humanitarian settings, so they would be appropriate for the Malian context (Corby, 2019).³⁷

³⁷ The question sets are either written for administration directly to the respondent (if the respondent is an adult), or to the caregiver (if the respondent is a child). If they are used in the classroom they may require adaptation. RtP should follow best practices in this regard.

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APPENDICES

APPENDIX 1: RFP

[RFP PAQE II Mali final evaluation 08 April 2021 \(1\).docx](#)

APPENDIX 2: INCEPTION REPORT

[NDInceptionReportAug15.docx](#)

APPENDIX 3: FIELD REPORT

[2. Rapport_de terrain_20_septembre_12h30.docx](#)

APPENDIX 4: INSTRUMENTS

School Checklist: [3. QUEST_CHECK_LIST_ECOLE.xlsx](#)

Teacher Survey: [2. QuestionnaireEnseignant.pdf](#)

Student Survey and EGRA: [Student Survey FINAL VERSION.pdf](#)

Director Key Informant Interview Guide: [3. Guide_Directeur_16Aout_12h30.docx](#)

CAP Key Informant Interview Guide: [4. Guide_CAP_16Aout_12h30.docx](#)

APE Key Informant Interview Guide: [5. Guide_APE_16Aout_12h30.docx](#)

Leader Key Informant Interview Guide: [6. Guide_leader_Mairie_16Aout_12h30.docx](#)

APPENDIX 5: COMPARISON OF INDICATORS SINCE BASELINE

Indicators	Disaggregation	Baseline	Midline	Endline
1000.I : Percent and number of children in target schools that have attained the minimum score in reading for the 4th grade level	Female	0%	6.6%	6.2%
	Male	0%	7.8%	6.6%
	CWD	0%	0%	8.2%
	TOTAL	0%	7.2%	6.4%
2000.I : Percent and Number of children in target schools that have demonstrated improved life skills (communication, teamwork, and conflict resolution) in 4th grade.	Female	23%	80%	87.2%
	Male	20%	82%	85.4%
	CWD	0%	75%	81.6%
	TOTAL (TEAMWORK)	22%	82%	86.3%
	Female	15%	76%	74%
	Male	16.5%	77%	83.1%
	CWD	0%	75%	92.5%
	TOTAL (COMMUNICATION)	16%	76%	78.5%
	Female	42.5%	78%	75.1%
	Male	40.7%	76%	76.6%
	CWD	0%	75%	81.7%
	TOTAL (CONFLICT RESOLUTION)	41.7%	77%	75.8%
2100.I Number of teachers formally trained in the use of play-based teaching methods, inclusive and gender-sensitive, in order to obtain the teaching qualifications in accordance with government standards.	Female	0	221	621
	Male	0	316	640
	Total	0	537	1261
2.2.I Percentage and number of teachers that put inclusive and gender sensitive play based learning into their teaching practice (disaggregated by level and sex)	Female	20%	86%	82.2%
	Male	9%	82%	89.3%
	Total	15.04%	84%	84.7%

2.2.2 % and number of teachers trained who received a satisfactory grade in the post test for COTT	Total	NA		94.4%
2.2.3 Percentage and number of technical personnel in the who state being better informed about play based learning	Female	NA	24%	73.3%
	Male	NA	35%	85.7%
	Total	NA	32%	79.5%
3.1 Percentage and number of teachers that respect the principles of a positive learning environment (disaggregated by sex)	Female	22%	100%	75.6 %
	Male	22.2%	100%	50 %
	Total	22.12%	100%	65.8 %
3.2 : Percent and number of girls and boys that have positive associations with school (disaggregated by sex and students with disabilities)	Female	35%	75%	74.7%
	Male	30.00%	66%	73.1%
	CWD	13%	0%	74.0%
	Total	24.50%	71%	73.9%
6.1 % of community members and leader who can easily identify at least 3 ways to overcome the obstacles to education facing girls and children with disabilities		NA	NA	57%
6.2% of community members and leaders who state an increase in knowledge of ways to eliminate obstacles to education for girls and students with disabilities		NA	NA	33%
GLOBAL INDICATOR Value for Money: Cost per student	Total	NA	15,580 CFA	8600 CFA
GLOBAL INDICATOR Value for Money: Cost per teacher	Total	NA	62, 297 CFA	100, 000 CFA

APPENDIX 6: ADDITIONAL ANALYSIS

TABLE A1: PERCENT OF STUDENTS READING AT GRADE LEVEL, TESTS BY GENDER

	RtP SCHOOLS	DIFFERENCE
Average Reading Score by Gender	6.44	0.39
Boys	6.63	
Girls	6.24	
Average Reading Score by Ability	10.9	9.06
Able Bodied	6.37	
CWD	15.43	

* $p < .05$

TABLE A2: TEACHER READING MATERIAL USE, BY GENDER

	RtP SCHOOLS	NON-RtP SCHOOLS	DIFFERENCE
Average Reading Material Use	53.5	33.7	19.8
Men	53.6	47.4	6.2
Women	53.3	20.0	33.3*

* $p < .05$, Note: Numbers may not add up due to rounding

TABLE A3: POSITIVE LEARNING TACTICS

	Frequency	Percent
1 factor	36	32.14
2 factors	54	48.21

3 or more factors	22	19.64
Total	112	100.00

TABLE A4: TEACHER CONFIDENCE IN INCLUSIVITY TRAINING, NON-RTP SCHOOLS

	NON-RtP SCHOOLS	DIFFERENCE
Average Confidence	43.28	23.44
Men	31.56	
Women	55.00*	

* $p < .05$

TABLE A5: TEACHER CONFIDENCE IN INCLUSIVITY TRAINING, RTP SCHOOLS

	RtP SCHOOLS	DIFFERENCE
Average Confidence	79.52	12.38
Men	85.71	
Women	73.33	

* $p < .05$