2014 final evaluation report: Teachers' literacy knowledge, instructional practices, and their students' reading performance in PAQUED-supported schools in the Democratic Republic of Congo

September, 2014

Submitted by Education Development Center, Inc.
Agreement #: AID-623-A-09-00010

Executive Summary

The *Project d'Amélioration de la Qualité de l'Education* (PAQUED), funded by the United States Agency for International Development (USAID) and led by Education Development Center (EDC), is a five-year program spanning 2009-2014 focused on improving the quality of basic education in 3,000 schools in the Democratic Republic of Congo (DRC). In its initial stages, the project centered around three objectives: improving the quality of teaching and teachers' mastery of content, improving student mastery of subject content, and improving the school learning environment. The project's interventions included the introduction of over 600 Interactive Audio Instruction (IAI) programs for reading and math, which mirrored the national curriculum; the training of over 30,000 teachers in French and Math content; the production and distribution of cluster-directed professional development modules; the rehabilitation and construction of training centers; the distribution of teaching and learning kits; and the training of 3,000 communities on school governance and on improving the school learning environment. In response to USAID's new strategy (launched in 2012 with a goal of 100 million children demonstrating improvements in reading by 2015) and to external midterm review findings that revealed project activities to be spread too thinly given the large terrain and numbers of schools outlined in the initial project design. PAQUED realigned in January 2013 to focus primarily on improving student reading outcomes. Certain components of the PAQUED program like IAI, self-directed training, community support, and kit distribution were continued, and a robust experimental reading program was introduced in 45 PAQUED schools. This reading program combined intense training, coaching, and the production of teaching and learning materials, as well as community mobilization activities centered on reading.

This report presents the results of a comparative evaluation study that was conducted post-realignment, between March 2013 and May 2014. The study focused on three groups of teachers in grade 1 to 6: experimental school teachers, IAI-only teachers, and control teachers. It endeavored to understand how teachers were using the various PAQUED interventions available to them and how their knowledge of teaching reading and their literacy instructional practices may have changed as a result of these interventions. Finally, the study also sought to understand whether there was any difference in how grade 1 and 2 students performed in reading as a result of their teachers' participation in the interventions and acquisition of literacy knowledge and practice.

In summary, the findings from this study show that experimental teachers' knowledge of how to teach reading and writing is more closely aligned with sound literacy instruction than their IAI-only and control counterparts. Experimental teachers' practice also changed significantly within a year of using the reading program. As a result, the performance of the students of these experimental teachers in key reading skills like letter identification and fluency showed

dramatic differences in comparison to their control counterparts. Linear regression analysis conducted establishes significant links between teachers' application of PAQUED interventions and student performance. Specifically, experimental teachers' IAI usage, their fidelity of implementation of the reading program, and their participation in continuing professional activities and visits from coaches were shown to contribute to changes in teacher practice, teacher knowledge of literacy instruction, and student performance. Many of these findings are supported by the separate PAQUED 2014 Endline Report of EGRA and EGMA produced by Research Triangle Institute (RTI).

Table of contents

Figures and Tables

Acronyms

CPD	Continuing Professional Development
CRS	Catholic Relief Services
CTB	Cooperation Technique Belge (Belgian Technical Cooperation)
CWPM	Correct Words per Minute
EDC	Education Development Center
EGRA	Early Grade Reading Assessment
IAI	Interactive Audio Instruction
MEPSP	*Ministère de L'Enseignement Primaire, Secondaire et Professionel*
PAQUED	*Projet d'Amelioration de la Qualité de L'Education*
RTI	Research Triangle Institute
USAID	United States Agency for International Development

Introduction

In 2014, the DRC Ministry of Education (*Ministère de L'Enseignement Primaire, Secondaire et Professionel,* MEPSP) launched new policy initiatives intended to improve the quality of literacy teaching and learning. In February 2012, the National Reading Commission, established by the DRC Ministry of Education, proposed new performance standards for reading and writing for all six primary school grades in French and national language. The new performance standards were part of a "roadmap" (*feuille de route*, in French) of key tasks to develop, implement and effectively monitor progress toward achieving the goal of improving the state of literacy education in the country. The reading roadmap includes the development of a new reading curriculum and pedagogical tools to support implementation.

The five-year USAID-funded *Projet d'Amelioration de la Qualité de L'Education* (PAQUED) project aligned with these national initiatives by developing and implementing a research-based reading instructional approach for Grades 1 and 2 in selected project schools. The experimental reading program aimed to provide a platform for testing key inputs from the roadmap. These inputs include the content standards, an evidence based instructional sequence, and text-leveling criteria and guidelines, which the Reading Commission has developed as part of the proposed new national reading curriculum. The training approach designed for the experimental program provided multiple opportunities for teachers to learn and reflect upon the new approaches.

PIEQ began the process of developing and testing the new program by identifying 45 experimental schools in the three provinces where the project operates. 16 schools were identified in Bandundu, 16 in Equateur, and 13 in Orientale. Grade 1 and 2 teachers in these schools benefited from ongoing training, coaching, a detailed daily lesson structure and accompanying activity guide, and leveled reading materials. The leveled reading materials, developed for both classroom and student use, drew upon themes and content within the official DRC language curricula (both for national languages and for French). These texts were developed according to provisional benchmarks and text-leveling criteria developed and adopted by the National Reading Commission, which was established late in 2012 by the Ministry of Education. Classroom activities and strategies outlined in these materials mirror the Ministry-validated student learning standards. Experimental school teachers also continued to benefit from PAQUED's Interactive Audio Instruction (IAI) and other project inputs (e.g., video training modules).

618 additional PAQUED project schools (referred to as *the IAI-only schools)* benefited from IAI, project training on IAI, French and Math content knowledge, and self-directed learning modules for professional development, occasional visits from a PAQUED project team member, and materials like student kits, classroom materials (chalk, rulers, math kits), mp3 radios, and teacher guides, but did not receive the other supports associated with the reading program. The remaining 2,382 PAQUED project schools were provided with IAI programs, training, and kit materials but were less likely to receive visits from a

PAQUED agent, as they were largely inaccessible due to distance, security, and limited transport options. These 2,382 schools were not included in the study described in this document, since the project's realigned focus had shifted to the experimental and IAI-only schools.

A comprehensive study was undertaken to identify how teachers in the experimental and IAI-only schools evolved over the course of the program in terms of their classroom practices, knowledge about literacy instruction, dispositions (i.e., attitudes) toward literacy and literacy instruction, and changes in student performance. Initial findings show marked improvement in teachers' knowledge and skills over baseline, as well as improved student performance on letter-sound, vocabulary, and fluency measures. Data collected via individual interviews, classroom observations, and focus group interviews of Grade 1 and 2 teachers show improvements in their knowledge and practice for developing a range of student skills, including letter-sound knowledge, decoding/encoding, vocabulary, fluency and comprehension. These results suggest that the reading program, including the integrated use of IAI instruction, positively impacted teacher knowledge and practice in support of the development of students' literacy skills.

This report presents the results of the study and highlights key elements of the reading program intervention that are believed to have contributed to results. First, we describe the study sample and the theory of change on which this study was based. Thereafter, the discussion is divided into two sections: the first focusing on the results for grade 1 and 2 students and teachers, who were the primary targets of the reading program, and the second focusing on grade 3 to 6 teachers, whose exposure to the program came through cluster training with grade 1 and 2 peers and IAI literacy materials for grades 3-6.

Chapter 1 is presented into two parts: The first part presents student reading performance data and the possible linkages to students' exposure to PAQUED intervention and the changes in their teachers' practice and knowledge. The second part dives deeper into the findings related to teacher knowledge of how to teach reading and writing and changes in teachers' literacy instructional practices from baseline to endline. These results are linked to the various PAQUED interventions made available to teachers. Chapter 2 explores grade 3 to 6 teachers' knowledge of reading and writing and their change in practice from baseline to endline, linking these results to PAQUED interventions.

The report concludes with a discussion of recommendations and lessons learned for future projects and policies derived from a data and results workshop attended by the DRC Ministry's National Reading Commission in August 2014.

Study participants

This study examined 3 distinct groups of teachers: teachers who benefited from PAQUED's intensive daily reading program (experimental school teachers) plus Interactive Audio Instruction (IAI); teachers who benefited only from PAQUED's IAI programming (this group represents 98% of PAQUED intervention schools); and teachers who did not benefit from the PAQUED program at all (control school teachers). The study was designed as a matched pair study (see Annex A) to permit both longitudinal and cross-sectional analysis. Teachers within each school were selected randomly from the PAQUED teacher database at baseline in February 2012.

At baseline, the study participant sample size was pre-determined based on a matched-pair design using a one tail, .5 effect size (α=.025, β=.8) providing the following breakdown of teachers to be surveyed and observed:

TEACHERS	Experimental	IAI -only	Control	
grade 1-2	35	35	35	
grade 3-4	35	35	35	
grade 5-6	35	35	35	
total	105	105	105	315

Taking into account general attrition, teacher mobility across grade-levels, and subsequent replacement teachers selected to participate in the study, the distributions changed over the course of endline and baseline. The tables and figures below provide an overview of our sampled population of teachers disaggregated by grade level taught, status and province, and their average classroom sizes. The distribution of teachers by province and status were fairly evenly distributed with the exception of Oriental where IAI-only teachers represent a greater percentage of the sample across grade levels.

Teacher Sample by province and grade

Table 1. Frequencies of sampled grade 1 and 2 teachers by province and status at endline

Status	Province	N
Control	Bandundu	34
	Equateur	38
	Orientale	53
Experimental	Bandundu	29
	Equateur	30
	Orientale	25
IAI-only	Bandundu	30
	Equateur	43
	Orientale	56

Table 2. Frequencies of sampled grade 3 and 4 teachers by province and status

Status	Province	N
Control	Bandundu	42
	Equateur	30
	Orientale	36
Experimental	Bandundu	30
	Equateur	30
	Orientale	28
IAI-only	Bandundu	33
	Equateur	46
	Orientale	62

Table 3. Frequencies of sampled grade 5 and 6 teachers by province and status

Status	Province	N
Control	Bandundu	39
	Equateur	32
	Orientale	26
Experimental	Bandundu	26
	Equateur	27
	Orientale	23
IAI-only	Bandundu	29
	Equateur	29
	Orientale	53

In terms of gender differences in teachers sampled, it is interesting to note the drop-off of female teachers in grade 5 and 6 for IAI-only and control schools. This is consistent with the DRC-based stereotype male teacher for older students. For experimental schools though, this trend wasn't as pronounced.

Teacher Sample by sex and grade

Table 4. Frequencies of sampled grade 1 and 2 teachers by sex and status

Status	Sex	N
Control	F	36
	M	53
Experimental	F	54
	M	15
IAI-only	F	66
	M	32

Table 5. Frequencies of sampled grade 3 and 4 teachers by sex and status

Status	Sex	N
Control	F	21
	M	53
Experimental	F	29
	M	38
IAI-only	F	59
	M	46

Table 6. Frequencies of sampled grade 5 and 6 teachers by sex and status

Status	Sex	N
Control	F	8
	M	53
Experimental	F	18
	M	21
IAI-only	F	21
	M	46

In addition to teacher demographics, it is also important to consider teachers' mean class sizes because larger class sizes are often correlated with teacher and student performance. Interestingly, the sample revealed slightly bigger mean class sizes in experimental schools versus IRI-only and control schools. However, this does not mean that experimental schools necessarily had higher enrollment rates. This measure was captured at the beginning of every classroom observation, when the enumerator would draw a map of the class and count the number of boys and girls. Therefore, this suggests that student attendance may be better in experimental schools over IAI-only and control schools.

Mean class size by status and gender

Table 7. Mean class size disaggregated by sex per grade 1 and 2 teacher sampled by status

Status	Sex	Mean	Total mean
Control	Girls	14	30
	Boys	16	
Experimental	Girls	19	37
	Boys	18	
IAI-only	Girls	17	35
	Boys	18	

Table 8. Mean number of students disaggregated by sex per grade 3 and 4 teacher sampled by status

Status	Sex	Mean	Total mean
Control	Girls	14	27
	Boys	13	
Experimental	Girls	25	44
	Boys	19	
IAI-only	Girls	19	39
	Boys	20	

Table 9. Mean number of students disaggregated by sex per grade 5 and 6 teacher sampled by status

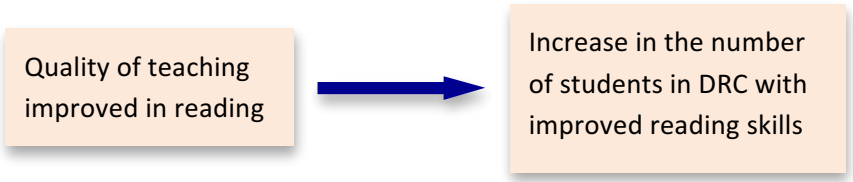
Status	Sex	Mean	Total Mean
Control	Girls	12	26
	Boys	14	
Experimental	Girls	25	40
	Boys	15	
IAI-only	Girls	16	34
	Boys	18	

Grade 1 to 6 teachers were sampled from the 3 PAQUED intervention provinces. Within these provinces, data was collected from randomly selected schools in the sub-divisions as follows:

Table 10. Number of schools sampled by sub-division

Bandundu	Orientale	Equateur
Kikwit (N=13)	Kisangani (N=17)	Mbandaka (N=14)
Bandundu-ville (N=5)	Bunia (N=9)	Boende (N=5)
Gungu(N=5)	Isiro (N=4)	Gemena (N=4)
Masi-Manimba (N=5)		Zongo (N=3)
Kenge (N=4)		Gbadolite (N=5)

Approximately half of the sample was drawn from RTI's midline evaluation schools in order to permit triangulation of results between student performance and teacher practice and knowledge. The remaining half of the sample was selected based on school cluster divisions; that is, if an experimental school was selected in the RTI midline sample, those schools that were already designated as "clustered" with those schools were also selected to be experimental. This is consistent with **PAQUED's Objective 2 theory of change**, which posits:



This theory of change is based upon teacher use and application of PAQUED tools and resources provided. More specifically, under "quality of teaching improved" PAQUED endeavored to explore what type of approach would foster this improved quality of teaching and beyond this, how to discern the potential of this approach for sustained and internalized improvement in teaching beyond the length of the program.

Improving quality of teaching in reading

If we give teachers an explicit reading program to follow in their classrooms
AND
We give them opportunities for learning and reflection (including collective reflection/exchange with their peers)
THEN
Teachers will gain an understanding of literacy learning needs and processes among their students
AND will appropriately apply instructional techniques and strategies in the classroom.
AND will change their dispositions vis a vis reading and writing instruction

This study searches to confirm or to disconfirm this theory of change and explores the following questions:

1. How are grade 2 students in control and experimental schools performing in reading at the end of school year 2013/14?
2. How are teachers applying the PAQUED interventions available to them?
3. How do teachers' classroom practices link to their students' performance in reading?*
4. How do teachers' understanding of effective reading instruction link to their students' performance in reading?*
5. How do teachers' use of the PAQUED interventions link to their students' performance in reading?*
6. How did teachers' classroom practices change over 1.5 school years AND are these changes linked to their use of the PAQUED interventions available to them?
7. What do teachers understand about effective reading instruction AND is this knowledge linked to their use of the PAQUED interventions available to them?

**This question is limited to grade 2 students and teachers only*

The first five questions will be addressed in the first section on grade 2 student reading performance. The following two questions will be addressed in the sections on teachers' practices and teachers' knowledge. For chapter 2 on grade 3 to 6 teachers, only questions 2, 6, and 7 will be answered given this study did not collect reading performance data for grades 3 to 6 students.

Chapter 1: Grade 1 and 2 student and teacher results

PAQUED reading program:

The reading program was designed to provide stakeholders (most importantly, the Ministry) with a robust model for transforming teachers' instructional practices and knowledge of how to teach reading; thereby improving student performance. The program included the following components:

- Government-validated Standards and benchmarks from which all materials were designed
- Comprehensive face-to-face teacher-training on effective reading strategies and on the use of instructional materials
- Teacher activity guide keyed to curriculum, teaching strategies, and materials, presented simple language (French) accessible to the teachers
- Teacher read-aloud books (1/week per class)
- Decodable / Leveled texts (1/week per class)
- 30-minute IAI lessons focused on developing reading skills (1/week per class)
- Monthly in-class Coaching/Mentoring by a coach trained in reading
- Adequate, dedicated daily teaching time focused on reading
- Teacher-led weekly meetings in a school-based learning circle focused on reading.
- Teacher-led monthly meetings with peers in a multiple-school learning circle focused on reading.
- Community support/participation through reading clubs or *Espace Communautaire d'Eveil en Lecture* (ECEL).

The training was designed to launch within the PAQUED project's final year of operations. Therefore, it aimed to quickly respond to grade 1 and 2 teachers' needs for knowledge and skills (i.e., practice) development in three areas: subject matter (literacy), pedagogy (i.e., the learning process) and instructional practice in reading and writing. The scope and depth of teachers' identified needs at baseline presented a challenge: how could the program develop teachers' knowledge and skills quickly, following a comprehensive, research-based pedagogical approach, while at the same time supporting rapid improvement of learners' skills in reading and writing? PAQUED addressed this problem by developing a series of structured classroom teaching and learning activities which repeated themselves weekly, to help teachers master strategies and continue to practice them. These activities shared a basic lesson structure, beginning with the development of learners' knowledge of letters and sounds and how to apply this knowledge to decode and encode new words. The program facilitated rapid teacher mastery of instructional strategies by repeating certain instructional activities several times during the week. This approach aimed to promote the development of teachers' understanding of literacy learning needs and processes among early grade learners, on the one hand, and their ability to effectively apply appropriate instructional techniques and strategies, on the other hand. This practice-based approach designed to foster teacher change via ongoing application and reflection[1] was vital to the program's success.

[1] The approach is based upon Schon's (1987) "knowledge-in-action", in which teachers develop the knowledge and skills for effective reading and writing instruction while applying research-based instructional strategies in the classroom.

The training component of the program entailed two training workshops, regular mentoring support and teacher learning (i.e., discussion) forums/learning circles. In an initial weeklong face-to-face training, participating teachers learned the basic steps to correctly execute literacy lesson activities via lesson demonstrations and group discussion. The project then reinforced teachers' skill development through regular mentoring or "coaching" classroom visits and teacher-led discussion forums. At the beginning of every week, teachers also participated in peer-to-peer coaching and lesson preparation, to further enhance their capacity to correctly execute activities and apply techniques and strategies for developing learners' skills. A second five-day face to face training workshop was given midway through the year to help teachers better understand, improve on, and add to the activities they had become comfortable implementing. Overall, these trainings and ongoing teacher support contributed to teachers' motivation and confidence in implementing the structured program in their classrooms and provided them with forums for sharing their students' progress and continuing difficulties. The section that follows presents results of Grade 2 student performance after benefiting from one year of the reading program intervention.

Grade 2 student reading performance

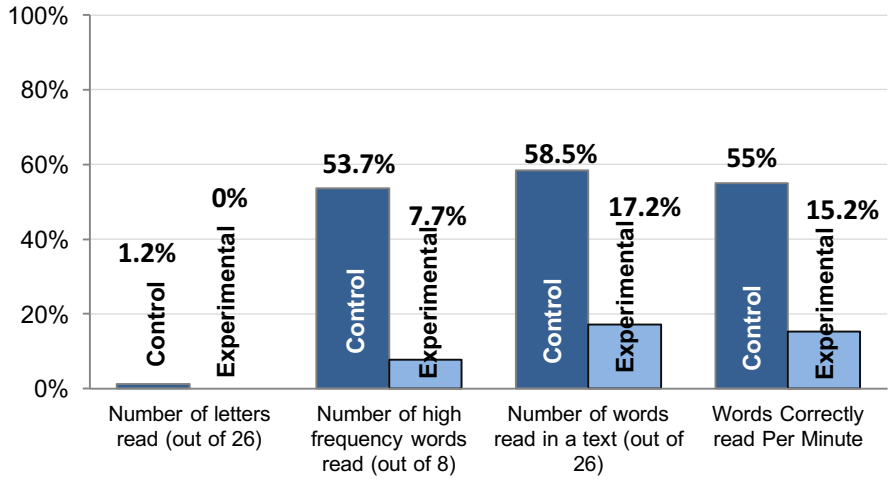
Although student reading performance was captured in RTI's PAQUED 2014 Endline of EGRA and EGMA performance, the Grade 2 reading data largely focused on pre-reading skill testing, skills that were chosen by a Ministry committee at test adaption in 2009. In order to capture more advanced reading skills targeted in the grade 1 and 2 reading program, a short reading assessment tool was developed by EDC to measure fluency (accuracy and automaticity) and alphabetic awareness. The sub-tests employed were letter identification, high frequency words, and connected-text subtests adapted from existing EGRA tools from Mali. Students tested were randomly + who participated in the study (see sampling and methodology in Annex A). This was to offer the opportunity to triangulate teacher practice, knowledge, and fidelity of implementation with student performance results. Unfortunately, insufficient numbers of IAI-only students were tested in this study, which explains their omission from this section of the discussion and analysis. It should also be noted that the number of students participating in this part of the study remains low. However, RTI's more extensive PAQUED 2014 Endline of EGRA and EGMA performance also shows positive trends in different reading sub-tests for grade 2 experimental school students. For example, grade 2 experimental school students progressed significantly in their identification of graphemes from baseline to endline. Below is a summary of student results disaggregated by status (experimental and control) and disaggregated by province and status.

Table 11. Summary descriptive statistics of grade 2 student performance in reading sub-tests by status

Sub-task	Status	Mean	SD	p-value	Cohen's D	Effect size
Number of letters read (out of 26)	*Experimental (N=169)*	20.96	5.4	.000	-2.11	0.73
	Control (N = 82)	10.2	6.71			
Number of high frequency words read (out of 8)	*Experimental (N=169)*	4.39	2.63	.000	-1.46	0.59
	Control (N = 82)	1.21	2.005			
Number of words read in a text (out of 26)	*Experimental (N=169)*	11.24	9.25	.000	-1.27	0.54
	Control (N = 82)	2.22	5.014			
Words Correctly read Per Minute	*Experimental (N=169)*	9.8	13.73	.000	-1.03	0.46
	Control (N = 82)	1.22	3.69			

The table above reveal that grade 2 students in experimental schools performed significantly better than their control and counterparts in all sub-tasks (p=.000) at endline in May 2014. The graph below illustrates the differences in zero scores across subtests, that is, students who could not identify or read a single letter or word. For number of letters read, all grade 2 experimental students were able to identify at least one or more letters whereas 1.2% of control students were not able to identify a single letter. For high frequency word reading, only 7.7% of grade 2 experimental students were unable to read a single word out of eight whereas 53.7% of control students were unable to do so. In terms of percent accuracy in reading a connected text, only 17.2% of grade 2 experimental students were unable to read a single word out of eight whereas almost 59% of control students could not read one word.

Figure 1. Percentage of students with zero scores by status



Given the large numbers of zero scores, it is useful to look at results omitting non-reader's scores in order to capture a realistic view of reader's performance. The table below summarizes results omitting the zero scores. Overall, omitting these scores drives up mean scores slightly in each subtest with the exception of numbers of letters read for experimental school students for whom none had zero scores in that subtest. Despite omitting zero scores, experimental students still significantly outperformed their control counterparts across subtests (p=.000).

Table 12. Summary descriptive statistics of grade 2 student performance in reading sub-tests by status omitting zero scores

Sub-task	Status	Mean	SD	p-value	Cohen's D	Effect size
Number of letters read (out of 26)	*Experimental (N=169)*	20.96	5.4	.000	-1.71	0.71
	Control (N = 81)	10.32	6.65			
Number of high frequency words read (out of 8)	*Experimental (N=156)*	4.75	2.4	.000	-1.36	0.56
	Control (N = 38)	2.61	2.25			
Number of words read in a text (out of 26)	*Experimental (N=140)*	13.57	8.45	.000	-1.55	0.61
	Control (N = 34)	5.35	6.66			
Words Correctly read Per Minute	*Experimental (N=117)*	11.56	14.22	.000	-.99	0.44
	Control (N = 27)	2.72	5.17			

Student performance by province

Grade 2 experimental school student performance in varied significantly from province to province. The table below shows a summary of scores across all subtests for each province.

Table 13. Summary descriptive statistics of grade 2 student performance in reading sub-tests by province and status

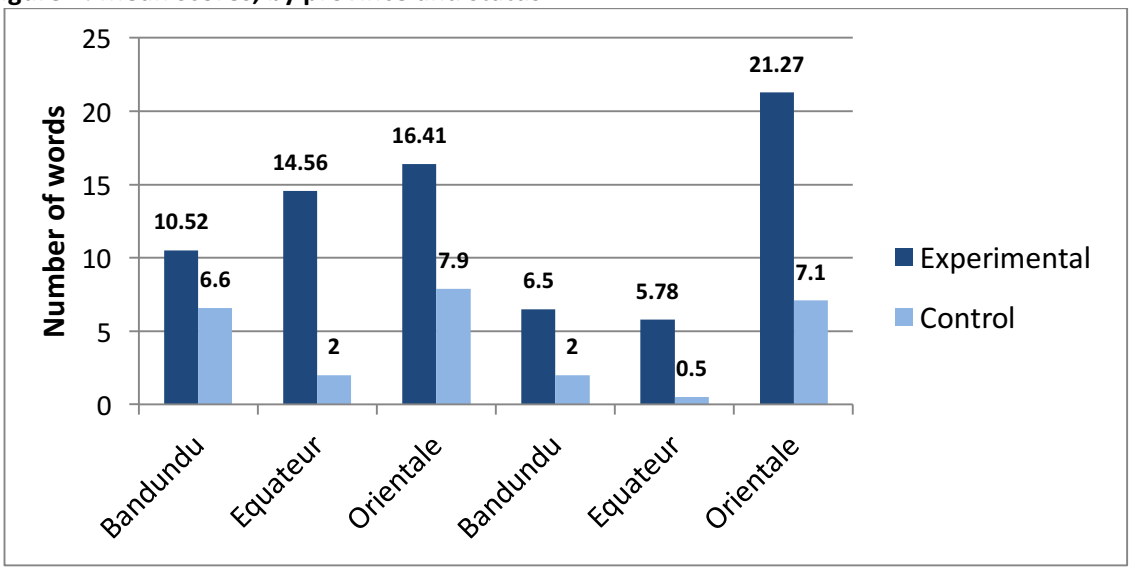
Province	Sub-task	Status	Mean	SD	p-value	Cohen's D	Effect size
BANDUNDU (N= 107)	Number of letters read (out of 26)	*Experimental (N=81)*	19.26	6.23	.000	-1.69	0.65*
		Control (N=26)	11.77	5.631			
	Number of high frequency words read (out of 8)	*Experimental (N=81)*	3.9	2.9	.000	-1.29	0.54*
		Control (N=26)	1.31	2.478			
	Number of words read in a text (out of 26)	*Experimental (N=81)*	7.67	8.6	.002	-0.78	0.36
		Control (N=26)	3.04	5.67			
	Words Correctly	*Experimental*	4.75	8.6	.001	-0.75	0.35

	read Per Minute	*(N=78)*					
		Control (N=17)	1.04	1.5			
EQUATEUR (N=55)	Number of letters read (out of 26)	*Experimental (N=32)*	20.69	.403	.000	-2.51	0.78*
		Control (N=23)	9.61	6.31			
	Number of high frequency words read (out of 8)	*Experimental (N=32)*	4.31	1.91	.000	-1.97	0.7*
		Control (N=23)	1.26	1.3			
	Number of words read in a text (out of 26)	*Experimental (N=32)*	12.28	7.78	.000	-2.7	0.8**
		Control (N=23)	1.04	1.64			
	Words Correctly read Per Minute	*Experimental (N=19)*	5.77	3.51	.000	-3.14	0.84**
		Control (N=18)	0.33	0.35			
ORIENTALE (N=89)	Number of letters read (out of 26)	*Experimental (N=56)*	23.57	3.42	.000	-3.2	0.84**
		Control (N=33)	9.36	7.67			
	Number of high frequency words read (out of 8)	*Experimental (N=56)*	5.14	2.44	.000	-1.91	0.68*
		Control (N=33)	1.09	2.07			
	Number of words read in a text (out of 26)	*Experimental (N=56)*	15.82	8.85	.000	-1.85	0.67*
		Control (N=33)	2.39	5.9			
	Words Correctly read Per Minute	*Experimental (N=41)*	21.27	17.47	.000	-1.82	0.67*
		Control (N=25)	1.99	5.54			

**effect size is medium*
***effect size is large*

For the letter reading and high frequency words sub-test variation between provinces remained stable. However, for connected text reading, in experimental schools in Orientale, students significantly outperformed not only their control counterparts in that province but also their experimental counterparts in Bandundu and Equateur in their percent accuracy and in their number of words read per minute (p=.000). This can be explained by several factors that were found to positively and significantly correlate with student results. These are teachers' fidelity of implementation of the reading program and teachers' knowledge and classroom practices. These will be discussed further below.

Figure 2. Mean scores, by province and status



Number of words read correctly in a connected text (out of 26)

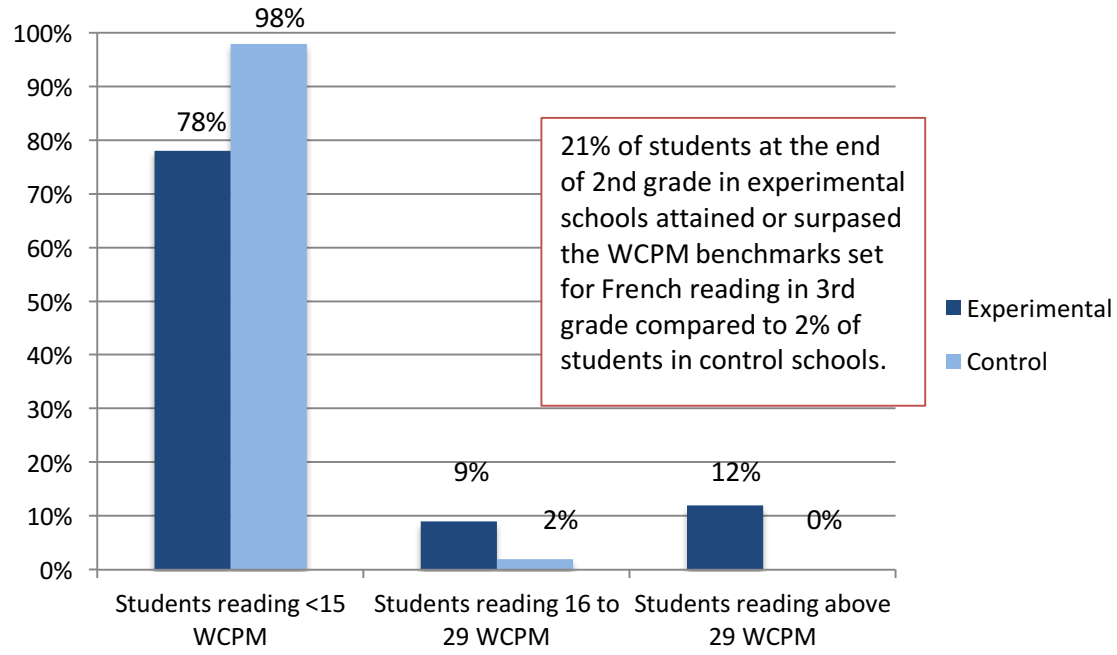
Number of words read correctly per minute

**performance for Orientale experimental schools for WCPM is p=.000*

Student performance relative to benchmark

The DRC government set provisional benchmarks for different reading competencies in February 2012 for both national language and French. Because students in grade 1 and 2 are intended to learn to read in national languages, no benchmarks were set for reading fluency in French for grade 2. However, benchmarks were set for grade 3. The figure below shows the proportion of experimental and control schools who are below the benchmark, at benchmark, and above the benchmark. 12% of grade 2 experimental students read above fluency benchmark for French set for grade 3, 9% read at benchmark and 78% read below the benchmark. In contrast to this, only 2% of grade 2 control students showed to read at benchmark for fluency and 98% read below benchmark.

Figure 3. Students' performance in WCPM against national benchmarks set for 3rd grade



Student performance and PAQUED interventions: As mentioned earlier, analysis revealed student performance to be positively and significantly linked to several factors to teachers' fidelity of implementation of the reading program, teachers' knowledge and teachers' classroom practices. The data specifically revealed that student performance was significantly linked to two factors: rates of IAI listenership and their teachers' fidelity of application of the reading program. Below is an outline of the degree to which teachers applied or participated in certain PAQUED interventions available to them.

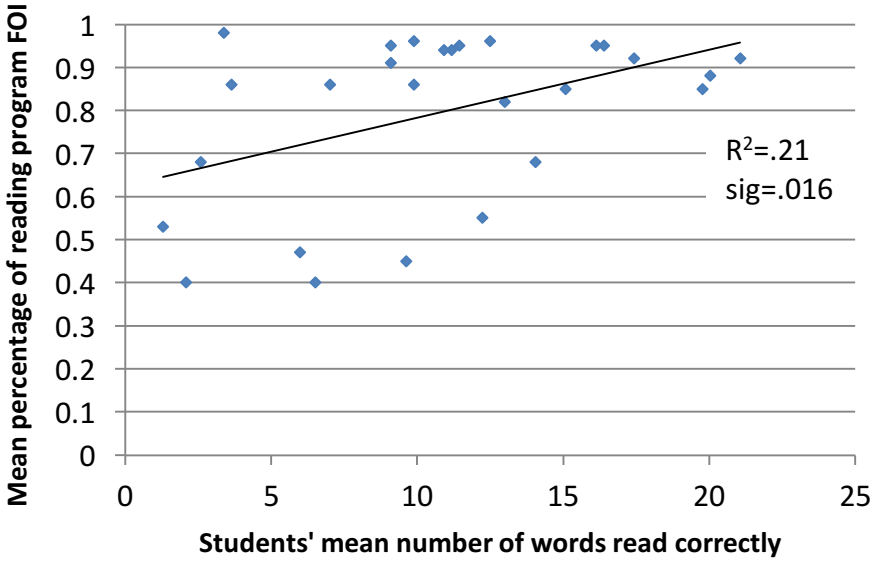
Table 14. Fidelity of implementation data for grade 1 and 2 teachers by school treatment status

Experimental N= 69						IAI-only N= 96	
Fidelity of implementation of reading program rate		Participation in CPD[2]		IAI listenership		IAI listenership	
Mean	St. Dev.	Mean	St. Dev.	Mean	St. Dev.	Mean	St. Dev.
.88	.13	.71	.15	.86	.067	.51	.28

Overall, experimental teachers used and/or followed the various elements of the PAQUED intervention as designed. Despite this, experimental teachers' employment of only one of these interventions correlated significantly with student performance: fidelity of implementation of the reading program. Linear regression showed that 21% of the variation in mean student performance in connected text reading correlated positively and significantly (p=.016, d=1.01, ES=0.45) with their teachers' fidelity of implementation of the reading program.

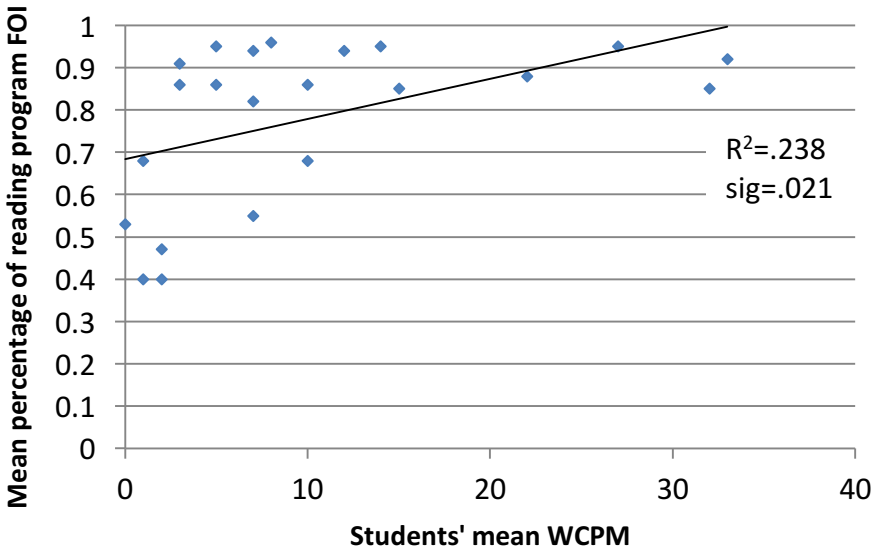
[2] CPD= Continuing professional development. This is a composite scores including rates of teacher participation in school-based and cluster based meetings available to them and number of monthly coaching visits from facilitators or PAQUED staff.

Figure 4. Teacher's fidelity of implementation (FOI) of the reading program and their students' mean performance in number of words read correctly



In addition to this, 23.8% of the variation in student's mean words correct per minute can be explained by teachers' following the reading program the way it was designed (p=.021, d=1.09, ES=0.479).

Figure 5. Teacher's fidelity of implementation (FOI) of reading program and their students' mean WCPM



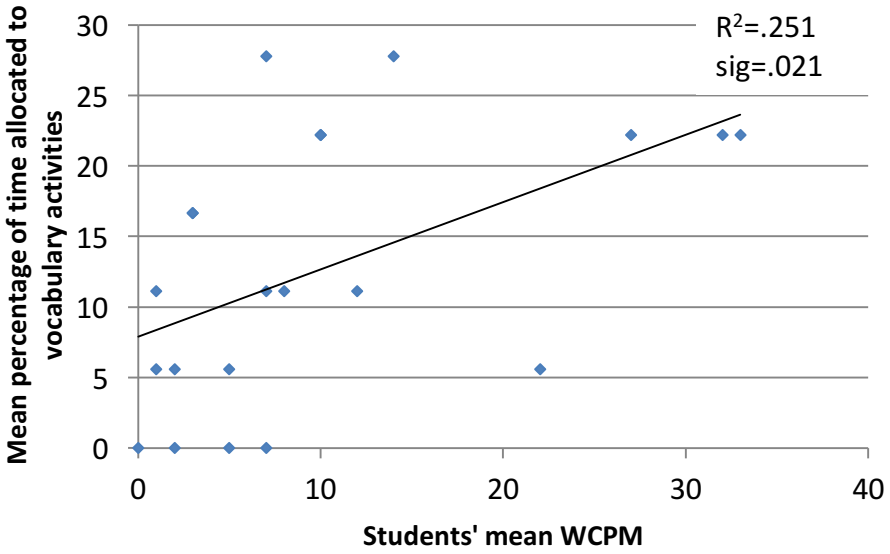
This correlation points to the importance of teachers following a program as it is designed. On average, teachers in experimental schools followed 88% of the reading program activities as they were devised. This was higher for Orientale and Equateur provinces where teachers showed to apply more than 90% of the reading program appropriately. Due to low numbers of teachers as matched with students tested, correlations of fidelity of implementation of the reading program and mean student performance cannot be presented by province.

Other PAQUED interventions such as IAI listenership were assumed to have an impact on student performance in reading. This is because the programs were broadcast directly into the classroom and were designed to engage the students just as much as they were to provide continuous training to the teachers. Unfortunately, linear regression analysis found no significant correlation between IAI usage and student performance. A possible explanation for this lack of significant correlation is twofold: the lack of data on student absenteeism and time on task, and the very low exposure to IAI programming that was called for in grade 1 and 2. Student absenteeism is also a major issue in the DRC because attendance is directly linked to the student's payment of fees (exam fees, enrollment fees, etc). When students are not able to pay these fees, they are barred from attending school. Therefore, even if teachers are present to listen to the IAI, it is not certain that every student benefited equally. Secondly, in grade 1 and 2, only one 30-minute program was provided for reading per week. On average, teachers in experimental schools showed to use more of the IAI programs available to them than their IAI-only counterparts and, variation of usage for these two groups of teachers was also much lower for experimental school teachers. This is likely due to IAI's integration in the reading program weekly activity calendar. Still, given the low dosage of IAI programming per week, it is little surprise that IAI listenership was not significantly correlated with student reading performance.

However, because this sample size is fairly small, conclusions are difficult to draw. The 2014 PAQUED EGRA/EGMA report produced by RTI, a larger scale study, establishes the relationship between student performance on the grapheme recognition subtask and PAQUED interventions. This report showed that teacher participation in continuing professional development (CPD) activities was found to have substantial impact on student performance in this sub-task ($p = 0.0387$). This correlation is consistent with teachers' assertions in focus groups, which revealed that they believed IAI to be a useful tool for oral language development and engaging students in numerous pre-reading activities like stretching out words to hear individual sounds, cutting up words by syllable, etc. Taking this all together, this suggests that IAI when used regularly and in the context of a robust reading program, can bear positive results and provide sound models of teaching reading. This suggestion is consistent with conclusions drawn by the Ministry Reading Commission's analyses of data collected from various sources (EDC, RTI, and Mukendi, 2014).

Student performance and teacher practices: In addition to teachers' application of PAQUED interventions, it is also interesting to better understand how teachers' practice and their knowledge of teaching reading links to student reading performance. According to PAQUED's theory of change, improvement in teacher classroom practices concerning literacy will influence student performance. Research suggests that teachers' explicit modeling and instruction of the component skills of reading and writing will benefit students' reading acquisition. In the reading program, activities often involved a combination of reading and writing to develop skills like phonological and alphabetic awareness, fluency, vocabulary building and comprehension. However, linear regression analysis indicated that only teachers' application of vocabulary activities was strongly correlated with students' reading performance on certain sub-tests. The graph below shows that 25.1% of the variance in students' mean fluency (WPCM) can be explained by a teachers' application of vocabulary activities in the classroom ($p=0.021$, $d=1.13$, $ES= 0.49$).

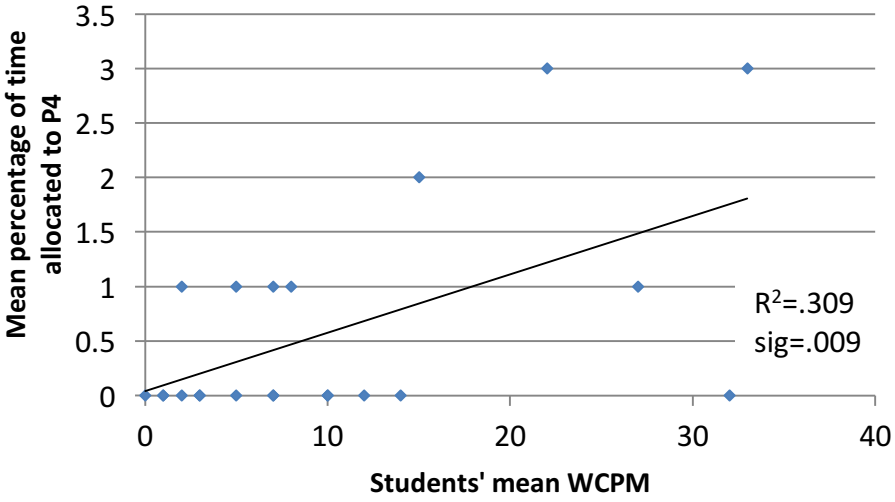
Figure 6. Experimental teacher's application of vocabulary practices at endline and their students' mean WCPM



While vocabulary activities may not seem directly linked to improving reading fluency, the specific types of vocabulary activities that correlated significantly with student performance expose students to text thereby providing opportunities for students to develop familiarity with sight word vocabulary. For example, a teacher's application of pre-reading activities like making predictions and discussing illustrations and new vocabulary embedded within a text explained 20.1% of the variance in student's fluency (WCPM) (p=.021, d=0.978, ES=0.44). Such activities inevitably engage students with the reading of new words, which can be linked to developing decoding skills necessary for building fluency.

Student performance in reading a connected text was also significantly correlated with their teacher's application of engaging students in correcting their spelling. For example, the graph below demonstrates that experimental teachers engaging in the practice of asking students to engage in correcting their invented spellings can explain 30.9% of the variation in students' mean WCPM (p=.009, d=1.3, ES=0.55). In the reading program, students are asked encode words that contain a phonics pattern studied that week. This is to help them apply their knowledge of letter-sound relationships. When teachers ask students to correct their spellings, this suggests that students are brought to reinforce these letter-sound relationships that will help them decode words that contain those same patterns.

Figure 7. Experimental teachers' application of P4 at endline and their students' mean WCPM

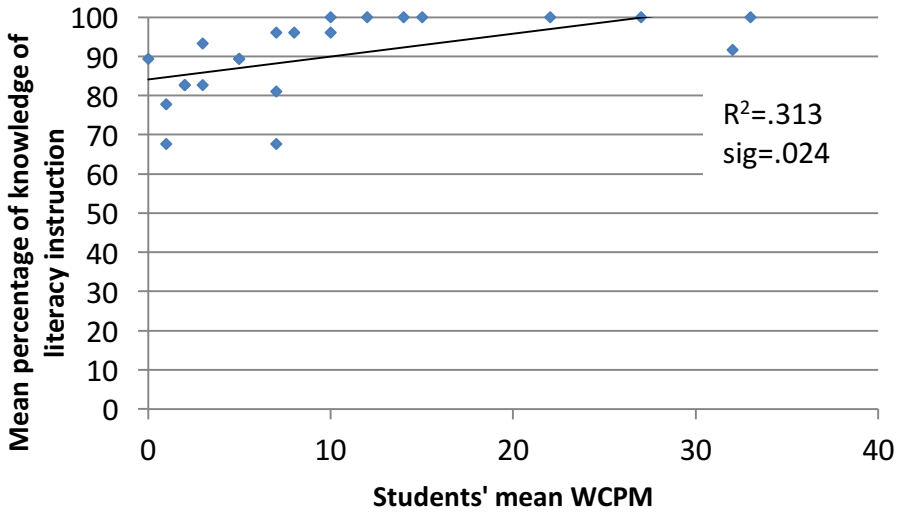


Generally, it was expected that analysis would have revealed more significant links between teacher practice observed at endline and mean student performance. This may be due to the limited number of reading skills tested. Still, those links that emerged from the data point to the importance of pre-reading activities and to students engaging in correcting their own writing.

Student performance and teacher knowledge: PAQUED's theory of change also hypothesizes that teachers' knowledge of teaching reading and writing play just as important of a role in predicting student reading outcomes as classroom practice does. In this case, teachers' knowledge are measured by teachers' answers to questions about specific practices and their utility and suitability for teaching reading and writing to grade 1 and 2 students. This is consistent with the teacher results in the following section that show direct links between the PAQUED interventions and teachers' understanding about how students learn to read. Therefore, it is interesting to see what predictors of teacher knowledge and dispositions seemed to explain the variation in student reading outcomes.

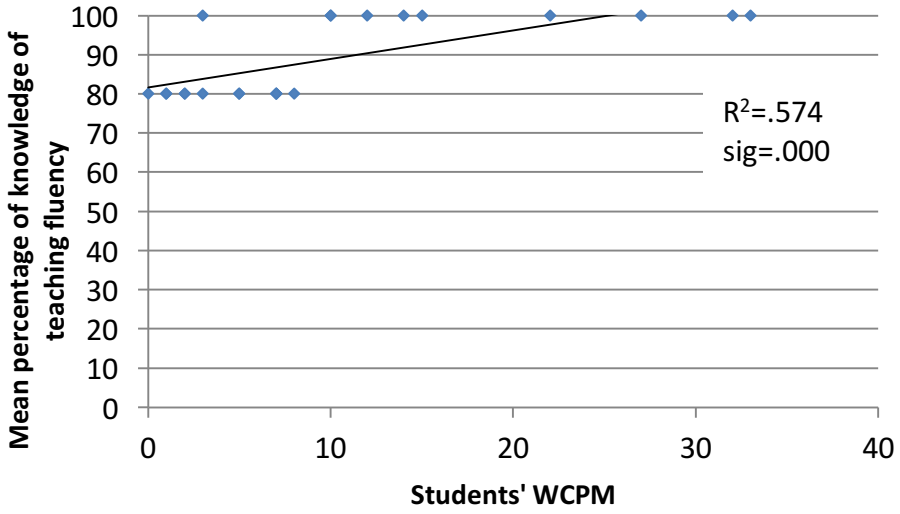
Overall, experimental teachers' total demonstrated knowledge in the endline interview were shown to be significantly and positively correlated with their student's performance in reading of a connected text (p=.045, d=1.096, ES=0.48) and their fluency in doing so (p=.024, d=1.166, ES=0.5). This is demonstrated in the graph below showing that 31.3% of the variation in students' mean WCPM is explained by their teachers' overall knowledge of teaching reading.

Figure 8 .Experimental teacher's total mean knowledge of literacy instruction and their students' mean WCPM



Analyzing teachers' knowledge of teaching various component skills of reading and writing it was first found that teachers' knowledge of teaching fluency correlated significantly with students' mean reading high frequency words (p=.032, d=1.1, ES=0.48), connected text (p=.019, d=1.22, ES=0.52) and their fluency (p=.000, d=2.25, ES=0.75). The graph below shows that 57.4% of the variations in students' mean WCPM is predicted by their teachers' knowledge of how to teach fluency.

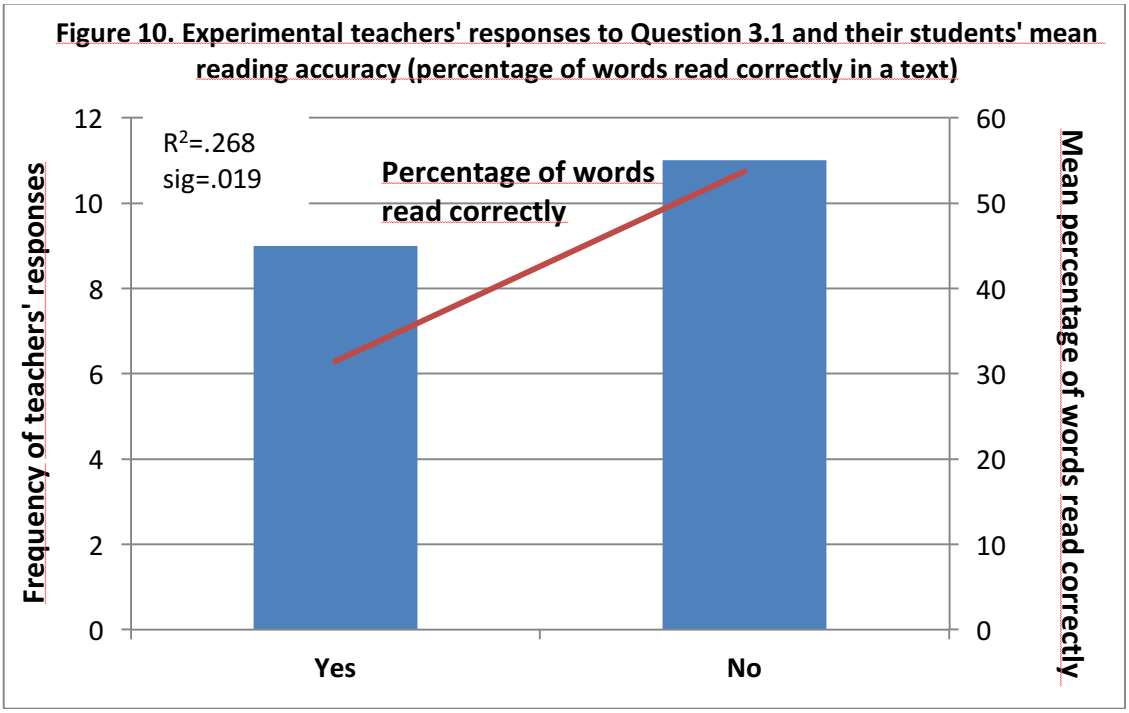
Figure 9. Experimental teacher's total mean knowledge of teaching fluency and their students' mean WCPM



This is supported by item analysis which shows experimental teachers' response to Question 3.1 (see below) *"is it always important to read for students so they can learn to read",* was negatively and significantly correlated with student's reading of high frequency words (p=.028, d=1.09, ES=0.48) and the mean percentage of words correctly read in a text (p=.019, d=1.18, ES=0.51). This is positive as it denotes that teachers' allowance of their students to read on their own does correlate with students' reading performance. These finding also suggests that teachers are passing the baton to students,

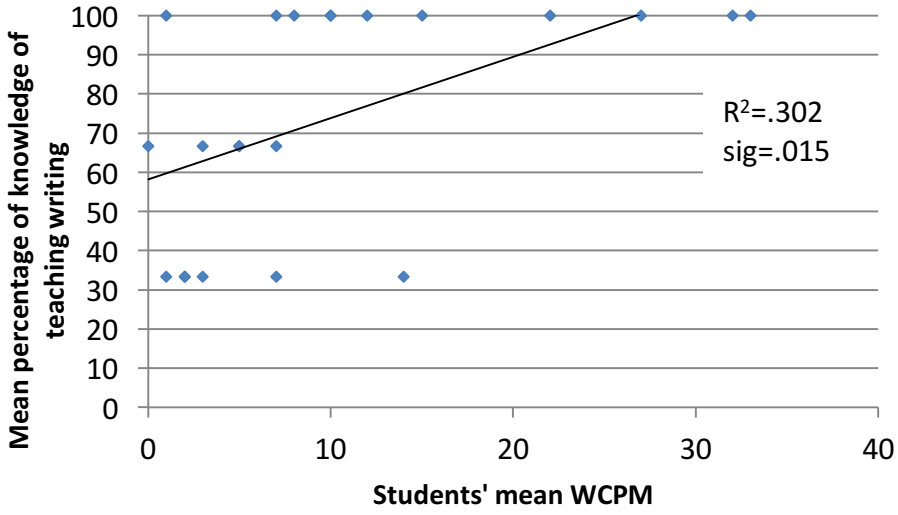
incorporating the *gradual release model* laid out in the reading program, and allowing students to take responsibility for their own learning. This is further supported by the focus group findings, which point to teachers' higher expectations of learners' reading capabilities especially to perform decoding and other reading and writing tasks independently.

Figure 10. Experimental teachers' responses to Question 3.1 and their students' mean reading accuracy (percentage of words read correctly in a text)



Teachers' knowledge of teaching writing and integrating writing into their reading lessons was also positively and significantly correlated with student abilities to read a connected text (p=.027, d=1.07, ES=0.47) and their WCPM (p=.015, d=1.28, ES=0.75).

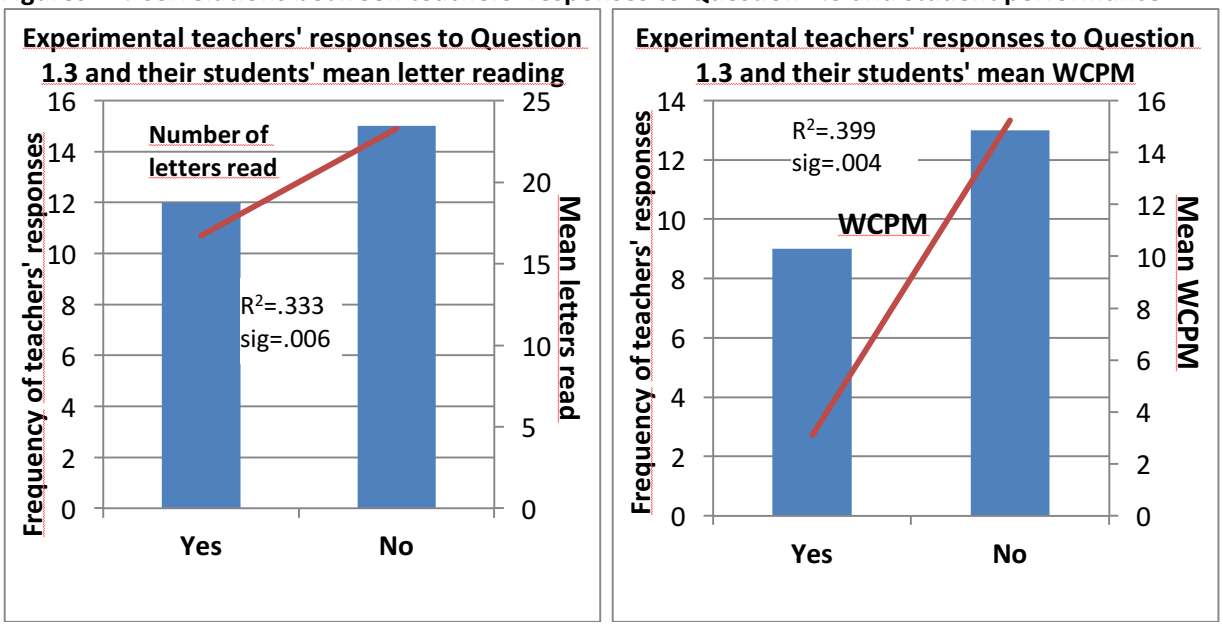
Figure 11. Experimental teacher's total mean knowledge of teaching writing and their students' mean WCPM



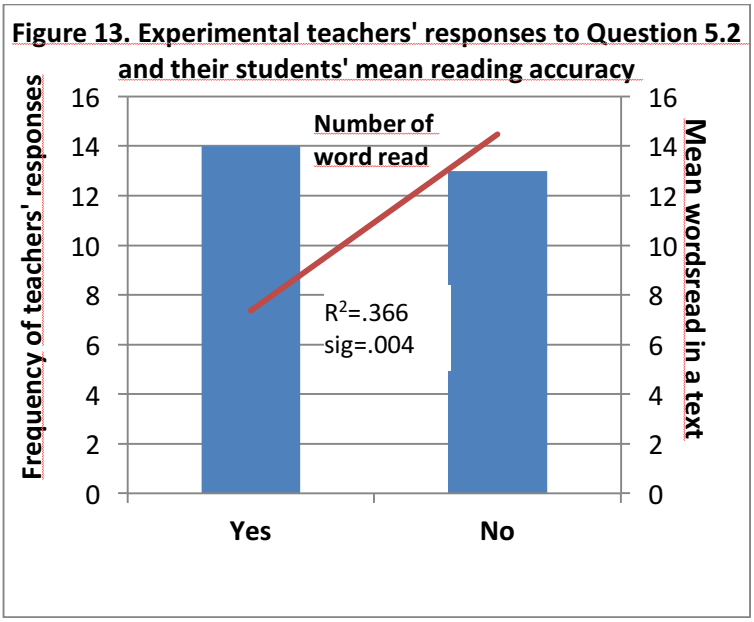
This finding is consistent with several key reading program activities that encourage students to practice writing using the phonics patterns they've learned or drawing and writing their reactions to a read-aloud text. Research also denotes the importance of students having opportunities to engage with writing as it simultaneously aids in solidifying the letter-sound relationships and spelling patterns studied in addition to aiding in comprehension of a text read.

This link between teachers' knowledge of integrating reading and writing into their lessons is supported by their response to Question 1.3. (see below) *It is better to teach reading and writing in the same lesson rather than in separate lessons*, which was found to be significantly correlated with student performance on all sub-tests. For example, the graph below shows that 33.3% of the variation in students' mean ability to identify letters (p=.006, d=1.38, ES=0.57) and 39.9% of the variation in students' mean WCPM (p=.004, d=1.58, ES=0.62) is predicted by teachers' responses to Question 1.3 on integrating reading and writing.

Figures 12. Correlations between teachers' responses to Question 1.3 and student performance

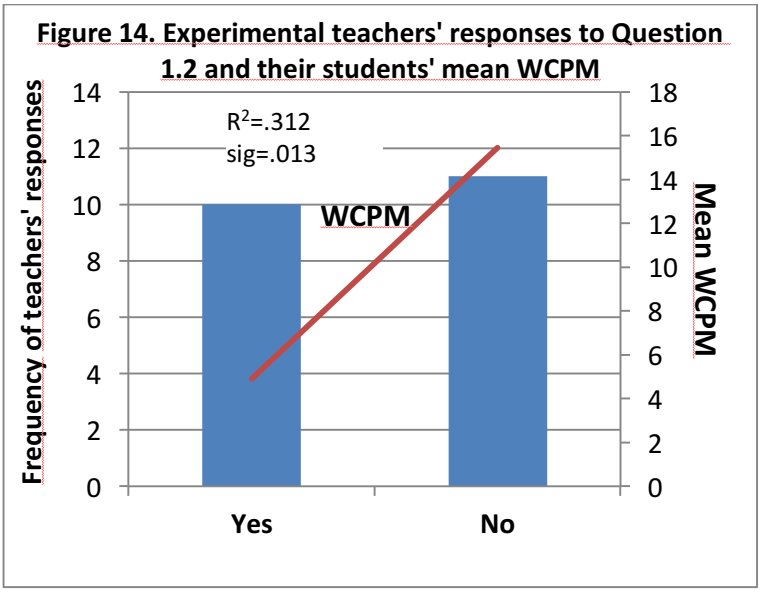


Related to teachers' knowledge of writing, teachers' expectations of their students' writing capabilities also revealed to be significantly correlated with student reading performance. In experimental schools, 36.6% of the variation in their students' reading of a connected text was explained by teachers' negative response to Question 5.2 "*my students have a hard time learning to write*." (p=.004, d=1.48, ES=0.6). This relationship is demonstrated in the graph below.



This finding is supported by extensive education research by Stronge (2010), which points to teacher expectations of their students as the primary predictor of student performance. The findings above are also supported by focus group and extension question responses in that experimental teachers exhibited better understanding of the importance of integrating reading and writing activities citing the direct relationship between encoding and decoding and how allowing students to experiment with writing help develop student capacity to read and write effectively and independently. In a classically authoritarian education environment, this is both profound and exciting.

Lastly, experimental teachers' opinions of the language in which their students learn to read better also correlated significantly with student results. However, they correlated in a way that does not corroborate with the research as more experimental teachers asserted that their students learn to read more easily in French (a second language) rather than in their mother tongue over their IAI-only and control peers. This is demonstrated in the graph below which shows that 31.2% of students' mean WCPM is explained by their teachers' negative response to the question *It is easier for my students to learn to read in French rather than in mother tongue* (p=.013, d=-1.31, ES=0.55).



It is speculated that the reason why more experimental teachers responded in way they did may be attributed the reading program being conducted in French. Because their students became better readers as a result of the program, teachers may be linking their student's progress in reading to the language they are learning to read in (they were not asked to teach in mother tongue so do not have a point of reference for students' ability to do so)..

Grade 1 and 2 Teachers' knowledge of literacy instruction

In addition to linking teacher knowledge and practice to student performance, this study also endeavored to better understand how teachers' knowledge of teaching reading might be linked to their use of the various elements of the PAQUED interventions available to them. In this section, teachers' knowledge of reading in different groups (experimental, IAI-only, and control) will be discussed using data from an extensive face-to-face interview conducted at endline in addition to focus group data. The interview included questions on specific reading and writing instructional practices and their utility and suitability for teaching reading and writing to grade 1 and 2 students. Certain "extension" questions asked that teachers provide justifications and a self-lived classroom example to support their answer. This was partially used for ensuring reliability of teachers' answers but also to obtain further insight into teachers' responses. The interview tools can be found in Annex B. Focus group data was derived from a series of focus groups conducted after data collection on teacher knowledge, practice, and student performance. Focus group questions asked experimental teachers to discuss how they would introduce a new text or guide their students in how to decode a new word. Teachers' examples provided rich information on how deeply practices and strategies embedded within reading program emerged from their classroom examples.

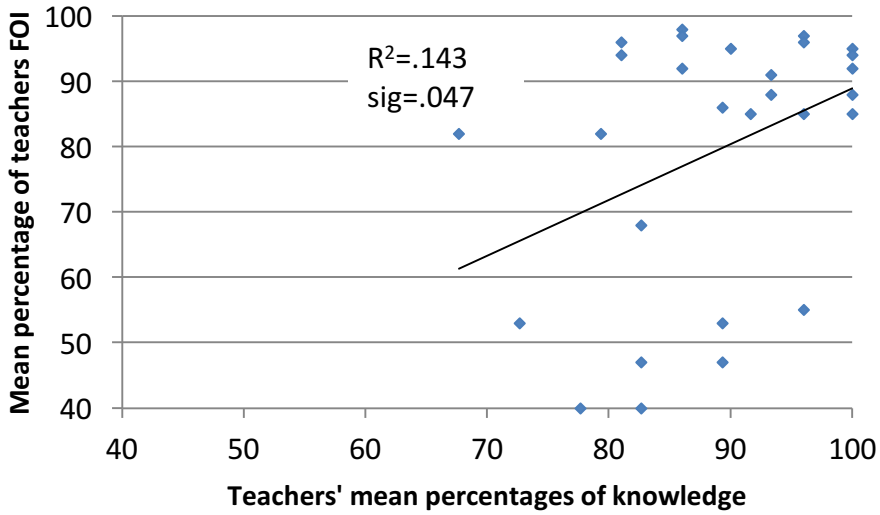
The tables and figures summarize the status of teachers' knowledge at endline grouped by component skill and pull out specific items relative to the teaching of component skills. The results presented by component skill represent the mean percentage of agreement to a group of questions classified by component skill. The composition of questions by component skills can be found in Annex B. As every

questions posed could be answered as “yes” or “no”, the means were calculated based on these responses. For example, experimental teachers’ frequency of agreement to questions on how to teach vocabulary amounted to 89% mean agreement as compared to 74% for IAI-only and control teachers. The results of the individual questions outlined in Table 17 represent the percentage of agreement for each question across different teacher groups.

The decision to present teachers’ knowledge data by component skill was deliberate, so that findings for this section would be organized in the same way as the teacher practice and student performance results. However, it should be noted that this division by component skill is not necessarily consistent with how teachers think about teaching reading and writing. That is, teachers may not think about teaching vocabulary and comprehension separately nor may they think about teaching alphabetic awareness and phonemic awareness separately. Rather, focus group data suggest that they are coming to think about teaching reading and writing as the use of specific activities that build several component skills in reading. For example, the word study activity not only develops a student’s ability to differentiate spelling patterns by sound and orthography but also builds their vocabulary as they learn the new words.

Overall, the findings below generally reveal that teachers in experimental schools exhibit knowledge that is consistent with evidence-based research on how to teach reading and writing effectively. In addition, 14.3% of teachers’ overall knowledge of teaching reading was found to be predicted by experimental teachers’ fidelity of application of the reading program (p=.047, d=0.8, ES=0.37).

Figure 15.Experimental teachers' fidelity of implementation (FOI) of reading program and their total mean knowledge of literacy instruction at endline



Most of the mean differences in teachers’ knowledge across experimental and control groups were also found to be significant. Unfortunately, IAI-only teachers did not seem to differentiate significantly in their knowledge of teaching component skills of reading as compared to their control teacher counterparts. These differences or lack thereof are further explored in the discussion following the

tables and links to teachers' knowledge and various PAQUED interventions will be established using fidelity of implementation data.

Table 15 below provides a summary overview of teachers' knowledge of different domains of reading instruction and indicates whether the difference in knowledge is significant in comparison to the control group. Overall, experimental teachers seem to have significantly more knowledge about how to best teach certain reading domains notably fluency, vocabulary, and comprehension in comparison to their control counterparts.

Table 15. Summary of the grade 1 and 2 teacher knowledge results of comparison of means at endline between groups (higher percentages convey "sound" knowledge)

	PAQUED		CONTROL (n=61)
	Experimental (n=37)	IAI (n=64)	
Phonemic/ Phonological and Alphabetic awareness	94%	88%	91%
Fluency	85%***	76%	76%
Vocabulary	89%**	74%	74%
Comprehension	96%***	88%	84%
Writing	71%	66%	65%
Total	88%***	78%	79%

** The difference in endline means between PAQUED and Control group teachers is statistically significant at $p<.01$
***The difference in endline means between PAQUED and Control group teachers is statistically significant at $p<.001$

Presented differently, the figure below illustrates the differences in knowledge of reading instruction across groups.

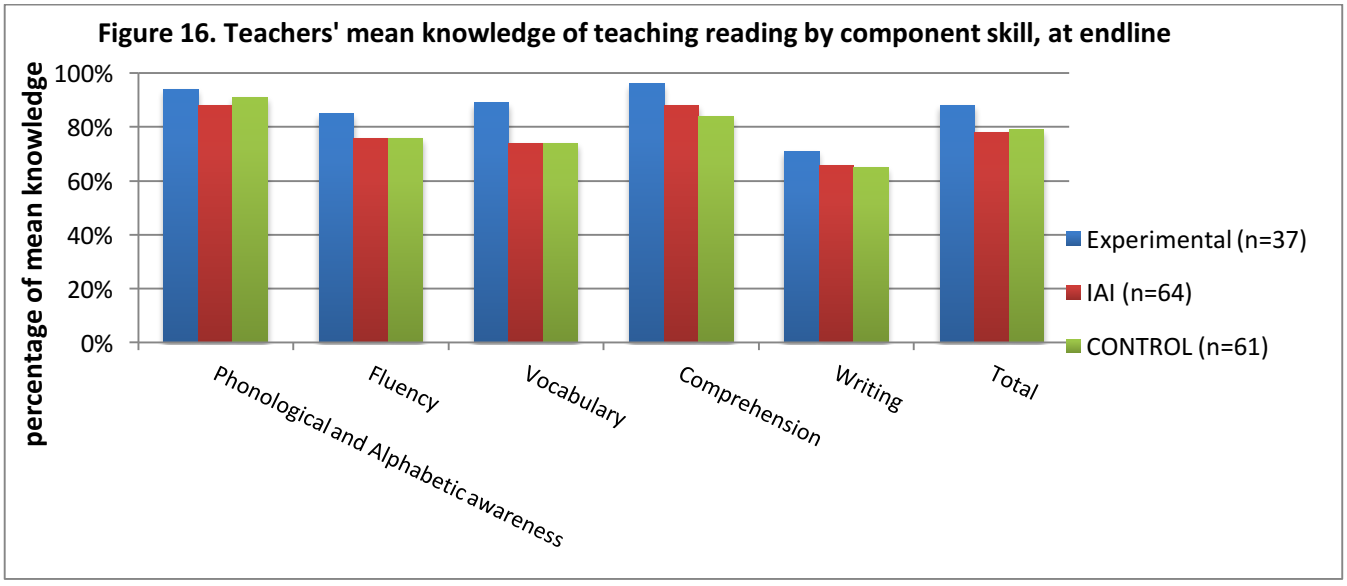


Table 16 below pulls out specific questions from the interview tool which produced significantly different responses between groups. For example, experimental teachers' responses to question 1.1 on expectations: *Most of my students have an easy time learning to read,* were found to be statistically different from their control counterparts.

Table 16. Item analysis of the grade 1 and 2 teacher endline knowledge results (means) comparison by groups (percentages reflect agreement)

	PAQUED		CONTROL (n=61)
	Experimental (n=37)	IAI (n=64)	
1.1 Most of my students have an easy time learning to read	51% agree***	30% agree	18% agree
1.2. My students learn to read more easily in mother tongue than in French.	65%*	81%	85%*
2.1 Before reading a new text, it is useful to have a discussion with the whole class to discuss what your students already know about the text's theme ?	97%	85%	88%
2.2 It is useful to discuss new vocabulary with my students **before** they read a text.	78%**	52%	47%
3.1 It is important to always read before my students so they can learn to read.	63.9%***	91%	96.8%
4.1 It is important to allow students to talk amongst each other on what they have read to help them understand a text.	89%*	78%	72%
4.2 After having read a text, it is important to ask students to explain what they've read.	97%***	82%	75%
4.4 It is important to ask students questions after having read a text.	100%*	92%	91%
4.5 Students are capable of saying what they liked or disliked about a text read.	91%*	82%	75%
5.2. My students have a lot of difficulty learning to write.	35%***	61%*	79%

* The difference in endline means between PAQUED and Control group teachers is statistically significant at $p<.05$
** The difference in endline means between PAQUED and Control group teachers is statistically significant at $p<.01$
***The difference in endline means between PAQUED and Control group teachers is statistically significant at $p<.001$

The results presented in the above tables and figures are discussed by domain of reading instruction below. Attempts to connect teachers' knowledge of reading instruction to their use of the PAQUED interventions available to them will also be discussed. Finally, teachers' responses to extension questions will also be presented so as to provide a more concrete vision as to how teachers think about how to best teach their students to read.

Phonemic, phonological and alphabetic awareness: The PAQUED reading program and IAI grade 1 and 2 program placed emphasis on the development of phonemic, phonological and alphabetic awareness in the lower grades. This emphasis was selected to address the findings of the project's baseline and midline Early Grade Reading Assessments, which revealed that students in grade 2 had great difficulties with providing initial sounds in spoken words and with correctly identifying letters, skills that are essential precursors to learning how to decode the written word.

Experimental school teachers' knowledge of phonemic awareness, phonological and alphabetic awareness at endline did not differ significantly from their IAI-only or control counterparts, and none of the PAQUED interventions were found to correlate significantly with these endline teacher knowledge data. To better understand what teachers mean when they respond to "yes" or "no" questions on the importance for students to develop their phonemic, alphabetic and phonological awareness, teachers' responses to an open-ended follow-up question are also presented. When asked to provide concrete classroom examples of how they helped their students build these component skills, teachers reflected many of the activities outlined in PAQUED tools. The examples cited included alphabetic awareness activities:

> "*my students recite the letter-song (la comptine des lettres) while I point"* (N=5)
> "*I show my students how to decode new words by tying the individual letters to their sounds (letter-by-letter reading)"* (N=6)
> "*I remind my students to remember the letter sounds to help them read a new word*" (N=2)

and phonemic awareness activities:

> "*From a sound that I give, students can find other words that contain that sound*."(N=5)
> "*I help my student stretch out words so they can hear all of the sounds in the word or I do it by syllable*." (N=13)

Teachers also pointed to phonological awareness activities as helpful to helping their students write:

> *"If a student knows a sound that a letter makes, they can also write it. In the word 'mbenza', if the students know that the beginning sound is made up of m-b, they can write it. "* (N=3)

These examples directly relate to the type of activities (such as word study and letter-sound study) and strategies (such as word stretching) covered in the IAI programs as well as in the reading program guide that was followed by experimental school teachers on a daily basis. Such findings are encouraging, as they indicate that teachers are beginning to internalize and explain what the teaching of these building block skills looks like in the classroom.

Fluency: Another key component skill the reading program and IAI programs aimed to develop is fluency. Fluency is defined by one's ability to read with accuracy, automaticity, and proper intonation. Fluent readers move beyond letter-by-letter or syllable-by-syllable decoding (which take focus and concentration) to recognize chunks of text and hence read more quickly and accurately. Research points to the importance of developing fluency in order for the reader to be able to focus more on comprehending what s/he reads and less on the mechanics of decoding to (Rasinki, 2006). There are

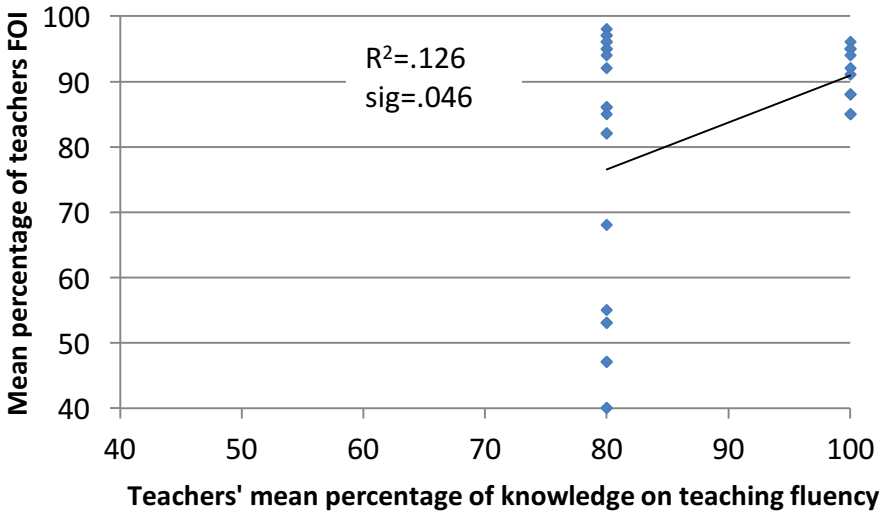
several instructional strategies that teachers can employ to develop this skill. Some that are outlined in the PAQUED reading program activities and IAI programs include teachers pointing to words to help move student's eyes faster from word to word; teachers doing flash card activities with high frequency and previously studied words; and teachers simply providing more opportunities for students to practice reading.

After applying these fluency activities and strategies in the classroom, what did teachers retain as "sound" practice for developing this important skill? Table 16 summarizes that teachers' knowledge of developing fluency was significantly greater than their IAI-only and control counterparts (p=.001, d=-0.95, ES=0.43). This is positive and was consistent in the discussions undertaken with experimental school teachers:

> "*It seems like students need more time to practice reading in order to read faster and better.*" (N=14)

This shows that teachers are beginning to recognize the importance of practice for students to become better readers. Also interesting to note is how PAQUED interventions may have predicted teachers' knowledge of teaching fluency. Linear regression analysis showed that experimental teachers' adherence to the reading program activities explained 12.6% of the variance in teachers' responses to fluency questions (p=.046, d=0.75, ES=0.35).

Figure 17. Experimental teachers' fidelity of implementation (FOI) of reading program and their total mean knowledge of teaching fluency at endline



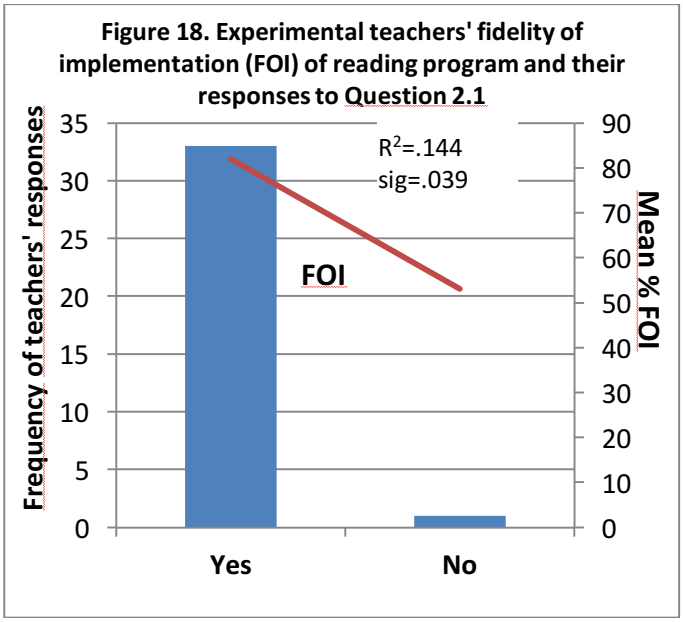
This significant correlation suggests that the explicit fluency-building activities in the reading program may have contributed to developing teachers' understanding of the importance of applying such activities to build their student's reading skills. This is consistent with the student performance results discussed above, which link teachers' knowledge of teaching fluency to student reading fluency of a connected text (p=.000, d=2.25, ES=0.75).

Vocabulary: Vocabulary (particularly French vocabulary development) was also a key component of the reading program and IAI programs. Vocabulary development is especially important in the context of second language learning, as is the case in the DRC. As one PAQUED IAI-only teacher states: "*A student*

can read the words but may not know what they're reading.(N=2)" In other words, one can be a fluent reader, but if s/he does not have oral language skills or vocabulary knowledge in the language being read, s/he will comprehend little. Consequently, mastering fluency alone is insufficient to becoming a good reader. To ensure that students developed the necessary vocabulary, the PAQUED program interventions all provided significant amounts of time for vocabulary development in French through brainstorming activities (*collecte des idées*) around story themes; games with movements and/or illustrations to explain new vocabulary relevant to a story; or having students use new vocabulary learned in a sentence they composed orally or in writing.

So what was teachers' knowledge on teaching vocabulary at endline after having engaged in these vocabulary-building activities with their students? Table 16 shows that experimental teachers' knowledge of how to best teach vocabulary differed significantly from their IAI-only and control counterparts (p=.002, d=-1.13, ES=0.49). This is also supported by experimental teachers' responses to Question 2.2 that states the importance of explaining new vocabulary before reading a new text (p=.025, t=0.48, ES=0.24) and Question 2.1 affirming the importance of discussing what students know about a theme is also related to vocabulary development (p=.002, d=0.7, ES=0.33). This is not surprising given that the pre-reading activity outlined in the reading program explicitly invites the teacher to discuss the theme of the story with his/her students and explain the new vocabulary associated with the read-aloud text of the week. Linear regression supports this link between Question 2.1 and teachers' application of the reading program in that 14.4% of the variance in teachers' response to Question 2.1 can be explained by their application of the reading program (p=0.39, d=-0.8, ES=0.37).

Figure 18. Experimental teachers' fidelity of implementation (FOI) of reading program and their responses to Question 2.1



To further support this link between reading program application and knowledge of teaching vocabulary, the concrete classroom examples of vocabulary instruction derived from the interview with experimental teachers allows us to better understand how teachers are actually putting these statements into classroom practice:

"*with the help of illustrations, I ask questions that have to do with the theme of the text to bring out the new vocabulary,"*(N=7)

"I do a brainstorming with my students around the theme and the new vocabulary. Then, I read the text to them." (N=6)

Both of the above examples are consistent with the step-by-step sequence of how vocabulary instruction is presented for the pre-reading exercise in the reading program guide.

In contrast to the experimental teachers, control teachers' responses and examples regarding vocabulary instruction in their classrooms included such statements as:

"they [students] don't do vocabulary at this grade level," (N=12)

"students will only understand the new words after the reading of the text." (N=12)

Experimental teachers' statements are dually reinforced by their expectations related to the language in which students learn to read and write more easily. Experimental teachers significantly differed in their opinions of Question 1.2, *my students learn to read more easily in mother tongue than in French* (p=.033, d=0.56, ES=0.27). 67% of experimental teachers felt this statement was true whereas a larger proportion of IAI-only teachers (81%) and control teachers (85%) agreed with this statement. In comparison to their counterparts, it can be suggested that more experimental teachers may have disagreed with this statement because the reading program is given in French. Hence, they may have felt that given the right strategies, their students could learn to read just as easily in a second language.

Comprehension: Comprehension is the ultimate goal when reading. If a student can decode fluently, understands sufficient vocabulary in the language being read, and is equipped with comprehension strategies, s/he is well equipped to comprehend a text s/he reads. Unfortunately, comprehension is the most difficult skill to acquire, because it requires that the student has acquired the foundational skills listed above. Comprehension is also not usually the main focus of early grade reading programs because so much attention is needed to helping students learn to crack the alphabetic code and to decode with accuracy and fluency. The PAQUED reading program and IAI programs repeatedly modeled comprehension strategies for teachers to apply in their classrooms. These activities included asking students to reflect on what they already know about a subject; posing literal questions (i.e. *Who? What? When? Where? Why?*) about a text they had read; asking students to justify the answers they give; and showing teachers how to employ graphic organizers to structure thinking and information derived from a text. Comprehension strategies also encouraged students to illustrate or write their reactions to texts they had read; conceive an alternative ending to a story; or create their own poems, stories, or letters.

How did teachers in the PAQUED intervention schools demonstrate their knowledge of how to teach comprehension at endline? Table 16 shows that at endline, experimental teachers' knowledge of how to best teach comprehension differed significantly from their IAI-only and control counterparts (p=.000, d=0.92, ES=0.42). This is consistent with item analysis for 4.1, 4.2 and 4.4, in which a significant proportion of experimental teachers responded positively over their IAI-only and control counterparts.

Statements 4.1, 4.2 and 4.4 all assert how important it is to ask students questions or to explain what was read and to allow students to discuss information they retained from a text with their peers.

Interviews with experimental school teachers further explained how they orchestrate reading comprehension activities in their classrooms. These examples support teachers' responses to questions on their knowledge of teaching reading comprehension while also mirroring the approaches outlined in the PAQUED reading program and IAI programs.

> "*After reading a text, I always ask comprehension questions—sometimes in mother tongue—on the story,*" (N=17)
>
> "*I ask my students to explain all they saw and what happened in the text—the characters, the important events*," (N=11)
>
> "*I use the illustrations to help students answer questions on the text just read*," (N=11)
>
> "*I ask my students to tell me what they liked in the text and why.*" (N=5)

These statements specifically relate to reading program and IAI program activities which ask teachers to pose both literal and inferential comprehension questions on the story read. This explanation, however, was not confirmed by linear regression analysis, which indicated no significant correlations between specific PAQUED interventions and a teacher's knowledge of how to teach comprehension.

In contrast, examples and justification provided by control teachers are consistent with their responses to the 'knowledge of teaching comprehension' questions:

> *"I ask my students to repeat the explanation of what we read after me."* (N=2)
>
> "*studying a text in grade 1 and 2 is too difficult*," (N=8)
>
> "*it is more useful to explain difficult words in the text rather than asking students to say what they learned*." (N=4)

These examples suggest that control teachers are hesitant to help their students develop comprehension skills or may not know how to best develop a student's comprehension skills beyond rote repetition. Likely explanations for these teacher statements include teachers' unwillingness to allow children to make mistakes or think for themselves, and perhaps also, their low expectations of their students' abilities.

Writing: The integration of writing was a strong component of PAQUED instructional materials, drawing on the research pointing to writing as useful for developing reading skills. For example, students connect their phonemic and alphabetic awareness skills when they attempt to spell words. Likewise, a student works their comprehension skills when they are asked to react to a text in writing, paying attention to sentence structure, use of vocabulary, spelling, and punctuation. Because writing is a process that pulls together several components skills of reading, it allows a student to practice utilizing these skills to communicate. It is also an empowering tool because it is a visual production of what a student if capable of doing. The IAI programs and accompanying teacher guide place emphasis on getting students to experiment with writing and illustrations. Similarly, the reading program post-reading activities and word study activities both have writing components that enable students to express their ideas and preferences by answering "on my own" extension questions on the story they

heard as well as by practicing their phonics skills through spelling. Convincing teachers to allow for free writing like invented spelling is a big step.

This is because at the beginning of the PAQUED project, stakeholder research revealed that teachers always taught reading and writing separately because it was prescribed in the curriculum as two separate sub-branches (sous-branche) and should therefore be taught in different lessons. Teachers also asserted that students should not be allowed to make spelling mistakes and that writing should be limited to copying on the board until students were 'capable' of expressing themselves properly in writing, a skill often expected for children in grade 4 and beyond. Based on these findings, asking teachers to allow their students to engage in writing activities during reading lessons was expected to be a challenge. Endline data indicating that teachers have begun to allow free writing and invented spelling are a significant indicator of progress towards classroom practices that are documented to support student achievement.

Summary results on a teachers' knowledge of integrating writing into their lessons showed that teachers across groups did not differ significantly. The writing composite includes teachers' tolerance of invented spelling; their perceived importance of integrating reading and writing into a same lesson; and their perceived importance of students having opportunities to practice writing. However, experimental teachers' classroom examples of how they orchestrate writing activities do provide evidence that, despite the lack of difference in their knowledge about teaching writing, they are integrating writing into their lessons:

> "*we practice writing high frequency words and familiar words—their names, words in mother tongue, mom, dad, under, over, etc."* (N=10)
>
> *"When I teach a new letter, I ask the students to find another word with that letter in their books or in the classroom and to write it on the board,"* (N=3)
>
> *"I let them write a reaction to a text and then we correct it in pairs,"* (N=8)
>
> "*I ask students to write their own sentences with new words we just learned."* (N=2)

Teachers also cited using writing activities to *"motivate [their] students to learn,"* speaking to the power of writing for student empowerment mentioned above.

Some teachers in experimental and IAI-only schools still indicated at endline that*: "I do writing by way of spelling tests or copying off the board."* (N=16) This is not surprising given how difficult it is to ask teachers who originally professed their lack of tolerance for spelling mistakes to shift their practices. This position is echoed in assertions by several teachers in control schools, such as:

> "*it is not appropriate for children to write in second grade*" (N=7)
>
> *"Students' lack experience. Therefore, reading and writing must always be taught separately*." (N=3)

Relative to this discussion is teachers' knowledge that integrating reading and writing into the same lesson is useful. Although no significant differences were found between groups on teachers' opinion of this item, interview data showed that those control teachers who thought they should not be taught in the same lesson justified their answers in saying : "*students risk mixing reading and writing*" (N=2) and that *"reading should precede writing*"(N=4). However, those experimental teachers who acknowledged

the importance of integrating reading and writing into the same lesson justified their answers in a way that provides evidence of the use of the reading program:

> "*if a student knows how to write words, they can easily read them and vice versa*." (N=5)
>
> "*For each letter that I teach, we learn the letter (grapheme), the sound and how to write it. Then, we learn to read and write words with that letter*." (N=4)
>
> "*I do spelling tests of words they [my students] studied or that contain letters studied*." (N=16)

This shows that teachers seemed to develop an understanding of the relationship between decoding and encoding, one key topic presented in the initial reading program training for experimental teachers. This link is consistent with linear regression analysis which showed that 12.1% of the variance in experimental teachers' knowledge of writing can be explained by their application of the reading program (p=0.048, d=0.72, ES=0.34).

Finally, teachers' expectations of their students' abilities to learn to write were found to be significantly different across groups. Experimental teachers responded negatively to Question 5.2, *my students have a lot of difficulty learning to write* (p=001, d=-078, ES=0.36). As writing was much practiced in the context of the reading program, this may suggest that experimental teachers' expectations of their students' abilities may have shifted.

Grade 1 and 2 Teacher practice results

In addition to understanding teachers' knowledge about teaching reading and writing, it is also important to understand how these changes may have translated into practice. To measure changes in teacher practice, an observation tool was administered in grade 1 and 2 experimental, IAI-only, and control teachers' classrooms at baseline in March 2013 and at endline in May 2014. Sampled teachers were asked to teach a lesson introducing a new letter or letter-sound relationship to students at both points, in order to ensure a degree of comparability of the results. The observation tool contained a range of specific and observable practices grouped by the component skills they aimed to build (see Annex B for tool). These practices were chosen to reflect those outlined in the reading program, in the national reading standards, and those observed in numerous classroom observations conducted throughout the project. Each itemized practice was allotted 9 five-minute tranches of time, which covers an average lesson span. If the enumerator witnessed a practice, he or she would check of the practice in the appropriate time period. This was to provide a snapshot of the lesson as it progressed and to quantify teachers' implementation of certain practices over others. It should be noted that even if a practice was observed twice in a period of five minutes, only one check was allowed per five-minute tranche. This is a possible limitation of the tool as it hinders ability to detect subtle changes in teacher practice. Still, the results derived from the tool provide interesting information on teachers' practice and were found to be statistically reliable (see Annex B). Another limitation of the tool is its inability to see how teachers actually conducted a practice. Though each practice outlined is concretely observable, details like teachers dispositions were not captured. For example, for a vocabulary building practice which asks students to explain new vocabulary before they read a new text, the practice outlined in the tool does not say exactly how the teachers goes about guiding students in this activity.

Table 17 provides an overview of teachers' practice results grouped by component skill from the baseline and to the endline, and indicates whether or not these changes were shown to be statistically significant within the groups (longitudinally) and across groups (cross-sectional).

Table 17. Summary of the grade 1 and 2 teacher practice results of comparison of means between the baseline and the endline disaggregated by status[3]

	PAQUED						CONTROL (n=60)		
	Experimental (n=57)			IAI (n=78)					
	Baseline	Endline	Gainscore	Baseline	Endline	Gainscore	Baseline	Endline	Gainscore
Phonemic/Phonological and Alphabetic awareness	9.79%	8.9%	-0.89%	7.25%	7.73%	0.49%	6.87%	7.45%	0.58%
Fluency	13.26%	19.68%	6.42%***	20.39%	19.77%	-.62%	18.24%	19.88%	1.64%
Vocabulary	11.11%	12.86%	1.75%	6.7%	7.06%	.36%	5.83%	7.5%	1.67%
Comprehension	13.32%	18.91%	5.59%**	5.65%	10.82%	5.17%**	8.51%	8.39%	-0.12%
General instructional and literacy practices	15.94%	14.26%	-1.68%	16.61%	20.34%	3.73%*	14.96%	13.22%	-1.74%
Total	15.37%	14.25%	-1.12%	13.27%	15.34%	2.07%*	13.11%	12.74%	-0.37%

*The difference in baseline/endline gains between PAQUED and Control group teachers is statistically significant at $p<.05$

** The difference in baseline/endline gains between PAQUED and Control group teachers is statistically significant at $p<.01$

***The difference in baseline/endline gains between PAQUED and Control group teachers is statistically significant at $p<.001$

The following table that follows pulls out some specific practice items that were shown to change significantly across baseline and endline. The percentages represent the total number of times the practice was witnessed over the total lesson time. For example, if a teacher asked students to try to identify a specific sound in a word over three tranches of five-minute time periods of a 40-minute lesson, the teacher would be considered to have exhibited this practice for approximately 37.5% of total instructional time (3 out of 8).

Table 18. Item analysis of the grade 1 and 2 teacher practice results of comparison of means between the baseline and the endline disaggregated by status

The teacher…	PAQUED						CONTROL (n=60)		
	Experimental (n=57)			IAI-only (n=78)					
	Baseline	Endline	Gainscore	Baseline	Endline	Gainscore	Baseline	Endline	Gainscore
P15. Asks students to give their predictions on the content of a text by using clues (title, illustrations, etc)	9.1%	15.13%	6.03%*	5.6%	7.93%	2.33%	6.9%	4.49%	-2.41%
P16. Asks questions on a text read (ex. who? What? Where? How?…)	17.9%	29.14%	11.24%*	7.33%	13.71%	6.38%**	12.16%	11.74%	-0.42%
P17. Solicits ideas and experiences from their students on what they already know about a subject.	9.25%	12.24%	2.99%	6.01%*	10.77%	4.76%***	6.31%	6.99%	0.68%
P18. Integrates reading and writing activities into the same lesson.	7.71%	15.94%	8.23%**	9.98%	13.94%	3.96%*	9.23%	10.86%	1.63%
P23. Encourages students in a positive manner when they make an effort.	42.44%	38.49%	-3.95%	31.39%	35.83%	4.44%*	32.16%	33.58%	1.42%

*The difference in baseline/endline gains between PAQUED and Control group teachers is statistically significant at $p<.05$

** The difference in baseline/endline gains between PAQUED and Control group teachers is statistically significant at $p<.01$

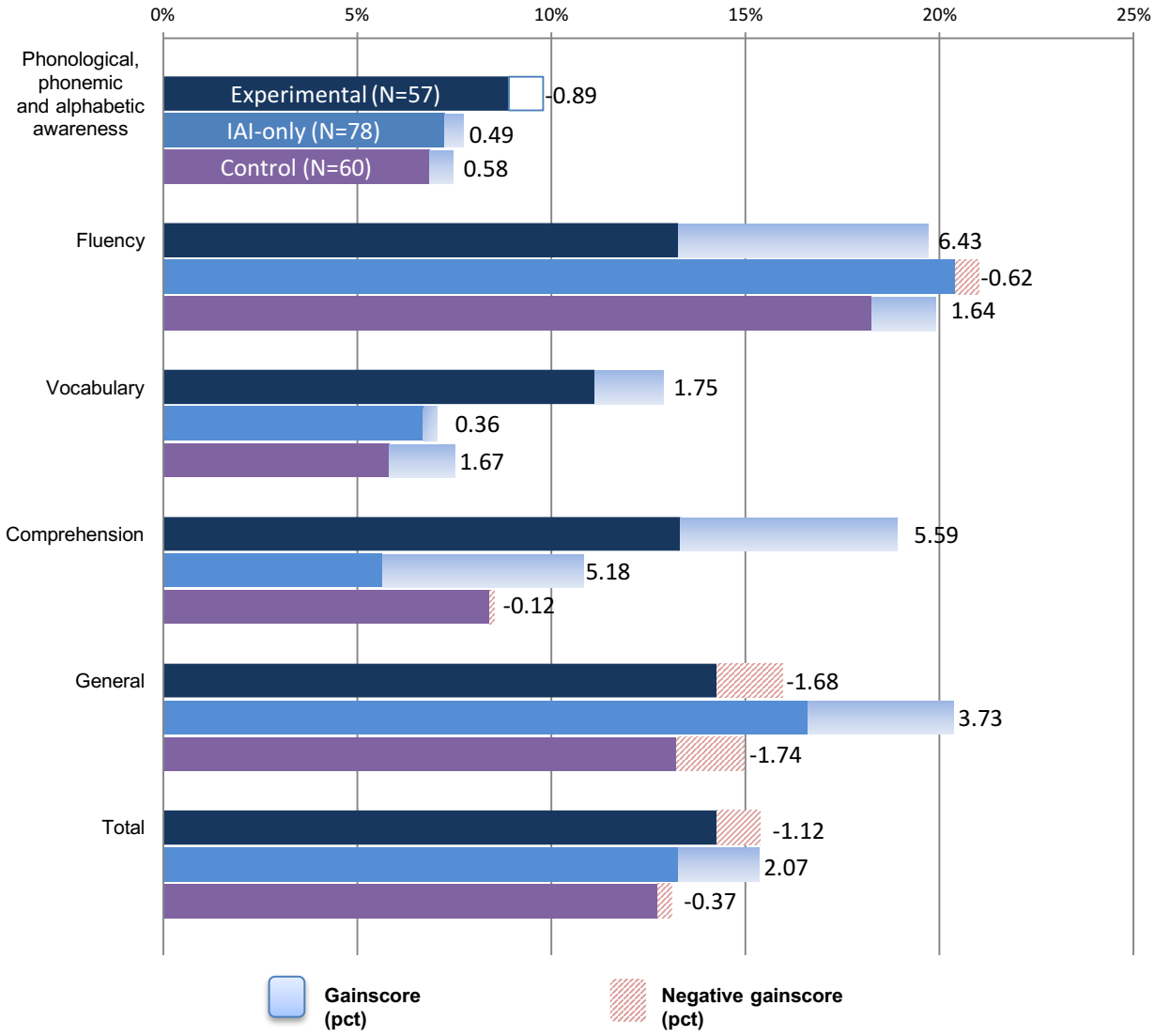
***The difference in baseline/endline gains between PAQUED and Control group teachers is statistically significant at $p<.001$

[3] Percentage indicates time allocated to these skills relative to the lesson's entirety.

= significant across groups (cross-sectional)

Figure 19 visually shows the gains in practice that teachers in the different groups made across baseline and endline.

Figure 19. Grade 1 and 2 teachers' change in literacy instructional practices from baseline to endline.



In contrary to teachers' knowledge of teaching reading, grade 1 and 2 IAI-only teachers improved significantly over baseline and endline in the total literacy practices combined (p=.017, d=0.56, ES=0.27) and in their application of comprehension activities (p=.000, d=0.87, ES=0.4) and general classroom practices (p=.003, d=0.7, ES=0.33). However, experimental teachers improved significantly in the instruction of some component skills (fluency and comprehension) but did not improve as significantly as they did in their knowledge about teaching reading. None of the groups improved significantly in their application of vocabulary-building and phonological and alphabetic awareness activities.

This lack of "improved practice" does not necessarily mean that teachers did not apply activities associated with these component skills in the endline reading lessons observed. Videos of these observations reveal that teachers did apply certain practices that were not cited in the tool. The tool also did not capture exactly how effectively teachers applied certain practices. Lastly, the absence of significant change may also be related to a limitation in the tool, which requires the enumerator to only check once if they see the practice within each five-minute tranche of the lesson. Because of this structure, if the teacher had conducted the activity twice or more within that five-minute period of time, the tool would not capture it. As a result, a teacher's gain in terms of demonstrated instructional across baseline and endline may not be thoroughly captured by the tool. On the other hand, being able to inventory every time a teacher applies a certain practice can be overwhelming for a data collector and doing so would have required a more limited list of practices to observe.

The final two tables, below, indicate how PAQUED interventions may have predicted some of these changes in teachers' practice. Interestingly, unlike teachers' knowledge, fidelity of implementation of the reading program did not correlate significantly with their changes in practice. This is interesting because one would assume that if a teacher consistently showed to apply certain practices associated with the reading program, that this would logically translate into their literacy –specific instructional practices. However, experimental teachers' listenership of IAI did correlate significantly with their instructional practices associated with all component skills except for phonemic, phonological and alphabetic awareness. In addition to this, Table 19 reveal that experimental teachers' participation in continuing professional development activities was significantly correlated with their application of general instructional practices like walking around a classroom to help students in need, asking students to work in groups, or congratulating students when students make an effort. Table 20 breaks down the correlations between specific practices applied and IAI-only and experimental teachers' IAI listenership. For experimental teachers only, it provides the correlations between teachers' participation in CPD and their application of specific instructional practices.

Table 19. Summary results of linear regression for the grade 1 and 2 teacher change of instructional practices using adherence to teachers' participation in CPD and IAI dosage as predictors

	Experimental				IAI schools: IAI dosage	
	Participation in CPD		IAI dosage			
	R^2	Sig.	R^2	Sig.	R^2	Sig.
Phonemic/Phonological and Alphabetic awareness	-	-	-	-	-	-
Fluency	-	-	.129	.007	-	-
Vocabulary	-	-	.074	.043	-	-
Comprehension	-	-	.083	.031	-	-
General instructional and literacy practices	.183	.012	.07	.048	-	-
TOTAL	-	-	.142	.004	-	-

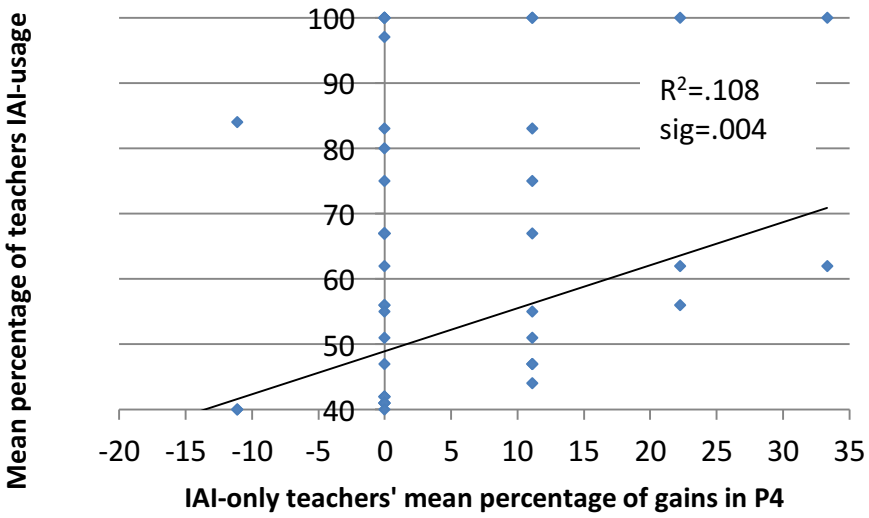
Table 20. Item analysis results of linear regression for the grade 1 and 2 teachers' change of instructional practices using adherence to teachers participation in CPD and IAI dosage as predictors

	Experimental				IAI schools: IAI dosage	
	Participation in CPD		IAI dosage			
	R^2	Sig.	R^2	Sig.	R^2	Sig.
P4. Asks students to correct badly spelled words in their own writing or in writings on the board.	-	-	-	-	.108	.004
P9. Points to letters, syllables, or words while he/she reads or to guide students in their reading.	-	-	.132	.006	-	-
P10. Attracts attention to punctuation while students read.	-	-	.083	.031	-	-
P11A. Asks students to read aloud alone.	-	-	-	-	.061	.031
P11C. Asks students to read together	-	-	-	-	.063	.028
P13. Explains or asks students to explain new vocabulary prior to reading a new text.	-	-	.105	.015	-	-
P15. Asks students to give their predictions on the content of a text by using clues (title, illustrations, etc)	-	-	.078	.038	.068	.022
P20. Walk around to help students when they are working individually or in groups.	.172	.015	-	-	-	-
P21B. Asks students to work in pairs or groups.	-	-	.084	.03	-	-
P22. Asks students to categorize groups of words by a characteristic (same sound, same letter, same theme)	-	-	.086	.01	-	-
P23. Encourages students in a positive manner when they make an effort.	-	-	.109	.013	-	-

The discussion below further expands on teachers' gains in instructional practices relative to reading and further elaborates on the links between these gains and PAQUED interventions. It is broken down by component skill to reflect how they are organized in the observation tool.

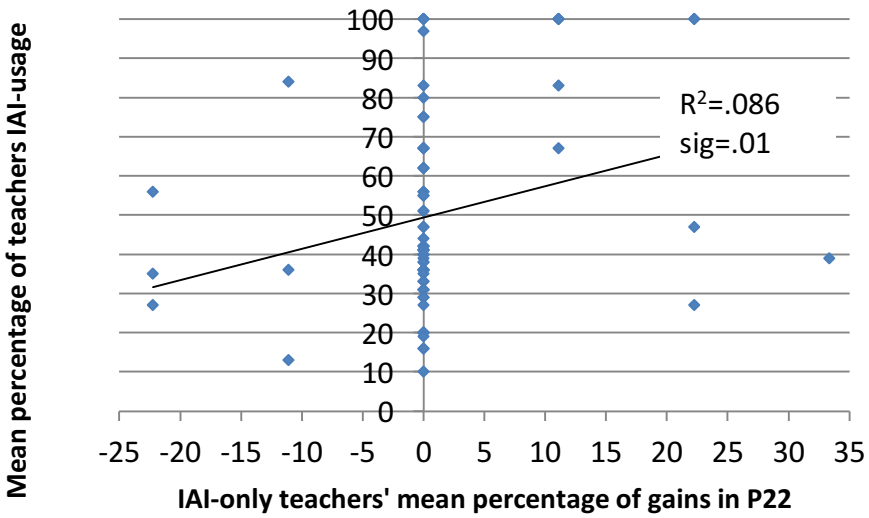
Phonemic, phonological and alphabetic awareness: As stated earlier, the PAQUED reading program in experimental schools and IAI programs focused heavily on developing phonemic, phonological, and alphabetic awareness skills because they are the essential building blocks for decoding and developing concept of word. Due to this emphasis, did teachers' tend to use more practices associated with building phonological, phonemic, and alphabetic awareness? While teachers across groups were observed applying several activities associated with these component skills at endline, there was no statistically-significant change observed in these practice areas. On average, experimental teachers spent around 10% of instructional time on explicitly teaching these component skills. IAI-only spent 8% of instructional time and control teachers spent 7.5%. For those practices more closely associated with reading program activities (i.e. helping students to identify letter names and sounds), experimental teachers spent an average of 18% of instructional time whereas IAI-only and control teachers spent less time doing so. For experimental teachers, no specific practices outlined in the tool correlated significantly with their use of PAQUED interventions. For IAI-only teachers, 10.8% of the variance in teachers' change in their application of Practice 4, *asks students to correct badly spelled words in their own writing or in writings on the board,* could be explained by their IAI usage (p=.004, d=0.69, ES=0.33), as shown below.

Figure 20. IAI-only teacher's IAI usage and their gains in Practice 4



In addition to this, 8.6% of IAI-only teachers' change in application of P22, *asking students to categorize groups of words by a characteristic* was explained by IAI-listenership (p=.01, d=0.61, ES=0.29).

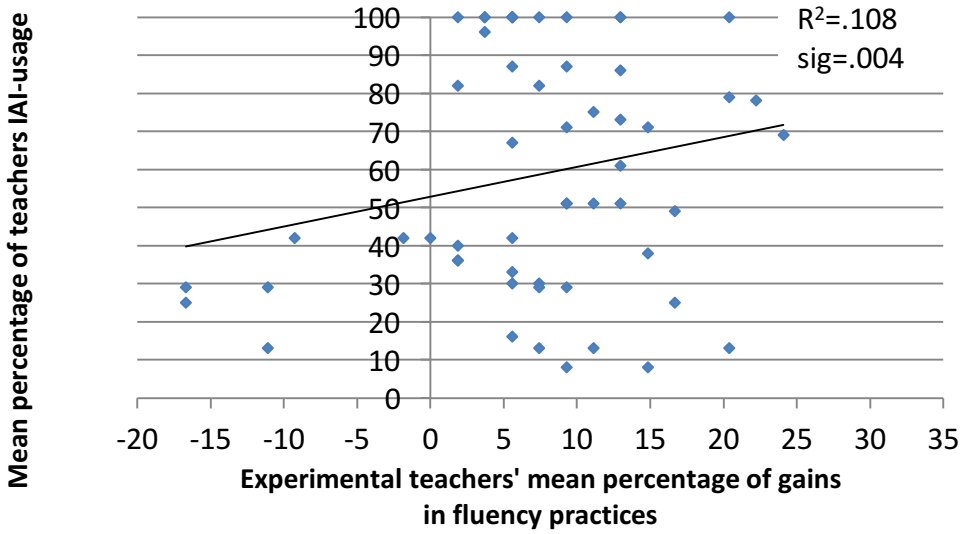
Figure 21. IAI-only teacher's IAI usage and their gains in Practice 22



This correlation is surprising, as this activity was more prevalent in the reading program activities guide than in the IAI programs, and the IAI-only teachers did not receive the program activities guide. However, although experimental teachers did not seem to allocate more instructional time to this particular practice across baseline and endline, at endline, experimental school teachers spent 48% of instructional time on this practice while IAI-only teachers spent 31% and control teachers spent 20%. This finding is consistent with application of reading program activities that allocate significant time to word study and vocabulary development.

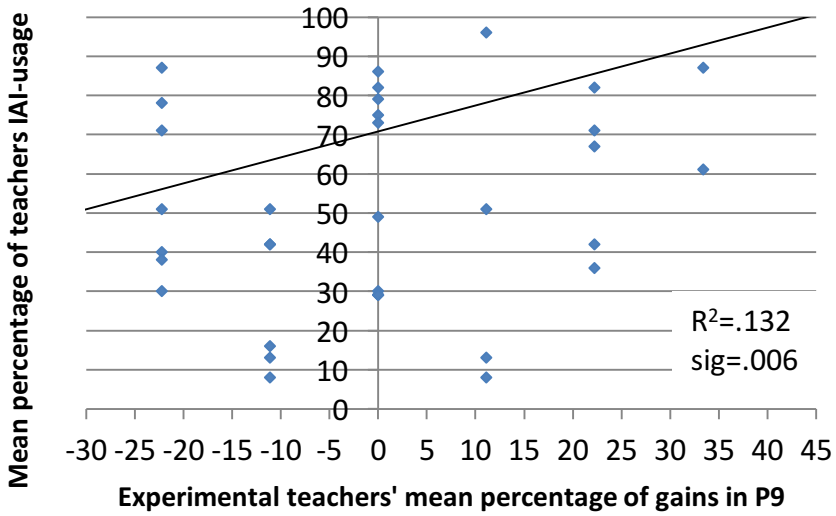
Fluency: Practices associated with building student fluency were part of the daily sequence of activities outlined in the reading program. These activities involved students quick reading of high frequency words and words studied; having teachers point to words for students to develop a concept of word and to model fluent reading; and allowing students to have in-class time to practice reading aloud in pairs or through choral reading. As a result of PAQUED interventions, did teachers apply more fluency-related activities from baseline to endline? The composite score associated with fluency practice shown in the above table shows experimental teachers improved significantly more in terms of allocating instructional time to fluency practices from baseline to endline (p=.000, d=1.42, ES=0.58), longitudinally and in comparison with their IAI-only and control counterparts. This is supported by item analysis showing that experimental school teachers significantly increased their classroom time allocated to allowing students to read in pairs or alone (p=000, d=1.43, ES=0.58). Linear regression also found that 12.9% of the variance in gain on these practices can be explained by a teacher's rate of IAI listenership (p=.007, d=0.76, ES=0.36).

Figure 22. Experimental teachers' IAI usage and their gains in fluency building practices



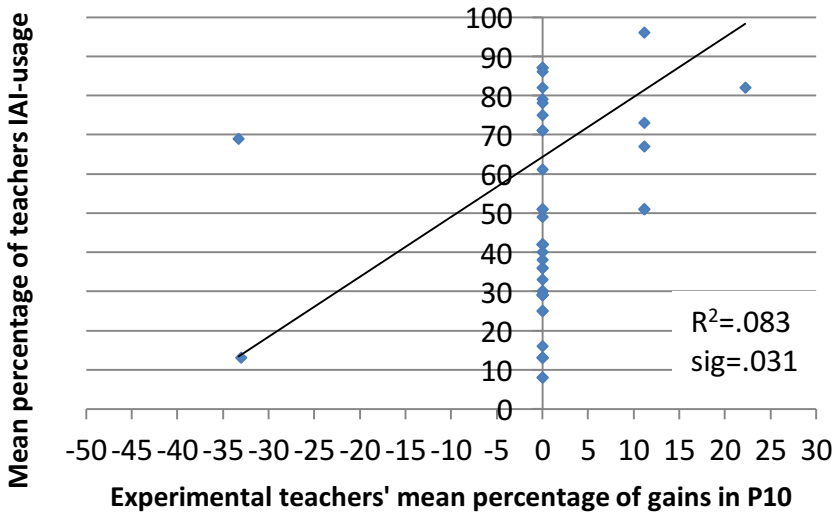
This shows that IAI may have contributed to experimental teachers' increase in application of fluency-building activities. Linear regression in item analysis also showed that 13.2% of the variation in experimental teachers' increased application of pointing to letters, syllables, and words to help guide students while they read can be explained by IAI listenership (p=.006, d=0.77, ES=0.36).

Figure 23. Experimental teachers' IAI usage and their gains in Practice 9



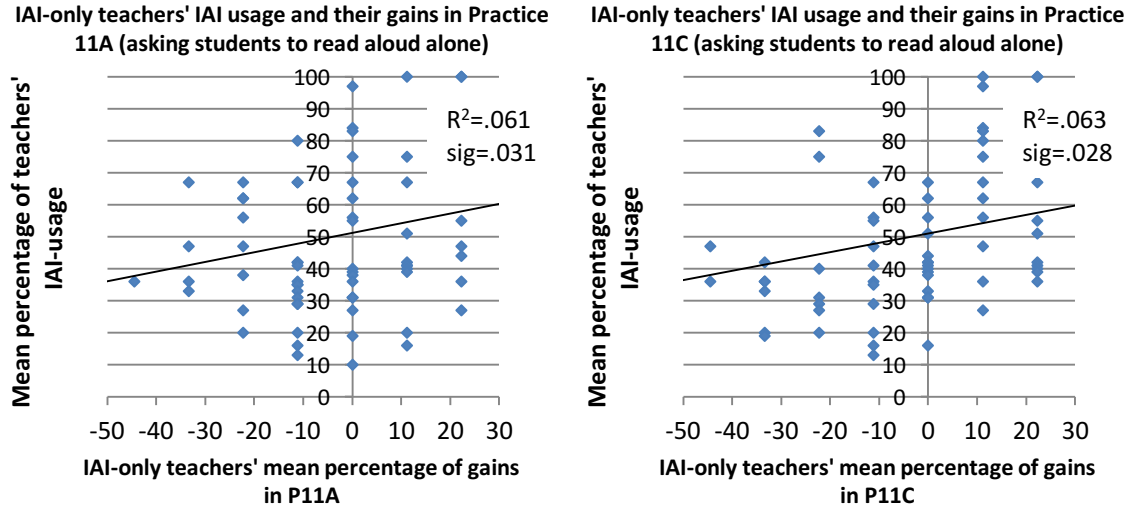
Likewise, 8.3% of the variation in experimental teachers' increased application of drawing attention to punctuation to help students read with intonation can be explained by IAI listenership (p=.031, d=0.6, ES=0.29).

Figure 24. Experimental teachers' IAI usage and their gains in Practice 10



Still, it is important to note that despite IAI-only and control teachers showing no significant improvement in applying fluency practices from baseline to endline, these teachers at endline still spend more instructional time on fluency than do their experimental teacher counterparts. This is perhaps because the reading program asks teachers to focus on developing several component skills in their students while IAI-only and control teachers may only be focusing on developing their students' fluency. IAI programs also focused heavily on developing fluency. This is consistent with linear regression analysis which found that 6.1% of the variation in the change of IAI-only teachers' gains in asking students to read alone (p=.031, d=0.5, ES=0.25) and 6.3% of the variation in their gains in asking students to read together (p=.028, d=0.52, ES=0.25) can be explained by a their rate of IAI-listenership. These correlations are shown in the figures below.

Figures 25. IAI-only teachers' IAI usage and their gains in instructional practice

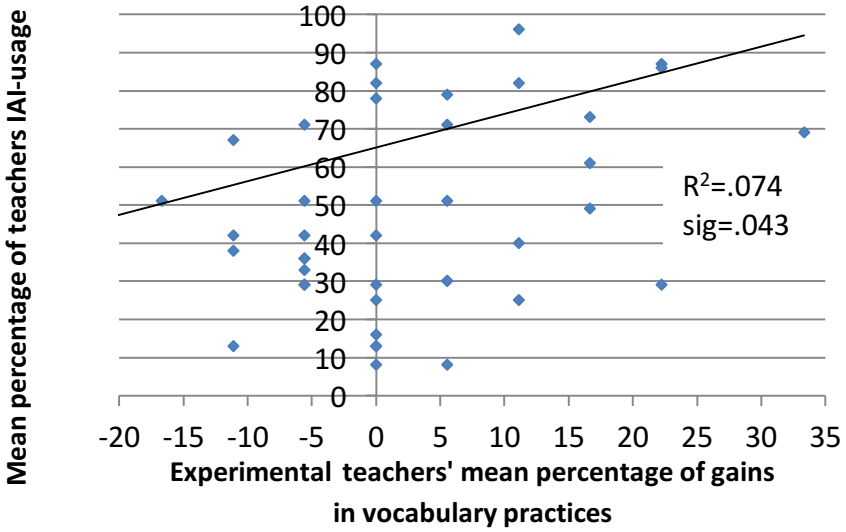


Due to this finding, it is interesting to understand the percentage of time teachers allocated to building fluency skills, on average and across groups. Teachers across all groups spent around 19 to 20% of

instructional time modeling or allowing their students to practice their fluency. Those practices that showed to be most prevalent were teachers pointing to words to guide their students' reading (24% of instructional time for experimental teachers, 28% for IAI only, and 31% for control teachers), allowing students to read aloud on their own (16% for experimental, 25% for IAI only, and 30% for control teachers) and having students engage in choral reading (26% of instructional time for experimental teachers, 25% for IAI only, and 30% for control teachers). However, it should be noted that the latter two items do not specify whether or not students are repeating after the teacher or if they genuinely read on their own. If they are repeating after the teacher, which is the traditional instructional model in DRC, this may explain why IAI-only and control teachers were found to exhibit these practices as frequently as their experimental teacher counterparts.

Vocabulary: Much of day 1 of the weekly reading program and the IAI programs were dedicated to vocabulary development, through brainstorming activities, discussion of new vocabulary, and vocabulary games. Given this focus, were teachers observed to be applying more vocabulary building activities at endline? Interestingly, teachers' application of vocabulary-building activities in the classroom was not shown to significantly change from baseline to endline and across groups. Still, experimental teachers allocated around 13% of instructional time to vocabulary building activities, as compared to their IAI-only (7%) and control (7.5%) counterparts. Linear regression explains this difference showing that 7.4% of the variance in experimental teachers' application of vocabulary activities can be explained by their IAI listenership (p=0.043, d=0.56, ES=0.27).

Figure 26. Experimental teachers' IAI usage and their gains in vocabulary building practices



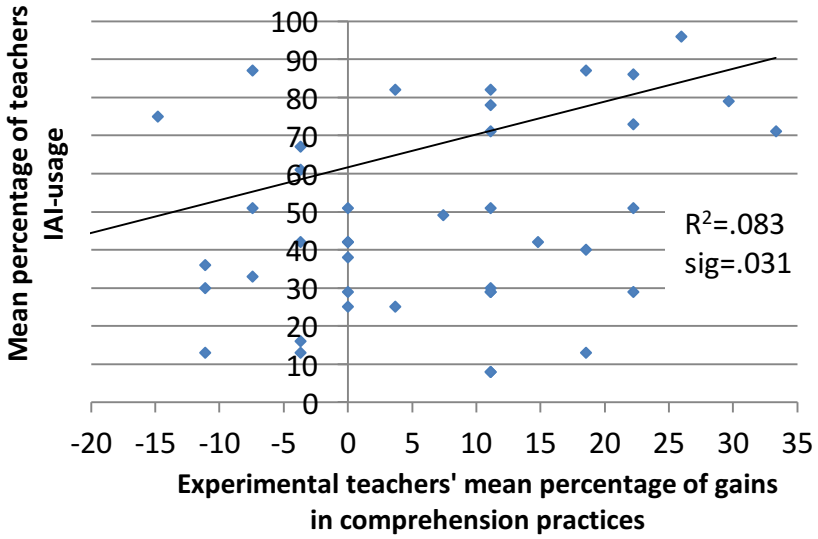
Linear regression of specific practices like P13 shows that 10.5% of teachers' change in application of explaining or asking students to explain new vocabulary prior to reading a new text is predicted by IAI-listenership (p=0.015, d=0.68, 0.32). This finding makes sense as IAI programs model strategies for vocabulary development.

Comprehension: As discussed earlier, instructional practices aimed at building students' reading comprehension are central to the reading program sequence of activities and the IAI programs.

Interactive vocabulary building activities, regular questioning to check for student understanding, asking students to make predictions using contextual and visual clues, and soliciting ideas from student's life experience so as to relate the information in the text to their lives were instructional approaches included in the reading program which support increased comprehension. Student reactions in writing to stories heard or read (which are also considered comprehension activities) were also promoted by the program. Given the PAQUED interventions' focus on comprehension, did teachers spend more instructional time at endline on such activities than they did at baseline? Table 18 above demonstrates that experimental school and IAI-only teachers spend more time engaged in reading comprehension activities with their students across baseline and endline ($p=.005$, $d=0.78$, $ES=0.36$). From a cross-sectional perspective, significant differences between experimental school and control teachers and IAI-only and control teachers were also found for these practices ($p=.011$, $d=-0.53$, $ES=0.26$). IAI-only teachers also significantly increased over baseline and endline in their application of comprehension activities ($p=.000$, $d=0.87$, $ES=0.4$). This is further supported by the individual practice analysis which showed experimental school teachers and IAI-only teachers to significantly show more application of P17—*soliciting ideas or experiences from students on what they already know about a subject prior to reading* ($p<.01$) and accounted for an average of 12% of instructional time for experimental teachers. This particular practice was a key component of the pre-reading activity outlined in the reading program and in the IAI programs. For P15—*asking students to given their predictions on the content of a text by using clues,* item analysis shows significant differences between experimental and control teachers and between IAI-only and control teachers ($p<.05$). IAI-only teachers tended to more frequently ask questions of their students across baseline and endline ($p<.01$) yet overall, experimental school teachers spent the most instructional time allocated to asking questions (29%). This mirrors the design of the IAI programs in which characters continuously ask students questions to keep them actively engaged. This difference was also found to be significant between IAI-only and control teachers.

These findings are interesting as they suggest that the presence of IAI may be related to teachers applying comprehension activities. This is consistent with linear regression showing that 8.3% of experimental teachers' change in application of comprehension activities can be explained by IAI listenership ($p=.031$, $d=0.6$, $ES=0.29$).

Figure 27. Experimental teachers' IAI usage and their gains in comprehension building practices

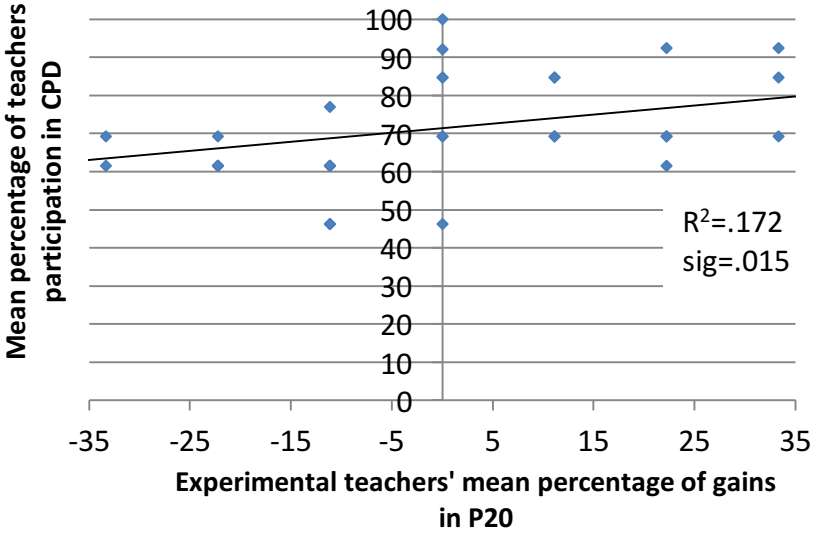


IAI listenership also explained 7.8% of the variance in experimental teachers' application of P15, asking students to give their predictions on the content of a text by using clues (title, illustrations, etc) (p=.038, d=0.57, ES=0.28).

General classroom and literacy practices: The practices contained in the "general classroom and literacy practices" composite include the incorporation of group work, teacher monitoring of student work, and the presence of positive student encouragement. So, how did teachers change in their practices between the baseline and the endline? IAI-only teachers improved significantly across baseline and endline in their overall general literacy and classroom practices (p=.003, d=0.7, ES=0.33).

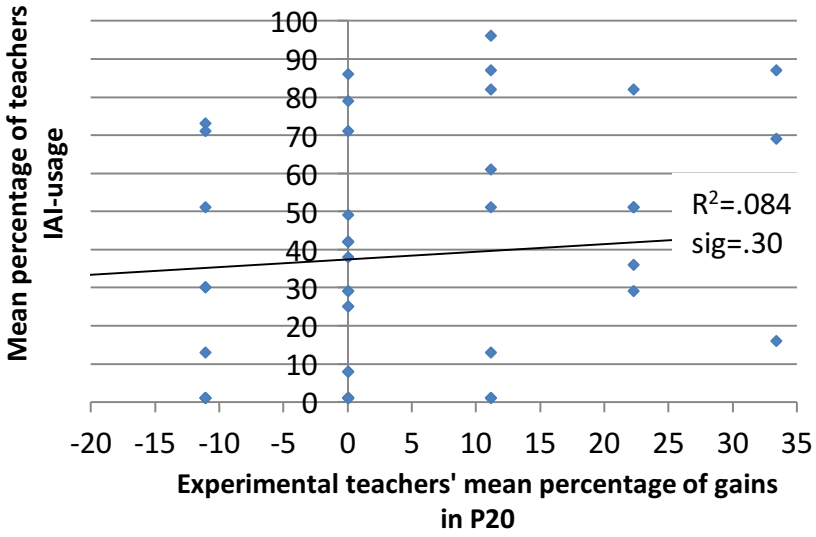
Individual practice analysis showed some significant differences in specific practices for both IAI-only and experimental teachers. For example, experimental school and IAI teachers both increased over baseline and endline in the integration of reading and writing activities within the same lesson, another overarching element of the reading program and the IAI program (p=006, d=0.75, ES=0.35 and p=.003, d=0.69, ES=0.33 respectively). Though this practice was not allocated to a specific composite practice score, it is interesting to see how it coincides with the teachers' knowledge findings indicating experimental teachers' overall positive attitudes towards the integration of reading and writing in their lessons (43% of experimental teachers agreed with this statement). IAI-only teachers were also found to provide more positive encouragement to their students (p=.022, d=0.53, ES=0.26) over baseline and endline. Experimental teachers' change in this particular practice correlated significantly with both IAI-listenership and teachers' participation in continuing professional development activities and coaching visits (p=.013, d= 0.69, ES=0.33 and p=.043, d=0.73, ES=0.34). Other items were also found to be significantly correlated with PAQUED interventions. For example, 17.2% of experimental teachers' change in P20, *walking around to help students when they are working individually or in groups* was explained by teachers' participation in continuing professional development activities and coaching visits (p=0.15, d=0.9, ES=0.41).

Figure 28. Experimental teachers' participation in CPD and their gains in Practice 20 (supporting students)



Finally IAI-listenership explained 8.4% of the variation in teachers' change in asking students to work in pairs (p=.03, d=0.6, ES=0.29), a strategy heavily encouraged in the IAI programs.

Figure 29. Experimental teachers' IAI usage and their gains in Practice 20 (supporting students)



Chapter 2: Grade 3 to 6 teacher results

This chapter presents the results of the study from the perspective of grade 3, 4, 5, and 6 teachers, who were served by PAQUED through the distribution of IAI programs (100 lessons per class), access to content knowledge trainings on French and Math, the distribution of classroom kits, and the distribution of audio-video modules to facilitate their teacher learning circles (forum d'échange). As the study aimed to focus on reading, the results presented below provide insight into teachers' knowledge reading and writing instruction and how their literacy-specific classroom practices may have changed over the course of 1.5 years from March 2013 to May 2014. These results have important implications for the development of future teacher training program design. These implications include the need for robust reading interventions at all grades and understanding what is required for this to be effectively implemented.

It should be reiterated here that the PAQUED intervention in grade 3 to 6 teachers was not as intense as it was for grade 1 and 2 teachers. Experimental grade 3 to 6 teachers were not specifically targeted in the early grade reading program so, although they may have participated in some school-based meetings, they were not provided with the same intense level of inputs as their grade 1 and 2 counterparts. Furthermore, the IAI programs were distributed to teachers gradually over the course of the project as they were produced. As a result, grade 1 and 2 teachers received them at the beginning of year 2 of the project whereas grade 3 and 4 teachers received them in year 3 and grade 5 and 6 teachers received them in year 4.

Teacher knowledge of literacy instruction findings : Grade 3, 4, 5 & 6 teachers

At endline, the study asked teachers in grade 3, 4, 5, and 6 to provide information about their knowledge about teaching reading. Though disaggregated by experimental and IAI-only, many of the experimental schools in this part of the sample benefited from about the same level of intervention as the IAI-only teachers. This is because the reading program in experimental schools was mainly targeted at grades 1 and 2. Still, it was decided to keep them as a separate group, as visits to schools by coaches to grade 1 and 2 teachers and participation by grade 3-6 teachers in school-based teacher learning circles (forum d'échange) may have influenced teachers' knowledge outcomes. This assumption of effect is supported by the results, which show that experimental teachers to have more knowledge on the teaching of certain component skills over their IAI-only and control counterparts. The tables below summarize the change in grade 3 and 4 and grade 5 and 6 teacher knowledge grouped by composite across the baseline and the endline and Tables 21 through 24 pull out specific items that were shown to be significant relative to the composite skills.

The results presented by component skill below represent the mean percentage of agreement to a group of questions classified by component skill. The composition of questions by component skills can be found in Annex B. As every question posed could be answered as "yes" or "no", the means were calculated based on these responses. For example, experimental teachers' frequency of agreement to questions on how to teach fluency amounted to 83.83% mean agreement, compared to around 80% for

IAI-only and 72% for control teachers. The results of the individual questions outlined in tables 22 and 24 represent the percentage of agreement for each question across different teacher groups.

The findings below represent teachers who participated in the endline knowledge interview. Overall, IAI-only and experimental teachers had more knowledge about how to teach reading and writing at endline than did their control counterparts. However, these total differences were not found to be significant. The results for knowledge were also correlated with teachers' use of the IAI programs made available to them[4]. No significant correlations were found between grade 3 to 6 experimental and IAI-only teachers' knowledge and their use of IAI programs. This may be due to two factors: the overall low mean IAI listenership[5] for these teachers which for both experimental and IAI-only teachers, did not exceed 34% of programs listened to. Another reason for lack no significant correlations found may also be attributed to how knowledge was measured through teachers' dichotomous "yes" or "no" answers, contributing to a lack of variability in responses. Therefore, the knowledge results presented below will be discussed by component skills but no regression results will accompany them.

Table 21. Summary of the grade 3 and 4 teacher knowledge results of comparison of means at endline (percentages indicate agreement)

	PAQUED		CONTROL (n=54)
	Experimental (n=36)	IAI (n=73)	
Phonemic and Phonological awareness	94.4%* agree	89% agree	81.48% agree
Fluency	83.83%**	80.01%	72.24%
Vocabulary	72.79%	70.42%	67.59%
Comprehension	92.85%	91.67%	87.5%
Writing	77.3%	74.24%	71.6%
Integrating reading and writing	42%	33%	31%
Total	83.6%	81.08%	78.7%

*The difference in endline means between PAQUED and Control group teachers is statistically significant at $p<.05$
** The difference in endline means between PAQUED and Control group teachers is statistically significant at $p<.01$
***The difference in endline means between PAQUED and Control group teachers is statistically significant at $p<.001$

Overall, grade 3 and 4 experimental and IAI-only teachers showed to exhibit more knowledge about the effective teaching of reading than their control counterparts. The table below demonstrates the specific questions to which experimental teachers' answers were significantly different from their control counterparts.

[4] Other training attendance (summer institute participation) was 98% across the teacher population. The lack of variability in attendance makes it difficult to link to change in practice or endline knowledge.
[5] Mean IAI listenership for grade 3 and 4 experimental teachers was 39% whereas IAI-only teachers listened to 32% of the program. Grade 5 and 6 experimental teachers' IAI listenership rate was 35% and IAI-only teachers listened to 32% of the programs.

Table 22. Item analysis of the grade 3 and 4 teacher knowledge results of comparison of means at endline disaggregated by status (percentages indicate agreement)

	PAQUED		CONTROL (n=54)
	Experimental (n=36)	IAI (n=73)	
1.4 To help students easily read and write words, it is useful to ask them to categorize words by common sounds, common themes or common endings	94%* agree	89% agree	81% agree
2.2 It is useful to talk about new vocabulary with student **before** reading a text.	77%***	50%	41%
2.4 It is better for students to learn new vocabulary through a story rather than in list form.	75%**	47%	47%
4.2 After reading a text, it is important to ask students to explain what they read.	92%*	86%	74%
5.1 It is ok if students make spelling mistakes when they write a new word for the first time.	2.7%***	16%	27.8%

*The difference in endline means between PAQUED and Control group teachers is statistically significant at $p<.05$

** The difference in endline means between PAQUED and Control group teachers is statistically significant at $p<.01$

***The difference in endline means between PAQUED and Control group teachers is statistically significant at $p<.001$

The table below provides a summary of grade 5 and 6 teachers' knowledge of teaching reading. Following the same trend as grade 3 and 4 teachers, experimental and IAI-only teachers showed to know agree with statements about teaching literacy that were in line with effective reading instruction.

Table 23. Summary of the grade 5 and 6 teacher knowledge results of comparison of means at endline disaggregated by status (percentages indicate agreement)

	PAQUED		CONTROL (n=61)
	Experimental (n=39)	IAI (n=67)	
Phonemic and Phonological awareness	91.03% agree	84.6%	89%
Fluency	80.51%	76.61%	75.6%
Vocabulary	79.47%	77.93%	77%
Comprehension	93.88%	93.67%	89%
Writing	69.91%	69.77%	66%
Integrating reading and writing	50%	44.9%	44.7%
Total	82.89%	80.92%	79%

*The difference in endline means between PAQUED and Control group teachers is statistically significant at $p<.05$

** The difference in endline means between PAQUED and Control group teachers is statistically significant at $p<.01$

***The difference in endline means between PAQUED and Control group teachers is statistically significant at $p<.001$

Table 24 pulls out those specific questions that were found to which experimental teachers responded in a significantly different way than their control counterparts.

Table 24. Item analysis of the grade 5 and 6 teacher knowledge results of comparison of means at endline disaggregated by status (percentages indicate agreement)

	PAQUED		CONTROL (n=61)
	Experimental (n=39)	IAI (n=67)	
2.1 To help students learn to read, it is important to have them repeat the reading of a text after you.	76.92%* agree	86.57%	93.4%
3.1 Before asking students to read a new text, it is useful to have a discussion with the class to bring out what they already know about the theme.	92%*	88%	78%
3.2 It is useful to talk about new vocabulary with student **before** reading a text.	74%*	52%	51%

*The difference in endline means between PAQUED and Control group teachers is statistically significant at $p<.05$

** The difference in endline means between PAQUED and Control group teachers is statistically significant at $p<.01$

***The difference in endline means between PAQUED and Control group teachers is statistically significant at $p<.001$

The data outlined in the four tables above will be discussed by component skill in the following sections.

Phonemic and phonological awareness: PAQUED interventions for grades 3-6 did not focus as intensely on developing basic decoding skills (letter-sound relationships, etc) as they did for grade 1 and 2 students. This is because students in grade 3, 4, 5, and 6 should already have developed many of the skills associated with learning how to decode new words. While EGRA results do not reveal this to actually be the case in DRC, the national curriculum objectives assume students are already strong decoders by grade 3, and the Ministry mandates that donor-funded interventions align with the curriculum. Therefore, it is no surprise that grade 5 and 6 experimental and IAI-only teachers' knowledge about teaching phonemic, phonological and alphabetic awareness did not differ significantly from their control counterparts.

Nevertheless, among grade 3 and 4 teachers, experimental teachers tended to exhibit significantly more knowledge on teaching this component skill in comparison to their control counterparts (p=.052, d=.21, ES=.21). This may be explained by teachers attending the school based *forum d'échange* and exchanging with their grade 1 and 2 experimental counterparts around teaching these skills. This explanation is supported by item analysis showing experimental teachers in grade 3 and 4 agreed significantly more with Question 1.4. (*to help students easily read and write words, it is useful to ask them to categorize words by common sounds, common themes or common endings*) (p=.052, d=.21, ES=.21) than their control counterparts. Experimental teachers' high tendency to respond positively to this particular question is interesting because it relates to a key word study activity in the reading program which was reported to be highly discussed in school based learning circles (forum d'échange).

Though no significant differences were found across groups for the question on whether or not it was useful for students to learn to chunks of words to read more quickly, 92% of grade 3 to 6 experimental teachers agreed that this was important. Some of the classroom examples teachers provided to support this answer were as follows:

I give a word to my students and my student cut them into syllables and then read them quickly (N=74).
I draw my students' attention to the word family (root) we are working with. From there, they know the meaning and can read the word (N=9).

Others grade 3 to 6 teachers who agreed that it is valuable to teach students to chunk words provided the following justifications:

The division of words into syllables helps draw out the sounds in the words which assists students in both reading and writing (N=4).
Chunking words helps in student's good pronunciation of the word (N=5).
Cutting words up into syllables or sounds helps students decode difficult words (N=7).
If students know that words are divided up into syllables, they will more easily be able to read it (N=8).

Experimental grade 5 and 6 teachers' responses also reflect some influence from the grade 1 and 2 reading program strategies, as in this classroom example:

After a reading lesson, I have my students write a word that contains the letter or spelling pattern they studied.

Grade 3 to 6 teachers who did not agree that chunking was useful to help students read quickly justified their responses in the following way:

One must always read the whole word without cutting it up (N=8).
Grade 5 and 6 students don't need to cut up words to read them (N=3).
Not all words have roots, and syllables are only useful for slow decoding (N=3).

Overall, these responses show that the majority of interviewed teachers seem to place importance on syllable-by-syllable reading to help students read more quickly. For learning to read in French language, this is an appropriate strategy and is one that is explicitly modeled in the PAQUED IAI programs as well as in other trainings provided by IFADEM.

Fluency: Fluency is a skill that PAQUED interventions, notably IAI, sought to build. Strategies to build fluency involved asking the teacher to drag their finger quickly under words to move their students' eyes more quickly from word to word or having students practice reading words in a given sentence in order and out of order. Other strategies were linked to phonological awareness, like recognition of word roots to help students more quickly chunk words to read them while simultaneously assisting in their comprehension of these words. Finally, the IAI stories strove to present a good model of fluency for teacher and students alike in their read-alouds, attending to fluid intonation and expression.

Given this emphasis, what was teachers' knowledge of teaching fluency teat endline? Only Grade 3 and 4 experimental teachers showed significant differences in their knowledge of teaching fluency at endline ($p=.002$, $d=-0.72$, $ES=.34$) in comparison to their control counterparts. Grade 5 and 6 experimental and IAI-only teachers knew more about teaching fluency but the differences were not significant.

Vocabulary: Both the IAI programs and the French summer institute modeled strategies for vocabulary building for teachers. Such strategies included having teachers collect ideas from students around a given theme, use movements and instructional material support (illustrations, concrete objects) to define new vocabulary, or having students use new vocabulary in sentences orally or by writing. Because students are learning in a second language, vocabulary development is vital to ensuring reading and listening comprehension. Grade 3 to 6 experimental and IAI-only teachers did not exhibit any significant differences in their knowledge about teaching vocabulary at endline. However, specific question analysis revealed that grade 3 to 6 teachers did differ significantly in their responses to certain questions. For example, 75% of Grade 3 and 4 experimental teachers felt is *better for students to learn new vocabulary through a story rather than in list form* (p=.005, d=.63, ES=.3).

Grade 3 to 6 teachers also significantly differed in their answer to the question: *it is useful to teach new vocabulary before the reading of a text* in comparison to their control counterparts (p=.000, d=-0.82, ES=.38 and p=.017, d=-0.52, ES=.25). Teachers' justifications for their positive responses to their question are pertinent to explicit strategies modeled in PAQUED interventions:

> *A student will better be able to understand what he reads if he understands the new vocabulary. (N=43)*

Such justification points to the fact that teachers may see the link between vocabulary knowledge and comprehension. Along these same lines, teachers asserted that students *will be more curious and attentive in their reading if they understand the vocabulary. (N=9)*

Teachers also pointed to the use of "brainstorming" (*collecte des idées*) to help them *bring out new vocabulary (N=14*). This particular activity was explicitly modeled in the French summer institutes which 98% of PAQUED teachers attended. Others cited the usefulness of *asking students questions on the theme of the text in order to develop their vocabulary (N=13)* while other indicated that *illustrations were helpful in explaining new vocabulary prior to reading (N=12).*

About a quarter of grade 3-6 teachers however, asserted that it wasn't useful to teach new vocabulary before reading a text. The reasons and examples cited include:

> *I always start with reading the text first and then I ask students to bring out the difficult words (N=56).*
>
> *"New words should be taught during the reading of the text and not before; otherwise, the words will be taught abstractly" (N=10)*

Though PAQUED encouraged teachers to teach vocabulary prior to reading a new text, the majority of concrete classroom examples given showed to highlight the importance of teaching of new vocabulary. This is positive because it means teachers do value the teaching of new vocabulary.

Comprehension: As it is the ultimate goal of learning to read, activities related to building reading comprehension were key to the PAQUED intervention design. These activities include the "questions" activity where students are always asked to answer "*Who? What? When? Where? How? Why?"*

(QQQOP) questions following the reading of a text. Several IAI programs were dedicated to showing students how to find answers to certain questions using language and context clues. At the end of every program, students were always asked what they liked about the story or how they could relate the story to their own lives.

Grade 3 to 6 experimental and IAI-only teachers did not show significant differences in terms of their knowledge of teaching comprehension as compared to their control counterparts. However, specific question analysis reveals that grade 3 and 4 experimental teachers differed significantly in their response to Question 4.2 *after reading a text, it is important to ask students to explain what they read or to answer comprehension questions* (p=.021, d=-0.51, ES=.24) in comparison to their control counterparts. Grade 5 and 6 experimental teachers differed significantly in their response to Question 3.1 on the importance of pre-reading activities (p=.45, d=-0.41, ES=.2).

Grade 3 and 4 teachers gave classroom examples and justification for why asking students to explain what they read after reading a text was important or not. Those who agreed this was important cited that they asked s*tudents to give the main idea of a text (N=10).* Others said they *asked students comprehension questions (N=21) because it helped them identify whether or not their students understood the text (N=14).* Teachers also pointed to the importance of asking students to explain what they read because it helped *solidify the information in the student's memory (N=5).* Finally, in line with those who believe vocabulary was best taught after the reading of a text, teachers examples included the *definition of new vocabulary after the reading of a text to help students explain what they read (N=10).*

However, some grade 3 and 4 teachers did not feel that it was important to ask students to explain what they read. Reasons provided include:

> *It is me (the teacher) who should explain the text and the words read. The students can repeat after me. (N=9)*
>
> *Students are not capable of explaining what they read. (N=5)*

Similar responses were found for grade 5 and 6 teachers who were asked whether or not they thought it is important for ask students to react to a text orally or in writing. Those who asserted that it was important gave the following justifications that point to some interesting findings, including teachers recognizing student preferences and how they (students) like to learn:

> *I ask my students to react to a text orally or in writing because it motivates them (N=5).*

Another explanation shows that teachers value text reaction because it helps them to evaluate student learning:

> *Asking my students to react to a text lets me know whether or not they have understood the text (N=15)*

Some teachers felt it was important to ask students to react to a text because *it would bring students to formulate their point of view on a given situation (N=8).*

Those grade 5&6 control teachers who disagreed with this statement said they didn't think *students were mature enough to answer comprehension questions (N=3).*

It was also interesting to mention how those teachers who agreed with this statement said they enacted this statement in their classrooms.

I ask my students to react by giving me the main idea of the text (N=8).
I ask my students to tell me the moral or the lesson they took from the story (N=5).
I pose comprehension questions to my students and they answer orally or in writing (N=21).

These responses are consistent with the comprehension-specific activities embedded within the IAI programs. However, no correlations can be established between teachers' use of IAI and their responses to these questions.

Writing: Writing was a core component of the PAQUED interventions designed for teachers and students in grade 3 to 6. Writing activities involved allowing students to experiment with writing beyond simple copying, and to engage in pair-review of drafts. For example, every IAI unit in grade 3 to 6 lessons called for student productions of particular text genres (e.g. poem, letter, fable) modeled in that unit. The French summer institutes also included writing activities, which may have served to influence teacher knowledge of writing instruction.

Overall, grade 3 to 6 experimental and IAI-only teachers did not show significant differences in their knowledge of teaching writing in comparison to their control counterparts. Still, item analysis reveals that experimental teachers in grade 3 and 4 did significantly differ on their tolerance of invented spelling: *It is ok if students make spelling mistakes when they write a new word for the first time* (p=.000, d=-0.87, ES=.4) in comparison to the grade 3 and 4 control teachers. Approximately 50% of Grade 3 to 6 experimental teachers agreed that it is appropriate to teach reading and writing in the same lesson, as compared to approximately 40% of control teachers who thought this was appropriate. Though the difference across groups is not significant, the reading program for grade 1 and 2 teachers did integrate reading and writing intensively. Given this, it is possible that experimental grade 3 to 6 teachers may have been influenced by their grade 1 and 2 counterparts in answering this question.

An extension question on teachers' perceived importance of giving students opportunities to write words or sentences that they produce on their own elicited several interesting responses that may shed light on how teachers are coming to think about writing instruction. Classroom examples ranged from more teacher-driven activities to student-driven activities. Those examples provided for teacher-driven activities include:

I do spelling tests (N=27).
I ask my students comprehension questions on a text and they answer in writing (N=8).
Students write words they saw in a text we just read (N=26).
Students copy the text off the board. (N=4).

Other examples that demonstrated more student-driven productions included:

My students write personal letters. (N=6)
I ask my students to write down any word they know around a given theme or that has a particular spelling pattern (N=18).

I send my students to the board to write their ideas on a text. Then, we correct it together. (N=6). Using illustrations or their own drawings, students can easily write what they see (N=4).

Grade 3 to 6 teacher justifications for providing writing opportunities also emerged from the responses. In addition to spelling tests, teachers explained that writing was important to help them *evaluate their student's comprehension or level (N=5*). Some also said it *facilitates comprehension of the subject matter (N=6)* and *helps a student improve their spelling (N=4).* Writing was also linked to promoting a student's initiative and was considered to be useful to their daily lives: *converting your oral words to the written word is needed in life (N=9).*

Lastly, teacher expectations also surfaced from grade 3 to 6 teachers who both agreed and disagreed that providing opportunities for writing is important. For those who did agree, teachers asserted that *only those intelligent students were capable of writing even though there were still many errors (N=3).* For those who did not agree that providing their students with opportunities to write is important, they cited it was because students *are not capable of writing anything that comes from them (N=6)* and rather, student should *first see what the teacher writes on the board and copy (N=2).*

Overall, the data derived from questions around allowing students to practice writing, to make mistakes, and to do writing activities within the context of a reading lesson shows that teachers across groups take varied stances on what it means to teach writing. Given this, it is difficult to draw conclusions on how PAQUED interventions may have influenced teachers' knowledge around teaching writing or the importance of allowing students to practice writing.

Grade 3 to 6 teacher practice findings

In addition to teachers' shifts in knowledge about teaching reading, it is also important to understand how these changes may have translated into practice. To measure changes in teacher practice, an observation tool similarly structured to that employed with grade 1 and 2 was administered in grade 3 to 6 experimental, IAI-only, and control teachers' classrooms at baseline in March 2013 and at endline in May 2014. Observation tools differed slightly between grade 3 and 4 and grade 5 and 6 teachers due to the inevitable differences in literacy practices associated with these levels.

Sampled grade 3 to 6 teachers were asked to teach a lesson where they introduce a new text to students at both baseline and endline data collection in order to ensure a degree of comparability of the lessons. The observation tool contained a range of specific and observable practices grouped by the component skills they aimed to build. These are: phonemic, phonological and alphabetic awareness, fluency, vocabulary, comprehension, and general instructional practices (see Annex B for tool). These practices were chosen based on those outlined in the national standards and those commonly observed in numerous classroom observations conducted throughout the project. Each itemized practice was allotted 9 five-minute tranches of time, which covers an average lesson span. If the enumerator witnessed a practice, he or she would check of the practice in the appropriate time period. This was to provide a snapshot of the lesson as it progressed and to quantify teachers' implementation of certain practices over others. It should be noted that even if a practice was observed twice in a period of five minutes, only one check was allowed per five-minute tranche. This is a possible limitation of the tool as it hinders one's ability to detect the subtle changes in teacher practice. Still, the results derived from the tool provide interesting information on teachers' practice and were found to be statistically reliable (see Annex B).

The summary tables describe the change in grade 3 and 4 and 5 and 6 teacher practices grouped by component skill across the baseline and the endline. The tables that follow each summary table present specific practices that were shown to change significantly over time. The percentages represent the total number of times the practice was witnessed over the total lesson time. For example, if a teacher asked comprehension questions over two tranches of five-minute time periods of a 35-minute lesson, the teacher would be considered to have exhibited this practice approximately 29% of total instructional time (2 out of 7). The last table shows the results of linear regression analysis linking teacher changes in practice to their use of IAI programs. Unlike teachers' knowledge, some teachers' practices were significantly correlated with their use of IAI programs.

Overall, experimental teachers improved significantly in the instruction of all component skills except for vocabulary over time (longitudinally). Some of these improvements were found to be significantly different in comparison to their control counterparts. In addition, 14.8% of the variance in grade 5 and 6 experimental teachers' total change in practice can be explained by their IAI-listenership ($p=.005$, $d=.83$, $ES=.38$). Finally, IAI-only teachers in grade 5 and 6 significantly improved on their total practices over time ($p=.009$, $d=.65$, $ES=.31$). This section will discuss these results, breaking them down by teachers' application of component skills. The analysis will provide some insight as to why teachers may have improved in the teaching of certain skills over others.

Table 25 below provides a summary of grade 3 and 4 teachers' mean observed literacy- building instructional practices grouped by component skill composite. It also shows the mean gains teachers showed to make over baseline and endline in each component skill and indicates when these gains are statistically significant both longitudinally and across groups.

Table 25. Summary of the grade 3 and 4 teacher practice results of comparison of means between the baseline and the endline disaggregated by status (percentage of instructional time allocated)

	PAQUED						CONTROL (n=46)		
	Experimental (n=48)			IAI-only (n=72)					
	Baseline	Endline	Gainscore	Baseline	Endline	Gainscore	Baseline	Endline	Gainscore
Phonemic and Phonological awareness	1.12%	3.9%	2.78%***	1.39%	1.26%	-0.13%	0.52%	0.89%	0.37%
Fluency	13.19%	17.22%	4.03%**	19.22%	19.64%	0.42%	17.35%	17.59%	0.24%
Vocabulary	5.4%	7.41%	2.01%	6.12%	7.36%	1.24%	6.2%	5.56%	-0.64%
Comprehension	8.47%	11.2%	2.73%**	7.56%	9.44%	1.88%	7.05%	8.31%	1.26%
General instructional and literacy practices	10.5%	13.24%	2.73%*	12.8%	13.05%	0.25%	9.76%	11.79%	2.03%
Total	8.55%	9.79%	1.24%*	9.5%	10.06%	0.56%	8.18%	8.83%	0.65%

*The difference in baseline/endline gains between PAQUED and Control group teachers is statistically significant at $p<.05$

** The difference in baseline/endline gains between PAQUED and Control group teachers is statistically significant at $p<.01$

***The difference in baseline/endline gains between PAQUED and Control group teachers is statistically significant at $p<.001$

___ = significant across groups (cross-sectional)

The table below pulls out specific practices outlined the observation tool where grade 3 and 4 teachers showed to make significant gains across baseline and endline. For example, experimental teachers tended to integrate reading and writing into their lessons (P19) much more at endline than they did at baseline.

Table 26. Item analysis of the grade 3 and 4 teacher practice results of comparison of means between the baseline and the endline disaggregated by status

	PAQUED						CONTROL (n=46)		
	Experimental (n=48)			IAI-only (n=72)					
	Baseline	Endline	Gainscore	Baseline	Endline	Gainscore	Baseline	Endline	Gainscore
P1. Asks students to decode words on their own using sound-letter associations.	3.24%	5.09%	1.85%	1.38%	3.24%	1.85%*	1.69%	1.93%	0.24%
P4. Asks students to correct badly spelled words in their own writing or in writings on the board.	0.23%	11.34%	11.11%***	2.93%	1.85%	-1.08%	.96%	1.44%	0.48%
P13. Asks student to complete a sentence with a missing word orally or in writing.	0.46%	3.24%	2.77%*	1.38%	1.7%	0.31%	1.69%	2.41%	0.72%
P18. Asks questions on a text read (ex. who? What? Where? How? Why?...)	20.13%	27.31%	7.17%*	16.82%	20.98%	4.17%	18.6%	21.5%	2.89%
P19. Integrates reading and writing activities into the same lesson.	2.31%	14.35%	12.04***	3.54%	3.54%	0%	1.2%	3.1%	1.93%
P22A. Asks students to work individually at their desks.	10.42%	19.21%	14.35%**	11.73%	14.97%	3.24%	7.48%	12.08%	4.58%

*The difference in baseline/endline gains between PAQUED and Control group teachers is statistically significant at $p<.05$

** The difference in baseline/endline gains between PAQUED and Control group teachers is statistically significant at $p<.01$

***The difference in baseline/endline gains between PAQUED and Control group teachers is statistically significant at $p<.001$

___ = significant across groups (cross-sectional)

Figure 30 is a visual representation of how teachers spent instructional time at baseline, endline and their gains over baseline and endline. This shows that grade 3 and 4 experimental teachers made the largest gains across baseline and endline across most component skills as compared to their IAI-only and control counterparts.

Figure 30. Grade 3 and 4 teachers' change in literacy instructional practices from baseline to endline.

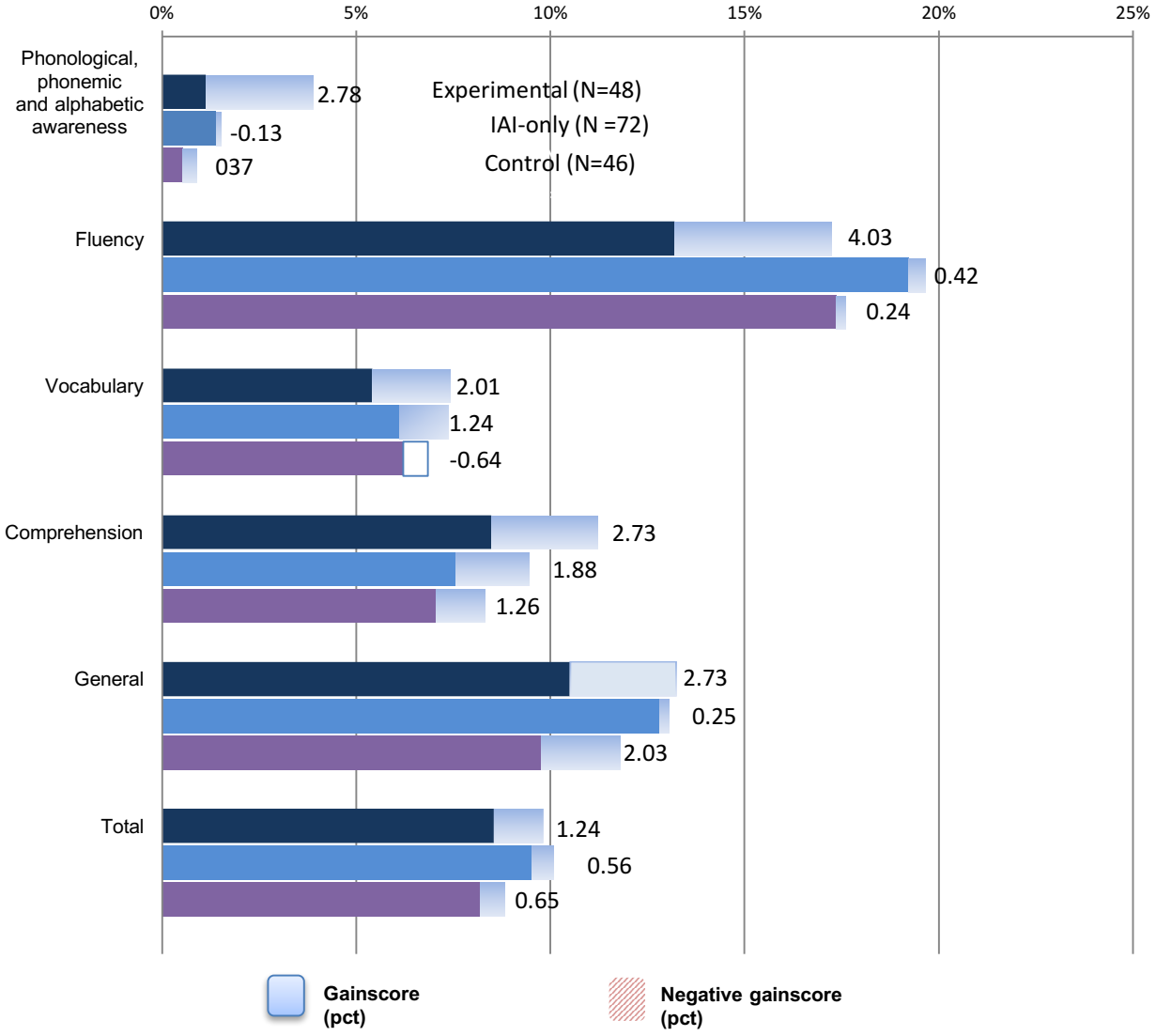


Table 27 below provides a summary of grade 5 and 6 teachers' mean observed literacy- building instructional practice across baseline and endline and their gains in each component skill composites. This table reveals that grade 5 and 6 experimental teachers' gains were not as significant as those made by their grade 3 and 4 counterparts. However, IAI-only grade 5 and 6 teachers did show to make significant gains in their application of phonological awareness activities like word study.

Table 27. Summary of the grade 5 and 6 teacher practice results of comparison of means between the baseline and the endline disaggregated by status (percentage of instructional time allocated)

	PAQUED						CONTROL (n=58)		
	Experimental (n=53)			IAI-only (n=69)					
	Baseline	Endline	Gainscore	Baseline	Endline	Gainscore	Baseline	Endline	Gainscore
Phonemic and Phonological awareness	3.77%	6.92%	3.14%*	2.41%	5.56%	3.14%**	1.72%	2.3%	.57%
Fluency	10.4	14.04%	3.64%***	14.23%	15.57%	1.35%	13.55%	14.61%	1.05%
Vocabulary	4.65%	8.35%	3.70%***	6.09%	7.46%	1.37%	5.36%	7.09%	1.73%*
Comprehension	12.0%	13.15%	1.15%	7.93%	12.0%	4.7%	7.71%	9.0%	1.29%
General instructional and literacy practices	11.7%	13.54%	1.84%	13.4%	13.62%	0.19%	7.85%	8.2%	0.35%
TOTAL	9.23%	10.47%	1.24%	9.09%	10.57%	1.48%	7.45%	8.03%	0.58%

*The difference in baseline/endline gains between PAQUED and Control group teachers is statistically significant at $p<.05$

** The difference in baseline/endline gains between PAQUED and Control group teachers is statistically significant at $p<.01$

***The difference in baseline/endline gains between PAQUED and Control group teachers is statistically significant at $p<.001$

___ = significant across groups (cross-sectional)

The table below pulls out specific instructional practices outlined in the observation tool where grade 5 and 6 teachers made the most significant gains over baseline and endline. For example, grade 5 and 6 experimental teachers seemed to integrate more of P2 in to their lessons when asking students to correct badly spelled words using the CAPOT, a revision strategy explicitly proposed in the IAI programs. Likewise, experimental teachers also showed to integrate significantly more reading and writing activities over baseline and endline.

Table 28. Item analysis of the grade 5 and 6 teacher practice results of comparison of means between the baseline and the endline disaggregated by status

	PAQUED						CONTROL (n=58)		
	Experimental (n=53)			IAI-only (n=69)					
	Baseline	Endline	Gainscore	Baseline	Endline	Gainscore	Baseline	Endline	Gainscore
P1. Asks students to decode words using parts of words already learned (word roots)	1.15%	2.64%	1.49%	1.46%	4.94%	3.48%***	0.84%	1.9%	1.06%
P2. Asks students to correct badly spelled words on the board or in their classmate's writings using CAPOT—conjugation, accord, punctuation, and spelling.	5.56%	11.46%	5.90%*	3.9%	5.61%	1.71%	2.81%	2.34%	-0.47%
P8. Asks students to spell high frequency words or words they've already studied.	1.18%	4.59%	3.41%*	2.07%	2.37%	0.30%	1.69%	0.29%	-1.40%
P11. Asks student to complete a sentence with a missing word orally or in writing.	1.34%	4.4%	3.06%*	1.34%	2%	0.66%	0.98%	0.73%	-0.25%

P12. Does a pre-reading activity **before** reading a text (ex. explain new vocabulary, make predictions)	8.92%	12.87%	3.95%*	10.98%	14.6%	3.62%	8.43%	8.91%	0.48%
P13. Asks students to find synonyms or other words they know on a given theme.	3.03%	10.23%	7.20%***	5.49%	7.36%	1.87%	4.92%	9.06%	4.14%
P14. Solicits ideas and experiences from their students on what they already know about a subject	11.44%	11.29%	-0.15%	9.52%	13.1%	3.58%*	7.73%	8.18%	0.45%
P16. Asks students to order and explain important events or information in a text using a graphic organizer.	6.5%	4%	-2.5%	1%	3.1%	2.1%*	2%	2.8%	.08%
P17. Guides students to form complete sentences (orally or in writing)	5.89%	8.82%	2.93%	5.74%	9.36%	3.62%*	3.79%	4.82%	1.03%
P18. Integrates reading and writing activities into the same lesson.	2.02%	13.4%	11.38%***	3.41%	6.86%	3.45%*	1.13%	3.07%	1.94%*
P22. Asks students to categorize groups of words by a characteristic (same sound, same letter, same theme)	0.16%	1.59%	1.43%*	0.48%	1.99%	1.51%	0%	1.17%	1.17%

*The difference in baseline/endline gains between PAQUED and Control group teachers is statistically significant at $p<.05$

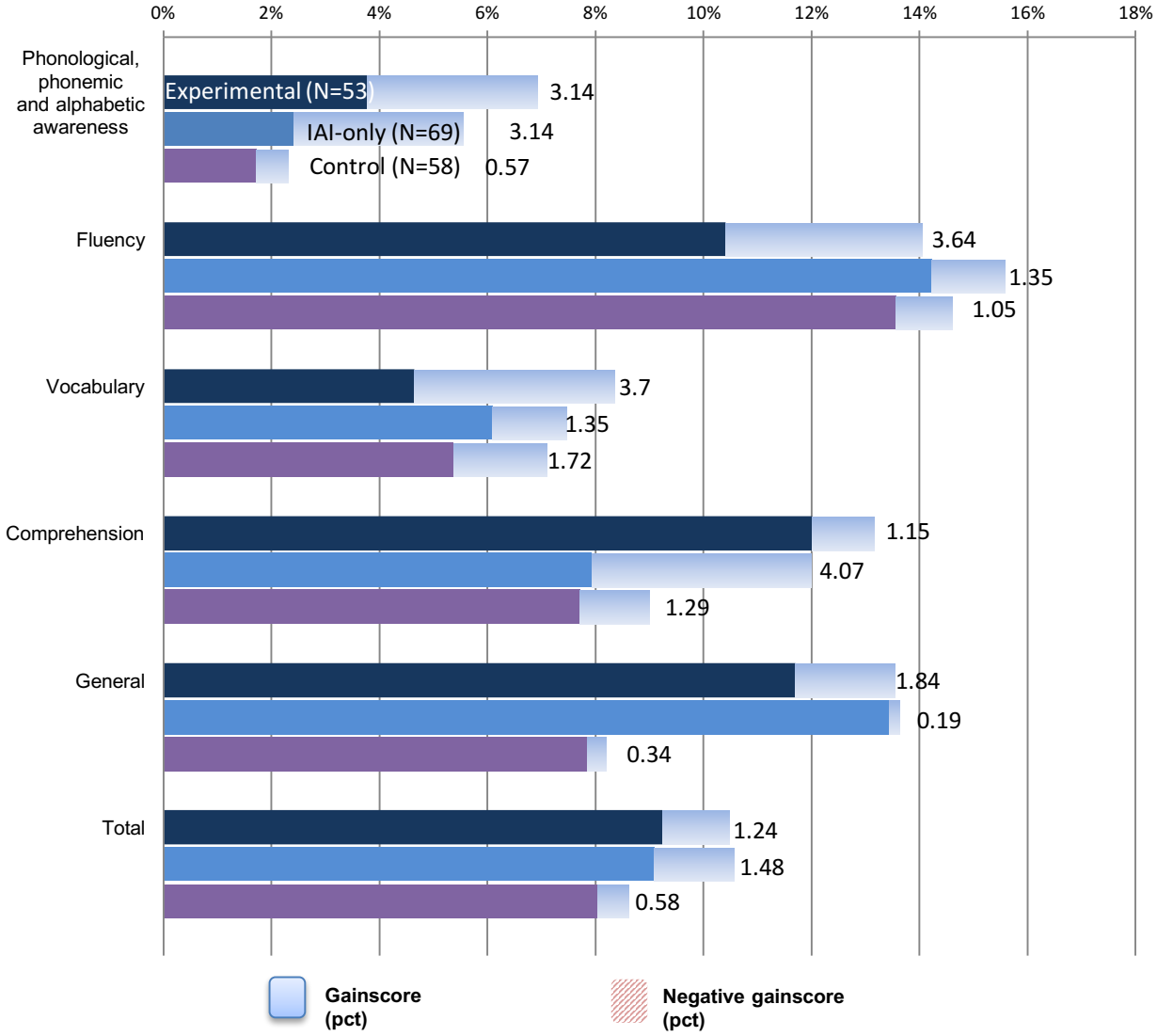
** The difference in baseline/endline gains between PAQUED and Control group teachers is statistically significant at $p<.01$

***The difference in baseline/endline gains between PAQUED and Control group teachers is statistically significant at $p<.001$

___ = significant across groups (cross-sectional)

Figure 31 shows how grade 5 and 6 teachers spent instructional time at baseline, endline and their gains in these component skill composites. Across baseline and endline, all grade 5 and 6 teachers showed to integrate the direct instruction of literacy-specific component skills. Still, mean gains were greater for grade 5 and 6 experimental teachers across component skills.

Figure 31. Grade 5 and 6 teachers' change in literacy instructional practices from baseline to endline.



The two final tables below show the significant correlations identified between IAI-listenership and teachers gains in the application of certain component skills composites. Table 30 shows that grade 5 and 6 experimental teachers' gains in the application of phonological awareness and general instructional practices were positively and significantly correlated with their use of IAI programs. For grade 5 and 6 experimental teachers, the only specific practice that correlated significantly with IAI listenership rates was P1, *asking students to decode words using word roots*. This practice was included in the phonological awareness component skill composite.

It should be noted that these tables were not provided for grade 3 and 4 teachers as no significant correlations between IAI usage and teachers practices emerged from the analysis.

Table 29. Summary results of linear regression for the grade 5 and 6 change in practice using IAI dosage as a predictor

	Experimental IAI dosage		IAI –only IAI dosage	
	R^2	Sig.	R^2	Sig.
Phonemic and Phonological awareness	.102	.023	-	-
Fluency	-	-	-	-
Vocabulary	-	-	-	-
Comprehension	-	-	-	-
General instructional and literacy practices	.112	.017	-	-
Total	.148	.005	-	-

Table 30. Item analysis results of linear regression for the grade 5 and 6 teacher observation of instructional practices using IAI dosage as a predictor

	Experimental IAI dosage		IAI –only IAI dosage	
	R^2	Sig.	R^2	Sig.
P1. Asks students to decode words using parts of words already learned (word roots)	.117	.014	-	-

*The difference in baseline/endline gains between PAQUED and Control group teachers is statistically significant at $p<.05$
** The difference in baseline/endline gains between PAQUED and Control group teachers is statistically significant at $p<.01$
***The difference in baseline/endline gains between PAQUED and Control group teachers is statistically significant at $p<.001$

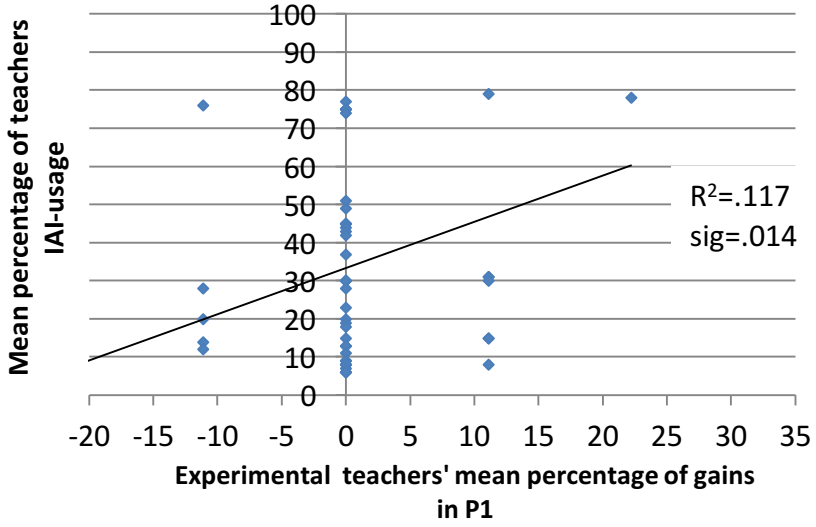
The following discussion will further explore the data outlined the tables and figures above in order to contextualize teachers' gains in certain instructional practices around the PAQUED intervention. For ease of interpretation, the discussion will be broken down by component skill composites.

Phonemic and phonological awareness: As mentioned previously, PAQUED interventions demonstrated phonological awareness building activities in so far as they assisted students to read more quickly and efficiently. This is because in the primary curriculum, it is presumed that students in grade 3 to 6 should have already mastered the basic mechanics of reading. Phonological awareness activities for grades 3-6 included word analysis for word roots, identifying homonyms and homographs, correcting spelling of words using knowledge of grapheme-sound associations and grammar, and categorizing words by common ending and/or sound.

Across baseline and endline, experimental grade 3 and 4 teachers improved significantly in their application of phonological awareness activities in the classroom (p=.000, d=1.26, ES=.53). This change was also significantly different from their control teacher counterparts who seemed to show no significant change in their application of these practices (p=.001, d=-0.83, ES=.38). Experimental and IAI-only grade 5 and 6 teachers also increased their teaching of this skill across baseline and endline (p=.015, d=.7, ES=.33 and p=.002, d=.79, ES=.38, respectively). Linear regression analysis also showed that 10.2% of grade 5 and 6 experimental teachers' gains in this component skill composite can be

explained by their use of IAI programs (p=.023, d=.72, ES=.34). This is consistent with specific practice analysis showing that grade 5 and 6 IAI-only teachers to ask their students to decode words using parts of words already learned (word roots) (P1). 11.7% of experimental teachers' change in application of this practice can be explained by their IAI usage (p=0.014, d=.72, ES=.34), as shown below.

Figure 32. Experimental teachers' IAI usage and their gains in Practice 1 (ask their students to decode words using word roots)



Though no significant correlations were found for grade 3 and 4 teachers, IAI-only teachers were shown to apply P1 more often over baseline and endline by *asking their students to decode words on their own using sound-letter associations* (p=.022, d=.55, ES=.27). Grade 3 and 4 experimental teachers greatly increased in P4, *asking students to correct badly spelled words in their own writing or in writings on the board* (p=000, d=1.49, ES=.6). Similarly, grade 5 and 6 experimental teachers demonstrated an increase in P2, *asking students to correct badly spelled words on the board or in their classmate's writings using CAPOT—conjugation, accord, punctuation, and spelling* (p=.011, d=.73, ES=.34). The gain score for these two items for grade 3-6 teachers were also found to be statistically different from their control counterparts. Still, despite this significant increase in their phonological awareness practices, both IAI-only and experimental schools allocated less than 6% of instructional time to these activities at endline.

Fluency: Fluency activities and instructional strategies for grades 3-6 that were explicitly modeled in the IAI and the French summer institute included having teachers drag their finger under words to move students eyes more quickly from word to word, drawing students attention to vocal pauses and exaggerations when encountering different punctuation, modeling fluent reading, holding silent reading sessions in the classroom, and having students learn to read and write high frequency words in French. Grade 3 to 6 experimental teachers were shown to significantly increase their application of fluency-building activities in the classroom (p=.009, d=.8, ES=.37 and p=.000, d=1.08, ES.48). These differences in gains were also statistically significant in comparison to their control counterparts (p=.036, d=.45, ES=.22 and p=.041, d=.4, ES=.19). Still, their mean application of fluency practices in the classroom remained fair at endline, ranging from 14 to 17% of instructional time allocated to fluency-building activities.

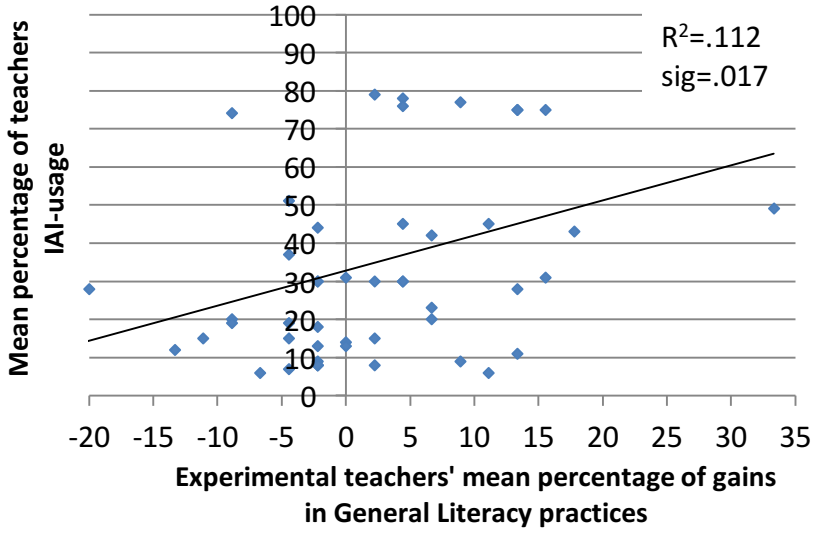
Vocabulary: PAQUED interventions focused on building student's vocabulary knowledge in French through an array of pre-reading and word study activities. More specifically, activities entailed brainstorming of words associated with a given theme; using movements, illustrations or mother tongue to define new words; employing cloze to develop student's attention to context for defining new words; and drawing attention to synonyms, homonyms, and homographs when reading. Vocabulary practices did not seem to shift significantly across baseline and endline for most teachers except for grade 5 and 6 experimental teachers, who increased their demonstrated use of vocabulary building activities in their classrooms (p=.000, d=1.11, ES=.49). This is consistent with specific practice analysis which demonstrates that grade 5 and 6 experimental teachers significantly increased their application of P11 *asking their student to complete a sentence with a missing word orally or in writing* (p=.022, d=.65, ES=.31). Other practices grade 5 and 6 experimental teachers significantly augmented were P12 -- orchestrating *pre-reading activity before reading a text* (p=.017, d=.68, ES=.32) -- and P13 -- engaging in more *word study activities on synonyms or doing brainstorming of other words they know around a given theme* (p=.000, d=1.07, ES=.47). When looking at time allocated to practices like pre-reading activities, it was shown that grade 3 to 6 experimental teachers spent an average of 11% of instructional time on these activities and IAI-only teachers spent an average of 10%. Grade 3 to 6 control teachers spent only 3% of instructional time on pre-reading activities.

Comprehension: Comprehension strategies were embedded in PAQUED IAI and the French summer institute. Activities for grade 3-6 teachers surrounding comprehension included teachers helping students connect their prior knowledge to new information found in a text, asking different levels of comprehension questions, asking students to organize information found in a text to help them make sense of it, and asking students to make predictions on the content of a text based on clues. Overall, grade 3 and 4 experimental teachers demonstrated significant gains in the application of comprehension activities in the classroom across baseline and endline (p=.007, d=.82, ES=.38) whereas IAI-only grade 5 and 6 teachers significantly increased in their application of comprehension activities (p=.001, d=.84, ES=.39). Specific practice analysis supports this by showing that grade 3 and 4 experimental teachers applied P18 more at endline, *asking their students more questions on a text read* (p=.027, d=.82, ES=.38). These teachers spent approximately 30% of instructional time asking their students comprehension questions. Grade 5 and 6 IAI-only teachers showed more application of P14, *soliciting ideas and experiences from their students on what they already know about a subject* (p=.022, d=.57, ES=,27); P16,*asking students to order and explain important events or information in a text using a graphic organizer* (p=.015, d=,61, ES=.29); and P17, *guiding students to form complete sentences* (p=.027, d=.55, ES=.26). However, linear regression analysis found no statistically significant correlations between these gains and teachers' IAI usage.

General instructional and literacy practices: The practices contained in the "general classroom and literacy practices" composite include the incorporation of group work, teacher monitoring of student work, the presence of positive student encouragement, and the integration of reading and writing into the same lesson. Grade 3 and 4 teachers in experimental schools improved significantly on their general literacy and instructional practices across baseline and endline (p=.014, d=1.26, ES=.35). However, grade 5 and 6 teachers did not change significantly in their application of these practices. Still, for these grade

5 and 6 experimental teachers, 11.2% of their gains in this composite could be explained by their IAI listenership (p=.017, d=.7, ES=.33).

Figure 33. Experimental teachers' IAI usage and their gains in General Literacy practices



As the "general" composite is fairly vague, it is useful to identify which items revealed the greatest change over time. Grade 3 and 4 experimental teachers applied more P19 -- integration of reading and writing into the same lesson (p=.000, d=1.52, ES=.6) -- and P22A -- asking students to work individually at their desks (p=.006, d=.84, ES=.39). Grade 5 and 6 experimental, IAI-only and control teachers also tended to shift longitudinally to integrate reading and writing into the same lesson (p=.000, d=1.26, ES=.53 and p=.016, d=.6, ES=.29).Grade 3-6 experimental teachers tended to integrate reading and writing in 13% of the lesson, whereas control teachers only applied writing activities in 3% of the lesson. Grade 5 and 6 teachers in experimental schools also showed significantly more application of word categorization by characteristic (sound, theme, spelling pattern), and mean application time of this item in the classroom moved from 0% application to 2% application of this practice.

Related to teachers' general practices, it was specifically noted in the observations that grade 3 to 6 teachers used examples directly embedded within the new manuals distributed by the Belgian Cooperation (CTB) in 2011. This suggests they use these manuals in their classroom examples indicates that they are using the reading materials that are at their disposal.

Recommendations for policy and practice:

The results of this study and RTI's 2014 EGRA results were presented to the DRC's National Reading Commission in August 2014 to arrive at collective recommendations for policy and a way forward in reading for the DRC primary grades. Fortunately, the new reading and writing standards and accompanying benchmarks have already been developed and harmonized across organizations and validated by the Ministry of Education in this past year, and the PAQUED program reflected those agreements. Therefore, the recommendations reflect not only the ambitions of the government, but also experience from an initial effort to implement programming aligned with those goals. Grounded in rigorous data, they represent sound and constructive suggestions for ways to strengthen reading at scale in the specific context of the DRC.

The primary recommendation derived from the analysis of this study is the ***need for nationalized implementation of a robust reading program*** encompassing the following aspects:

- **A multi-channeled teacher training program** which includes sufficient initial orientation and training on how to implement the new reading curriculum; regular visits from coaches or facilitators; and weekly school-based, teacher-led meetings on reading.
- **Appropriate and sufficient materials** to support the implementation of the new curriculum including a teacher reading activity guide and example lessons plans; a weekly structure for implementation; a scope and sequence outlining the theme, new vocabulary, and phonics patterns; accompanying read-alouds; and appropriately leveled student texts and decodables.
- **A community training component** that ensures parents and communities are involved in improving their children's reading outcomes.

The discussion below expands on considerations necessary for adopting such a program, including training modalities, materials development, community mobilization, research and evaluation, and the need for continued institutional capacity building.

Training modalities:

- ***Continue with the teacher "forum d'échange" system***. As regression analysis showed above, teachers' participation in continuing professional development activities at the cluster and school based level can lead to better teaching and, as a result, better student performance. The content discussed during these meetings should continue to revolve around reading and writing instruction and the active learning strategies necessary for teachers to actively engage students in their learning. Focus group data shows that teachers' participation in these *forum d'échange* meetings helped them to feel supported; facilitated their teaching methods and use of materials; and allowed them the time they needed to reflect on their practices, challenges, and their students' progress.

- ***Continue with the coaching model*** which serves to accompany and support teachers in their application of new reading and writing instructional strategies and activities. In the experimental school experience, coaching was found to help teachers build confidence in

applying strategies and to motivate them to use these strategies regularly and systematically. Over time, teachers became less dependent on coaches for motivation but continued to rely on them to gain an understanding of how to better apply strategies. This coaching helped teachers improve their classroom practice and gain sound knowledge of how to teach reading and writing. Concretely, the Commission suggested that coaches be appointed as "trainers" in the official training system. Though this may be possible in the longer-term, currently, 'itinerant' inspectors whose responsibilities current lie in providing teachers pedagogical support are likely best placed to carry out this role.

- ***Reinforce the capacity of the system to support teachers.*** Though this did not come directly from the data presented above, the reinforcement of inspectors' capacities to support teachers in the application of sound teaching is essential to ensure program sustainability, especially because inspectors and school directors will ultimately play the "coaching" role post-PAQUED.

- ***Use video to ensure quality training on reading and writing activities.*** A cascade model of training inevitably results in altering the end message teachers receive. The Commission pointed to the usefulness of video for those teachers who had difficulty orchestrating different reading and writing activities in their classroom. . PAQUED utilized videos to help teachers visualize what it is they need to do in the classroom and show them how to make and use locally found low cost, no-cost instructional materials for their literacy and math lessons. Focus group data reveals that these videos were extremely useful for teachers, when the technology worked[6]. Therefore, it is recommended that video be incorporated into the reading training package to complement coaching, materials, and continuing professional development activities.

- ***Structure and systematize the reading program to directly impact improvement in teaching practice, knowledge, and student performance.*** In the data presented above, fidelity of implementation of a systematic and structured weekly reading program served to be the most significant predictor of teachers' knowledge of teaching reading and writing and student performance. Focus group data showed that, due to the repetitive nature of activities, teachers came to feel more confident in their application and could focus beyond just simple implementation. For continuing professional development, this is essential: reflecting on one's practice is shown to lead to improvement on that practice. Furthermore, a weekly structure provides a routine for students that establishes clear expectations and, especially in post-conflict contexts like the DRC, leads to student well being (IRC, 2013). Students being able to expect the next step in a lesson build confidence and gain a sense of normalcy which they rarely experience outside of the classroom. The National Commission recommended that the structure of the reading program be sustained and distributed

[6] Due to delays in the release of the video players in customs, several video player batteries died and subsequently affected use of the video players in the field. Several batteries but not all batteries were replaced. Thus, videos were found to be useful when the batteries were functional.

beyond experimental schools. This is especially time sensitive as the new reading and writing curriculum becomes mandated this school year. Establishing a program which shows teachers how to go about teaching to these new standards in a way that is not too overwhelming will be a key element for the successful adoption of the new curriculum in schools.

- ***Ensure multiple delivery channels to support teachers in the implementation of literacy instructional practices***. The PAQUED reading program was successful because it provided multiple channels for building teachers' knowledge of teaching reading; helping them implement literacy practices and strategies in the classroom; providing them with accompanying training and instructional materials directly linked to these strategies; supplying them with coaching visits, and encouraging peer-to-peer exchanges around teaching reading in both school-based and school-cluster forums. In addition, the program mirrored the national teacher training strategy. To ensure teachers' successful use and application of the new reading curriculum in the DRC, it is therefore highly recommended that these multiple channels continue to be exploited.

Materials development:

- ***Make available sufficient and appropriately leveled reading materials , both in*** classrooms and for students to take home to continue practicing their reading skills. Currently, the majority of the books available in classrooms are not appropriately leveled, making it difficult for students to practice reading and for teachers to use texts that are at students' instructional levels. The PAQUED reading program materials were designed to respect the benchmarks and leveling criteria developed and validated by the Ministry of Education in 2013. Therefore, it was suggested that, although these materials are written in French, they can still serve as appropriately leveled reading materials for students to transition into French in grade 3 and should be widely distributed. It was also recommended that texts in national language should be developed as soon as possible and appropriately leveled texts for grade 3 to 6 in French should also be developed and distributed.

- ***Ensure regular use of IAI with appropriate technology to provide useful instruction and training.*** The PAQUED project faced significant challenges with the technology selected for the delivery of its IAI programs[7]. However, when the technology worked and when teachers used the IAI programs regularly, data show that they did contribute to improvements in teachers' pedagogical knowledge and practice, directly contributing to student performance. IAI provides a uniform quality of continuous training and instruction to everyone, which is a particular advantage in a vast and diverse country like the DRC.

[7] The delivery mechanism selected for IAI was extensively tested at the beginning of the project. Following testing, a final product was selected for large-scale procurement. Delivered radios experienced severe delays in their release from customs which resulted in battery failures. This was only realized after distribution had occurred. Some batteries were imported to replace the non-functioning ones. However, some radio batteries continued to function. Hence, when radios worked, the programs were found to be useful by teachers.

Therefore, it was recommended that a market study be undertaken to identify context-appropriate technology (i.e. mobile phones with solar panels) and that those devices be used to distribute IAI at a larger scale and in sufficient numbers to maximize teacher and student use.

Community mobilization

- ***Clarify and activate the role of communities in supporting improved reading outcomes.*** Communities have long been the backbone to education development and preservation in the DRC. Therefore, community involvement is vital to student success in school and, by extension, to reading. It is recommended that community roles and responsibilities under the COPAs and COGES structures be defined so that they can contribute to holding the school accountable for providing the education their children deserve and need.
- ***Train parents and communities in reading***. Communities often don't know how they can best help improve literacy rates or they may not think they have the resources or means (financial and human capital) to support literacy. Therefore, it is recommended that communities be provided with training and information on how they can contribute to bettering their student's literacy rates. Trainings can include in-school and out of school support like the establishment of reading clubs; providing parents and siblings with simple literacy-building activities to do with their children at home; or helping to create instructional materials for literacy (letter cards, word cards, etc).

Research and evaluation

- ***Conduct research and evaluation to track progress and keep all actors accountable.*** It was recommended that sufficient financial resources be allocated to research and evaluation within the national reading program. It was also suggested that standard evaluation tools to mirror national standards and benchmarks be developed and employed to evaluate student progress. Teacher evaluations based on teacher pedagogical practice standards should also be developed and should mirror student evaluations so that teachers' practices can be aligned with student learning objectives. Finally, the Commission recommended that a standard tool be developed to track community activities, as they are central to ensuring student success and attendance in school.
- ***Continue to conduct studies such as these, to inform policy and support the continuous improvement of training models.*** In working through the data presented in this report, the National Reading Commission came to appreciate the value of this type of information in understanding how teachers teach and how students are affected be teacher knowledge and practice. Therefore, future research initiatives are encouraged to continue in order to continuously inform the community of practice.
- ***Identify and further explore the trends emerging from existing data and future studies*.** In all data, interesting and pertinent trends tend to emerge. For example, in RTI's 2014 Endline EGRA and EGMA report, it emerged that children whose teachers had 5 years or less of teaching experiences performed better across all groups (experimental, IAI-only, and control). Such a

trend begs further questioning to better understand why more than five years of teacher experience may contribute to students not performing as well. SAs studies are undertaken and developed, they should strive to answer the questions arising from previous research and evaluation. This also requires that study results are appropriately and widely disseminated to local and international stakeholders.

Institutional Capacity Building:

- ***Define the roles and responsibilities of all actors in the system.*** In order for a reading program to be successfully implemented, all actors need to understand what their roles and responsibilities are and how they are expected to contribute to ensuring its success. In the DRC, assistance programs are often catered to the higher policy echelons of the education system or at the school level. Rarely have programs addressed the system as a whole. Therefore, it is recommended that roles, responsibilities, and training needs in order to effectively execute these responsibilities be put into place for every actor from the central Ministry level to the school director be spelled out. For example, this study revealed how important coaches were in teachers' successful application and understanding of reading instruction. Since the coaching role is not currently part of the education system, it is suggested that specific roles of inspectors or cluster facilitators include the function of a reading coach for teachers. This role needs to be defined in detail and training and support has to be provided to them. Likewise, training, monitoring, and evaluation tools. Reading activities, materials, and trainings also need to be harmonized across existing projects so that Ministry actors across the system understand how they fit into the advancement of a common goal.

Conclusion:

This study confirms that teachers' knowledge and expectations of how to teach reading and writing contribute substantially to students' reading performance. Simply asking teachers to change their practices, whether through general instructions or highly scripted lesson plans, ignores the importance of helping them understand the pedagogical foundations of the practices they are asked to adopt. Therefore in designing a teacher training program on reading, it is essential to embed frequent opportunities for teachers to reflect in addition to ensuring the program itself is accessible enough to allow for reflection rather than frustration.

How do teachers improve their knowledge? This study suggests that they learn from engaging in professional development activities, including exchanges with their peers, periodic training, and coaching. PAQUED offered a range of professional development pathways, including intensive workshops, peer-to-peer coaching and lesson preparation, monthly in-class coaching and learning circles formed among neighboring schools. Further research might explore the cost-effectiveness of these and other strategies for helping teachers improve their knowledge of reading instruction, as these investments may not only have an immediate impact on student performance but may create long-term positive effects, as well. The lessons learned also call for further experimentation, which is already a top priority for the Ministry of Education prior to the national roll-out of a reading program.

Further studies also need to consider the challenges of conducting research in vast and fragile countries like the DRC. These include not only logistical and security considerations but also the high rates of teacher attrition, which make it difficult to conduct longitudinal studies, and of student absenteeism, which puts into question how many of the students sampled were actually present for most lessons. With these variables in mind, future studies like this one should search capture and control for this type of data. This is it is still essential to continue to inform the exciting policy front in the DRC, decision making and the development of materials and tools that respond to the needs and realities of the education system.

Annex A. Methodology

Observation (practice) and interview (knowledge) tools:

Tool writing and adaptation: The observation tool was designed to assess whether or not teachers were using specific practices outlined in the experimental reading program and embedded within the IAI programs. The tool was used adapted from existing observation inventories utilized by EDC. Time tranches of five minutes were integrated in order to capture the extent to which practices were used and when. The tool was piloted in two Kinshasa schools by a team of five PAQUED technical team members. Post-pilot, the practice statements on the tool were revisited to clarify certain items that remained unclear, to remove those which overlapped, and to add essential practice items which appeared in the classroom but were not originally captured in the tool.

The knowledge tool was adapted from EDC's *Beliefs and Instructional Practices Inventory* (BIPI), which was designed to capture teachers' knowledge and expectations of their students in the domains of reading and writing. The original BIPI questionnaire was converted to be administered as a face-to-face interview and selected items were interposed with extension questions to provide additional validity and to enrich teachers' simple yes or no answers with justifications and classroom examples. The tool was piloted in a Kinshasa school by a team of five PAQUED technical team members. After piloting, the tool was adapted to clarify questions that were considered problematic and add or remove questions.

Training: A team of ten "supervisors" were trained in Kinshasa on tool administration. As a high-inference tool, the observation instrument required a high degree of inter-rater reliability. Each practice enumerated in the tool was explained and concrete classroom examples were provided to trainees. Thereafter, they were shown multiple 15-minute video clips of real Congolese classrooms and given opportunities to use the observation tool to check off the practices they witnessed in each five-minute tranche. Following each video clip viewing, pairs of observers exchanged their ratings of the practices they saw, and where there was disagreement in what was observed, they would justify their ratings until a consensus was reached. A similar process of consensus-building was then applied in a plenary session in which each pair presented their results. If other pairs did not share similar marks, justifications were provided and consensus was reached of what certain practices "looked like". This process was repeated until consensus was achieved amongst data collectors. For the training on the knowledge interview tool, each question in the tool was read aloud and clarifications on the question were provided. Training was also provided on establishing rapport with the interviewees, emphasizing the need to make the interview environment calm, distant from distractions and potential influences like a teachers' superior or peer, and to keep the interviewer's reactions to responses non-judgmental. Training on how to write summaries of classroom examples without misrepresenting teachers' opinions was also provided. Enumerators then paired off and each took turns administering the interview for all three "degré" levels.

38 enumerators were selected and trained on both the observation and interview tool by the supervisors using a coaching guide based off the training they had received themselves. Following this training, enumerators were paired by their supervisors and sent to schools to begin tool administration. During each observation, every enumerator was instructed to fill in their observation tool individually

according to what they saw. After each observation, the pairs would get together and compare their tools. Where their observations differed, enumerators would engage in the same process of justification performed in training. When consensus was reached, the pair would fill in a consensus observation tool and staple it to their individual tools. At baseline and endline analysis, these consensus tools and individual tools were compared. In addition to this, 10% of observations were filmed, scored separately by the original trainer, and compared to the scores of the field enumerators, to maximize inter-rater reliability. However, no inter-rater reliability study was conducted.

For interviews, each enumerator administered the same interview tool face-to-face and one-on-one with the teacher. Extension question responses were summarized following a process of repeating back to the teacher verbatim the example provided and then summarizing it. If the teacher agreed with the summary, the data collector would note this summary. If agreement was not reached, the teacher would be asked to provide a summary of what they intended to say and this would be recorded.

Teacher selection: At baseline, schools were randomly selected from schools identified in RTI's "accessible school" sample from the XXXX EGRA. Class sections within these schools were also randomly assigned by grade-level and by status (experimental, IAI-only, and control). Enumerators were given a list of class sections to visit in each school. Teachers' names were recorded after they were observed and retained in a database so that they could be similarly observed at the endline.

At endline, two teachers who took part in the observation from each grade-level were randomly selected for interviews.

Reliability analysis: A statistical analysis of test reliability was used to describe an internal consistency of each tool, and is based on the correlations between different items (subtests). Internal consistency of the test was measured with Cronbach's alpha which is the result of pairwise correlations between items. Cronbach's alpha ranges from zero to 1, where zero denotes an absence of any correlation across items on the test, and 1 denotes a perfect correlation across items. A typical and acceptable range for Cronbach's alpha is above .8. A good internal consistency of an observation tool means that a teacher who shows to exhibit one particular fluency-building practice would also demonstrate other types of fluency-building practices outlined in the observation tool.

A test of internal consistency of the observation tools for different grade found that the overall tool reliability was high, especially for the grade 1 and 2 tool (Cronbach's alpha =0.81 for grade 1 and 2, 0.7 for grade 3 and 4 and 0.71 for the grade 5 and 6 tool). The item level analysis for both grade 3 and 4 and 5 and 6 observation tools showed that phonological awareness practices did not correlate well with other items. If we remove it from the test, the Cronbach's alpha will go up to 0.75.

For the interview (knowledge) tool, a similar test of internal consistency found the overall reliability to be average (Cronbach's alpha =0.62 for grade 1 and 2, 0.56 for grade 3 and 4 and 0.51 for the grade 5 and 6 tool). This only includes items that required yes or no answers as extension question responses could not be captured by the analysis. Therefore, when judging the reliability measure on this tool, it should be considered that additional information beyond the dichotomous yes or no answers is obtained from this tool thereby allowing for a degree of validation to the answers teachers provided.

Reading assessment:

The reading assessment was designed to provide a snapshot of student's reading capabilities. Because the grade 2 EGRA administered by RTI did not include a fluency assessment, it was also deemed necessary to include one in the PAQUED study. This assessment took an average of 5 minutes to administer and included the following sub-tests:

- *Random alphabet letter reading subtest* assessed students' knowledge of letter names in the French alphabet. Students were presented with 26 lower case letters placed out of order and asked to identify the names of each letter they saw. In addition to letter names, letter sounds were also accepted as correct answers. The subtest was untimed though students were given only 3 seconds to identify each letter.

- *High frequency/familiar word reading subtest* assessed students' sight vocabulary knowledge of high frequency French words. Recognizing familiar words is critical for developing reading accuracy and automaticity. In this subtest, students were asked to identify 8 words that were randomly generated from a list of 580 most common words in the French language. Students were asked to read every word. The subtest was untimed though students were given only 3 seconds to identify each letter.

- *Reading of a connected text subtest* assessed students' reading accuracy and automaticity in reading a 26 word passage aloud. The subtest was timed but not capped at 60 seconds, allowing for the student to read until the end. This yielded a score of correct words per minute.

A group of administrators drawn from the PAQUED technical team from Kinshasa and a few field agents were trained on test administration following a specific protocol (see annex X). The test was piloted to assess the connected text-level with a randomly selected group of grade 2 classes in Mbandaka, Kisangani and Kikwit. Overall, 90 students were part of the pilot. Following this pilot, the text was adjusted and appropriately leveled in order to capture reading results from a majority of students and to avoid large numbers of zero scores.

Sampling: In June 2014, test administrators received refresher training and were instructed to administer the test and randomly sample 6 students (3 girls and 3 boys) from each teacher interviewed at the endline. Students were randomly selected from the teachers' class list to assess. Results were then entered electronically using Survey To Go in order to minimize data entry errors.

Reliability analysis: A statistical analysis of test reliability is used to describe an internal consistency of the reading assessment. The test of internal consistency of the reading assessment found that the overall test reliability was high (Cronbach's alpha = .871).

Reading Assessment Reliability

Subtests	Item-Total Correlation	Cronbach's Alpha if Item Deleted
1.alphabet letter reading	.732	.831
2.familiar word reading	.823	.798
3.Connected text reading	.881	.766

Data Analysis

All collected data were cleaned by EDC M&E staff and analyzed using standard statistical techniques, such as univariate and bivariate statistics, as needed for different analytical purposes. The results were disaggregated by sex and province, as appropriate. Central tendency analysis (e.g. mean, median) were conducted for continuous demographic variables. Comparison of means statistical tests (paired and independent samples *t*-test) were conducted to estimate differences between groups such as province and sex, where appropriate. Bivariate statistical analyses (e.g., correlations) were conducted to examine the relationship between different variables.

Study Limitations:

The study presented a few limitations which may have impacted the results of the study. First, the sample size for the reading assessment was quite small therefore, differences across groups were more difficult to detect. Another piece of data which would have been useful in explaining student performance results is student attendance data in school. It is difficult to extrapolate the degree to which teachers' practices, knowledge, and fidelity of implementation of various PAQUED interventions had impact on student performance when there is lack of information on how often student attended school to benefit from these factors. In future research studies, data for this variable should be routinely collected.

Secondly, teacher attrition across baseline and endline was high across grade levels (41% for grade 1 and 2, 35% for grade 3 and 4 and 24% for grade 5 and 6 teachers) for a mean of 33.7% attrition for all teachers sampled. Though teachers who were not retrained were replaced, this reduction of matched sample size reduced the statistical possibility of detecting differences in change in teacher performance over time.

Finally, though inter-rater reliability was accounted for in tool administration through consensus reaching, no inter-rater reliability study was undertaken with enumerators.

Annex B. Tools

Reading assessment:

Instrument d'appréciation de performance en lecture au degré élémentaire

Classe de 2ème année primaire **Date d'administration : ___/___/_____**

A. Question à poser à l'enfant.
   a. Âge de l'enfant …….. Année scolaire ……
   b. Classe (ex. 2A)…… Ecole ……..
      Nom de l'enseignant de l'enfant :……..
   c. Est-ce que son enseignant utilise un livre avec des images au moment où il leur raconte ou leur lise des histoires / contes ? OUI ☐ NON ☐
   d. Est-ce que son enseignant leur donne des petits livres avec images pour qu'ils lisent seuls ?
      OUI ☐ NON ☐

B. Test/Appréciation de l'acquis de l'alphabet.
   Consigne : combien de lettres l'enfant peut-il identifier correctement ?
   - Si l'enfant prend plus de trois secondes pour identifier une lettre, demandez-lui de passer à la prochaine lettre.
   - L'enfant lit ligne par ligne de gauche à droite.
   - Acceptez le son ou le nom de la lettre.
   - Sur cette fiche de réponses, encerclez les lettres incorrectes.
   - Dans la case en dessous, mettez le nombre de lettres correctement identifiées.

k	d	x	h	r	i	u	j	b	z	m	c	s
g	o	q	e	t	a	n	v	y	l	w	f	p

/ 26

C. Suivez la même méthode pour l'exercice suivant. L'enfant doit lire rapidement ces mots fréquemment utilisés dans la langue française.

le	avec	un	de	moi	car	pour	est

/ 8

D. Lecture de texte : Soulignez les mots lus incorrectement. Si l'enfant prend plus de cinq secondes à lire un mot, demandez-lui de passer au mot suivant. Chronométrer le temps qu'il prend pour le lire et enregistrer le temps ci-dessous en secondes.

Mon petit chat joue dans le jardin. Il a vu une souris. Il se cache. La souris est là. Il saute et il mange la souris.

/ 26

Temps de lecture (en secondes) :	**s**

PRATIQUES DE CLASSE	Appliquée? (mettez un X si vous observez la pratique)

Observation (practice) tools

Grade 1 and 2 observation tool

Diagnostic de la classe:

Nom de l'observateur :_____ Date : _____

Classe (ex. 1e C) 1e ___ 2e ___	**Nom et prénom de l'enseignant**	
	Sexe de l'enseignant (encerclez) : F M	
Nombre de fille _____	**Nom de**	**L'heure de _____à_____**
Nombre de garçon_____	**Sous division**	**Sujet : _____**

Dessin de la classe (fille = ♀ garçon = ♂)

		0 à 5 mns	5 à 10 mns	11 à 15 mns	16 à 20 mns	21 à 25 mns	26 à 30 mns	31 à 35 mns	36 à 40 mns	N/A
CONSCIENCE PHONÉMIQUE/PHONOLOGIQUE										
1.	Demande aux élèves d'identifier et de compter les sons/syllabes dans un mot.									
2.	Demande aux élèves de dire ce qui est pareil (rime, son, prononciation) dans **une liste de mots.**									
3.	Demande aux élèves de citer tous les mots qu'ils connaissent et qui commencent par un son précis ou qui riment avec un autre.									
4.	Demande aux élèves de corriger des mots mal orthographiés dans ses propres écrits ou dans les écrits au tableau.									
5.	Demande aux élèves de remplacer le son du début d'un mot par un autre son pour former un nouveau mot (ex : mère/père).									
6.	Demande aux élèves d'identifier le ou les sons au début et à la fin **d'un mot**.									
7.	Montre aux élèves comment écrire les lettres de l'alphabet, les diphtongues, ou les syllabes.									
8.	Aide les élèves à apprendre/identifier les noms et les sons de différentes lettres.									
FLUIDITÉ										
9.	Pointe les lettres, les syllabes ou les mots pendant qu'il lit ou pour guider les élèves à lire.									
10.	Attire l'attention des élèves à la ponctuation (point, point d'interrogation…) lorsqu'ils lisent.									
11.	Demande aux élèves de lire à haute voix ….									
	tout seul									
	Par paire ou par banc									

	tous ensemble									
12.	Fait lire **rapidement** aux élèves des lettres, des syllabes, ou des mots fréquents au tableau ou sous forme de cartes éclairs.									
VOCABULAIRE										
13.	Explique ou demande aux élèves d'expliquer du nouveau vocabulaire **avant la lecture** d'un nouveau texte.									
14.	Demande aux élèves de donner le sens d'un mot avec des gestes, des dessins ou à l'aide des matériels didactiques.									
COMPRÉHENSION										
15.	Demande aux élèves de donner leur prédiction sur le contenu d'un texte en se servant des indices (page couverture, images, titre, contexte).									
16.	Pose des questions aux élèves sur un texte lu. (Ex. Qui, Quoi, Où…)									
17.	Sollicite les idées et expériences de ses élèves (accéder à la connaissance antérieure et faire le lien avec la vie des élèves ou d'autres matières)									
GENERALES										
18.	Intègre des activités de lecture et d'écriture dans la même leçon (ex. les élèves écrivent le son qu'ils entendent/apprennent)									
19.	Veille sur la participation des élèves. **(COMPTEZ ET METTEZ LE NOMBRE D'ELEVES QUI NE PARTICIPENT PAS!! Ex. 9/55 élèves)**									
20.	Lorsque les élèves sont en groupe, en paire ou travaillent individuellement, l'enseignant **circule** pour aider les élèves.									
21.	Demande aux élèves de travailler…									

	tout seul									
	en groupe ou en paire									
	En plénière									
22.	Demande aux élèves de former des groupes de mots selon une même caractéristique (même son, même lettre, même thème...)									
23.	Encourage les élèves de manière positive lorsqu'ils fournissent un effort.									

Grade 3 and 4 observation tool

Diagnostic de la classe:

Nom de l'observateur :_____ Date : _____

Classe (ex. 3e B) 3e ___ 4e ___	**Nom et prénom de l'enseignant _____**	
	Sexe de l'enseignant (encerclez) : F M	
Nombre de fille _____	**Nom de l'école_____**	**L'heure de _____à_____**
Nombre de garçon_____	**Sous division**	**Sujet : _____**

Dessin de la classe (fille = ♀ garçon = ♂)

PRATIQUES DE CLASSE **L'enseignant(e)…**		**Appliquée? (mettez un X à chaque fois que vous observez la pratique)**								
		0 à 5 mns	**5 à 10 mns**	**11 à 15 mns**	**16 à 20 mns**	**21 à 25 mns**	**26 à 30 mns**	**31 à 35 mns**	**36 à 40 mns**	**N/A**
CONSCIENCE PHONÉMIQUE/PHONOLOGIQUE										
	Demande aux élèves de décoder des mots en utilisant les associations son/lettres.									
2.	Demande aux élèves de dire ce qui est pareil (rime, son, prononciation) dans **une liste de mots.**									
3.	Demande aux élèves de citer tous les mots qu'ils connaissent et qui commencent par un son précis ou qui riment avec un autre.									
4.	Demande aux élèves de corriger des mots mal orthographiés dans ses propres écrits ou dans les écrits au tableau.									
5.	Demande aux élèves de remplacer le son du début d'un mot par un autre son pour former un nouveau mot (ex : mère→père).									
FLUIDITÉ										
6.	Pointe les mots pendant qu'il lit ou pour guider les élèves à lire.									
7.	Attire l'attention des élèves à la ponctuation (point d'interrogation, exclamation, point, virgule) lorsqu'ils lisent.									
8.	Demande aux élèves de lire à haute voix…									
	tout seul									
	en paire ou par banc									
	tout ensemble									

9.	Fait un modèle de lecture avant que les élèves lisent.									
10.	Fait lire **rapidement** aux élèves des mots fréquents ou des tranches de phrases fréquentes au tableau ou sous forme de carte éclair.									
VOCABULAIRE										
11.	Explique ou demande aux élèves d'expliquer du nouveau vocabulaire **avant la lecture** d'un nouveau texte.									
12.	Demande aux élèves de donner le sens d'un mot avec des gestes, des dessins, ou en l'utilisant dans une phrase.									
13.	Demande aux élèves de compléter une phrase par un mot manquant à l'oral et à l'écrit.									
COMPRÉHENSION										
14.	Demande aux élèves de donner leurs prédictions sur le contenu d'un texte en se servant des indices (page couverture, images, titre, contexte).									
15.	Demande aux élèves d'ordonner des phrases (début, milieu, fin).									
16.	Sollicite les idées et expériences de ses élèves (accéder à la connaissance antérieure et faire le lien avec la vie des élèves)									
17.	Guide les élèves à former des phrases complètes (à l'oral ou à l'écrit).									
18.	Pose des questions aux élèves sur									

	un texte lu. (Ex. Qui, Quoi, Où, Pourquoi ?)									
GENERALE										
19.	Intègre des activités de lecture et d'écriture dans la même leçon (ex. les élèves écrivent le mot qu'ils entendent/apprennent)									
20.	Veille sur la participation des élèves. **(COMPTEZ ET METTEZ LE NOMBRE D'ELEVES QUI NE PARTICIPENT PAS!! Ex. 9/55 élèves)**									
21.	Lorsque les élèves sont en groupe, en paire ou travail individuellement, l'enseignant **circule** pour aider les élèves.									
22.	L'enseignant demande aux élèves de travailler….									
	Tout seul									
	en groupe ou en paire									
	En plénière									
23.	Demande aux élèves de former des groupes de mots selon une même caractéristique (même son, même lettre, même thème, etc.)									
24.	Encourage les élèves de manière positive lorsqu'ils fournissent un effort.									

PRATIQUES DE CLASSE L'enseignant(e)…	Appliquée? (mettez un X à chaque fois que vous observez la pratique)

Grade 5 and 6 observation tool

Diagnostic de la classe:

Nom de l'observateur :_____ _____ Date : _____

Classe (ex. 6A) 5e ___ 6e____	**Nom et prénom de l'enseignant _____**	
	Sexe de l'enseignant (encerclez) : F M	
Nombre de fille _____	**Nom de l'école_____**	**L'heure de _____à_____**
Nombre de garçon_____	**Sous division**	**Sujet : _____**

Dessin de la classe (fille = ♀ garçon = ♂)

PRATIQUES DE CLASSE **L'enseignant(e)…**		**Appliquée? (mettez un X à chaque fois que vous observez la pratique)**								
		0 à 5 mns	**5 à 10 mns**	**11 à 15 mns**	**16 à 20 mns**	**21 à 25 mns**	**26 à 30 mns**	**31 à 35 mns**	**36 à 40 mns**	**N/A**
CONSCIENCE PHONÉMIQUE/PHONOLOGIQUE										
	Demande aux élèves de décoder des mots en utilisant des parties de mot déjà acquis (racines).									
2.	Demande aux élèves de corriger des mots mal orthographiés (au tableau ou de leur ami en utilisant le CAPOT—conjugaison, accord, ponctuation, orthographe).									
FLUIDITÉ										
3.	Attire l'attention des élèves à la ponctuation (point d'interrogation, exclamation, point, virgule, guillemets) pour aider les élèves à lire avec un bon **débit** et **rythme**.									
4.	Fait lire **rapidement** aux élèves des mots fréquents ou des tranches de phrases fréquentes au tableau ou sous forme de carte éclair.									
5.	Fait un modèle de lecture avant que les élèves lisent.									
6.	Demande aux élèves de lire à haute voix ….									
	tout seul									
	Par paire ou par banc									
	tous ensemble									
7.	Demandez aux élèves de lire silencieusement un texte.									
8.	Demande aux élèves d'orthographier des mots fréquents et des mots déjà vus.									

VOCABULAIRE										
9.	Demande aux élèves de donner la définition d'un mot ou d'une expression avec des gestes ou en l'utilisant dans une phrase.									
10.	Fait des gestes ou définit de nouveaux mots ou expressions.									
11.	Demande aux élèves de compléter une phrase par un mot manquant à l'oral ou à l'écrit.									
12.	Mène des activités de pré lecture **avant de lire** un texte (expliquer du nouveau vocabulaire, faire des prédictions).									
13.	Demande aux élèves de trouver des synonymes ou d'autres mots qu'ils connaissent sur un thème.									
COMPRÉHENSION										
14.	Sollicite les idées et expériences de ses élèves (accéder à la connaissance antérieure et faire le lien avec la vie des élèves)									
15.	Pose des questions aux élèves sur un texte lu. (Ex. Qui, Quoi, Où, Pourquoi ? Comment ?)									
16.	Demande aux élèves d'ordonner et d'expliquer les évènements importants dans un texte (début, milieu, fin, d'autres éléments du texte, problème, solution) à l'aide d'un **schéma**.									
17.	Guide les élèves à former des phrases complètes (à l'oral ou à l'écrit).									

GENERALE										
18.	Intègre des activités de lecture et d'écriture dans la même leçon (ex. les élèves écrivent un mot pour compléter une phrase, les élèves écrivent une phrase qui résume un récit)									
19.	Veille sur la participation des élèves. **(COMPTEZ ET METTEZ LE NOMBRE D'ELEVES QUI NE PARTICIPENT PAS!! Ex. 9/55 élèves)**									
20.	Lorsque les élèves sont en groupe, en paire ou travail individuellement, l'enseignant **circule** pour aider les élèves.									
21.	L'enseignant demande aux élèves de travailler …									
	en groupe ou en paire									
	tout seul									
	En plénière									
22.	Demande aux élèves de former des groupes de mots selon une même caractéristique (même son, même lettre, même thème, etc.)									
23.	Encourage les élèves de manière positive lorsqu'ils fournissent un effort.									

Teacher Interview (Knowledge) tools:

Grade 1 and 2 interview tool:

Consentement:

Je vais vous poser quelques questions sur la lecture, l'écriture et d'autres pratiques de classe. Je vous prie de répondre honnêtement et selon vous. Il n'y a pas de bonne ou de mauvaise réponse. Si vous n'avez pas d'avis, ce n'est pas grave. Si vous ne comprenez pas une question, s'il vous plaît faites le moi savoir. Si vous ne vous sentez pas à l'aise, vous n'avez pas à répondre. Ce n'est pas une évaluation pour vous.

Pouvons-nous commencer ? ☐ **Oui** ☐ **Non**

Date (jour/mois/année)	l__l__l/l__l__l/l__l__l__l__l		
Province (encerclez)	BANDUNDU ORIENTALE EQUATEUR		
Sous-Division (encerclez)	Kikwit Kisangani Mbandaka Gungu Isiro Gemena Kenge Bunia Zongo Masi-Manimba Boende Bandundu-ville Gbadolite		
Nom de L'Ecole	----------		
Nom de l'enseignant	----------	**Classe enseignée (encerclez)**	**1e 2e**
Sexe de l'enseignant (encerclez)	**F M**	**Nombre d'année enseigné**	----------
Nom de l'enquêteur	----------		
Nom du superviseur	----------		
Début de l'entretien	l__l__l:l__l__l H H M M		

1. La lecture en générale

Commençons à discuter sur ce que vous pensez de l'enseignement de la lecture en générale. Si vous avez besoin d'une explication sur une question, n'hésitez pas à me demander. Allons-y !

1.1. **A.** Pensez-vous que la plupart de vos élèves ont beaucoup de difficultés à apprendre à lire?
- □ Oui
- □ Non
- □ Pas Certain/pas d'avis

1.2. Pensez vous que vos élèves peuvent plus facilement apprendre à lire dans leur langue maternelle qu'en français ?
- □ Oui
- □ Non
- □ Pas Certain/pas d'avis

1.3. Est-ce qu'il est mieux de mener des activités de lecture et d'écriture séparément, plutôt que dans la même leçon ?

□ Oui
□ Non
□ Pas Certain/pas d'avis

B. Discussion:

Posez les questions suivantes:

1.3. Parlons de votre réponse à la question—"est-ce qu'il est mieux de mener des activités de lecture et d'écriture séparément, plutôt que dans la même leçon "?

a) Expliquez pourquoi vous avez répondu comme ca. (ACCEPTEZ PLUS D'UNE REPONSE ET ENCERCLEZ-LE

1. *« parce que c'est mon expérience dans la salle de classe »*
2. *« parce que c'est ce que j'ai appris dans les formations »*
3. *« parce que c'est ce que les enseignants plus anciens m'ont dit »*
4. *« parce que c'est ce que mon directeur ou l'inspecteur m'a dit »*
5. *« parce que c'est ce que j'ai appris dan mon cours de pédagogie a l'école »*
6. *Autre (spécifier :_____)*

888. Pas d'avis

b) S'il vous plaît donner un exemple de votre expérience de classe pour soutenir votre point de vue? (GUIDEZ-LES DANS LEUR REPONSE ET REQUISITIONEZ **UN SEUL** EXEMPLE)

Ecrivez un sommaire de leur exemple.

c) Discutez-vous de vos leçons de lecture et écriture avec vos collègues*?*

1. *« Oui, souvent »* (1 fois par semaine)
2. *« Oui, parfois »* (1 fois par mois ou par trimestre)
3. *« Seulement quand j'ai un problème »*
4. *« Non, jamais »*

1.4. Est-il important pour vous de donner des occasions aux élèves de lire à haute voix (tout seul, avec un ami, ou tous ensemble avec la classe) ?

□ Oui
□ Non
□ Pas Certain/pas d'avis

1.5. Pensez-vous que « pointer les mots au tableau lorsque les élèves lisent » les aides à lire plus rapidement et facilement?

□ Oui
□ Non
□ Pas Certain/pas d'avis

1.6. Pour aider les élèves a facilement lire et écrire des mots, est-il utile de leur demander de catégoriser des mots par des sons, lettres ou terminaisons communes ?

□ Oui
□ Non
□ Pas Certain/pas d'avis

2. La pré-lecture

Continuons à discuter sur ce que vous pensez de l'enseignement de la pré-lecture c'est-à-dire, ce qui est utile et important à faire avant de commencer la lecture d'un nouveau texte.

2.1. Avant de demander aux élèves de lire un nouveau texte, est-il utile pour vous d'avoir une discussion avec toute la classe pour ressortir ce qu'ils savent déjà du thème?

□ Oui
□ Non
□ Pas Certain/pas d'avis

2.2. Pensez-vous qu'il est utile de parler du nouveau vocabulaire avec élèves **avant** de lire un texte?

□ Oui
□ Non
□ Pas Certain/pas d'avis

B. Discussion:

Posez les questions suivantes:

2.2. Parlons de votre réponse à la question —" Pensez-vous qu'il est important de parler du nouveau vocabulaire avec élèves **avant** de lire un texte "?

a) Expliquez pourquoi vous avez répondu comme ca. (ACCEPTEZ PLUS D'UNE REPONSE ET ENCERCLEZ-LES)

1. *« parce que c'est mon expérience dans la salle de classe »*
2. *« parce que c'est ce que j'ai appris dans les formations »*
3. *« parce que c'est ce que les enseignants plus anciens m'ont dit »*
4. *« parce que c'est ce que mon directeur ou l'inspecteur m'a dit »*
5. *« parce que c'est ce que j'ai appris dan mon cours de pédagogie a l'école »*
6. *Autre (spécifier :_____)*

888. Pas d'avis

b) S'il vous plaît donner un exemple de votre expérience de classe pour soutenir votre point de vue? (GUIDEZ-LES DANS LEUR REPONSE ET REQUISITIONEZ **UN SEUL** EXEMPLE)

Ecrivez un sommaire de leur exemple.

c) Discutez-vous de comment vous enseigné le nouveau vocabulaire avec vos collègues*?*

1. *« Oui, souvent »* (1 fois par semaine)
2. *« Oui, parfois »* (1 fois par mois ou par trimestre)
3. *« Seulement quand j'ai un problème »*
4. *« Non, jamais »*

2.3. Pensez-vous qu'il est utile que les élèves se servent des images d'un livre pour les aider à comprendre le nouveau vocabulaire?

□ Oui
□ Non
□ Pas Certain/pas d'avis

3. Le décodage

Continuons à discuter sur ce que vous pensez de l'enseignement du décodage, c'est-à-dire l'association lettres-sons qu'on a besoin de faire pour lire les mots. Si vous avez besoin d'une explication sur une question, n'hésitez pas à me demander.

3.1. Pensez-vous qu'il est important de toujours lire avant les élèves afin qu'ils apprennent a lire ?
□ Oui
□ Non
□ Pas Certain/pas d'avis

3.2. Pensez-vous qu'il est important que les élèves connaissent le(s) son(s) que fait chaque lettre dans un mot pour le lire?
□ Oui
□ Non
□ Pas Certain/pas d'avis

B. Discussion:
Posez les questions suivantes:

3.2. Parlons de votre réponse à la question—" Pensez-vous qu'il est important que les élèves connaissent le(s) son(s) que fait chaque lettre dans un mot pour le lire "?

a) Expliquez pourquoi vous avez répondu comme ca. (ACCEPTEZ PLUS D'UNE REPONSE ET ENCERCLEZ-LES)
1. *« parce que c'est mon expérience dans la salle de classe »*
2. *« parce que c'est ce que j'ai appris dans les formations »*
3. *« parce que c'est ce que les enseignants plus anciens m'ont dit »*
4. *« parce que c'est ce que mon directeur ou l'inspecteur m'a dit »*
5. *« parce que c'est ce que j'ai appris dan mon cours de pédagogie a l'école »*
6. *Autre (spécifier :_____)*

888. Pas d'avis

b) S'il vous plaît donner un exemple de votre expérience de classe pour soutenir votre point de vue? (GUIDEZ-LES DANS LEUR REPONSE ET REQUISITIONEZ **UN SEUL** EXEMPLE)

Ecrivez un sommaire de leur exemple.

c) Discutez-vous de comment vous enseigné le décodage avec vos collègues*?*
1. *« Oui, souvent »* (1 fois par semaine)
2. *« Oui, parfois »* (1 fois par mois ou par trimestre)
3. *« Seulement quand j'ai un problème »*
4. *« Non, jamais »*

3.3. Pensez-vous qu'il est important que les élèves apprennent à lire rapidement des mots fréquents (ex. est, ca, les, dans, sous, des, etc.)?

- □ Oui
- □ Non
- □ Pas Certain/pas d'avis

3.4. Est-il nécessaire que les élèves connaissent toutes les lettres de l'alphabet pour lire et écrire ?

- □ Oui
- □ Non
- □ Pas Certain/pas d'avis

3.5. Pour apprendre à lire plus rapidement un mot, pensez-vous qu'il est important que les élèves apprennent à reconnaitre automatiquement un groupe de lettre (ex. tim-bre—*la division des mots en syllabe ou en morceau*)

- □ Oui
- □ Non
- □ Pas Certain/pas d'avis

4. La compréhension

Continuons à discuter sur ce que vous pensez de l'enseignement de la compréhension c'est-à-dire, ce que vous pensez est utile et important à faire pour aider les élèves à comprendre ce qu'ils lisent.

4.1. Est-il important de laisser les élèves parler entre eux de ce qu'ils ont lu ou écouté pour les aider a comprendre un texte ?

- □ Oui
- □ Non
- □ Pas Certain/pas d'avis

4.2. Après avoir lu un texte, pensez-vous qu'il est important de demander aux élèves d'expliquer ce qu'ils ont lu ?

- □ Oui
- □ Non
- □ Pas Certain/pas d'avis

B. Discussion:

Posez les questions suivantes:

4.3. Parlons de votre réponse à la question —" Après avoir lu un texte, pensez-vous qu'il est important de demander aux élèves d'expliquer ce qu'ils ont lu "?

a) Expliquez pourquoi vous avez répondu comme ca. (ACCEPTEZ PLUS D'UNE REPONSE ET ENCERCLEZ-LES)

1. *« parce que c'est mon expérience dans la salle de classe »*
2. *« parce que c'est ce que j'ai appris dans les formations »*
3. *« parce que c'est ce que les enseignants plus anciens m'ont dit »*
4. *« parce que c'est ce que mon directeur ou l'inspecteur m'a dit »*
5. *« parce que c'est ce que j'ai appris dan mon cours de pédagogie a l'école »*
6. *Autre (spécifier :_____)*

888. Pas d'avis

b) S'il vous plaît donner un exemple de votre expérience de classe pour soutenir votre point de vue? (GUIDEZ-LES DANS LEUR REPONSE ET REQUISITIONEZ **UN SEUL** EXEMPLE)

Ecrivez un sommaire de leur exemple.

c) Discutez-vous de comment vous enseigné la compréhension avec vos collègues*?*

1. *« Oui, souvent »* (1 fois par semaine)
2. *« Oui, parfois »* (1 fois par mois ou par trimestre)
3. *« Seulement quand j'ai un problème »*
4. *« Non, jamais »*

4.4. Est-il important de poser des questions aux élèves sur un texte après l'avoir lu?

- □ Oui
- □ Non
- □ Pas Certain/pas d'avis

4.5. Pensez-vous qu'un élève devrait être capable de dire ce qu'il a aimé ou pas aimé dans un texte lu?

- □ Oui
- □ Non
- □ Pas Certain/pas d'avis

5. L'écriture

Continuons à discuter sur ce que vous pensez de l'enseignement de l'écriture c'est-à-dire, enseigner l'orthographe, la grammaire, la composition, la convention des textes. Ici, nous ne parlons pas de la calligraphie.

5.1. Est-ce grave si un élève fait des erreurs d'orthographe lors qu'il écrit pour la première fois un nouveau mot qu'il n'a pas étudié en classe ?

- □ Oui
- □ Non
- □ Pas Certain/pas d'avis

5.2. Est-ce que vos élèves ont beaucoup de difficultés à apprendre à écrire ?

- □ Oui
- □ Non
- □ Pas Certain/pas d'avis

5.3. Pensez-vous qu'il est important que chaque élève ait des occasions pour écrire des mots ou des phrases qu'il entend ou qu'il conçoit tout seul?

- □ Oui
- □ Non
- □ Pas Certain/pas d'avis

B. Discussion

Posez les questions suivantes:

5.4. Parlons de votre réponse à la question —" Pensez-vous qu'il est important que chaque élève ait des occasions pour écrire des mots ou des phrases qu'il entend ou qu'il conçoit tout seul?"

a) Expliquez pourquoi vous avez répondu comme ca. (ACCEPTEZ PLUS D'UNE REPONSE ET ENCERCLEZ-LES)

1. *« parce que c'est mon expérience dans la salle de classe »*
2. *« parce que c'est ce que j'ai appris dans les formations »*
3. *« parce que c'est ce que les enseignants plus anciens m'ont dit »*
4. *« parce que c'est ce que mon directeur ou l'inspecteur m'a dit »*
5. *« parce que c'est ce que j'ai appris dan mon cours de pédagogie a l'école »*
6. *Autre (spécifier :_____)*

888. Pas d'avis

b) S'il vous plaît donner un exemple de votre expérience de classe pour soutenir votre point de vue? (GUIDEZ-LES DANS LEUR REPONSE ET REQUISITIONEZ **UN SEUL** EXEMPLE)

Ecrivez un sommaire de leur exemple.

c) Discutez-vous de comment vous enseigné l'écriture avec vos collègues*?*

1. *« Oui, souvent »* (1 fois par semaine)
2. *« Oui, parfois »* (1 fois par mois ou par trimestre)
3. *« Seulement quand j'ai un problème »*
4. *« Non, jamais »*

6. Vos attentes

Terminons notre discussion en parlant de vos attentes par rapport aux capacités de vos des élèves.

6.1. Quand pensez-vous que les élèves peuvent décoder de nouveaux mots sans l'aide de l'enseignant en faisant l'association lettre-son? (LISEZ LES OPTIONS A L'ENSEIGNANT)

- □ A partir du 1e trimestre de la 1e année
- □ A la fin de la 1e année
- □ A la fin de la 2e année
- □ A la fin de la 3e année
- □ Ceci n'est pas une compétence importante

B. Discussion:

Parlons de votre réponse à la question —" les élèves peuvent décoder de nouveaux mots sans l'aide des enseignants en faisant l'association lettre-son a (INSERER LA REPONSE QU'IL A DONNE) »

a) Expliquez pourquoi vous avez répondu comme ca. (ACCEPTEZ PLUS D'UNE REPONSE ET ENCERCLEZ-LES)

1. *« parce que c'est mon expérience dans la salle de classe »*
2. *« parce que c'est ce que j'ai appris dans les formations »*
3. *« parce que c'est ce que les enseignants plus anciens m'ont dit »*
4. *« parce que c'est ce que mon directeur ou l'inspecteur m'a dit »*
5. *« parce que c'est ce que j'ai appris dan mon cours de pédagogie a l'école »*
6. *Autre (spécifier :_____)*

888. Pas d'avis

b) S'il vous plaît donner un exemple de votre expérience de classe pour soutenir votre point de vue? (GUIDEZ-LES DANS LEUR REPONSE ET REQUISITIONEZ **UN SEUL** EXEMPLE)

Ecrivez un sommaire leur exemple.

c) Discutez-vous de ce que vos élèves sont capables de faire en lecture ou en écriture avec vos collègues*?*

1. *« Oui, souvent »* (1 fois par semaine)
2. *« Oui, parfois »* (1 fois par mois ou par trimestre)
3. *« Seulement quand j'ai un problème »*
4. *« Non, jamais »*

6.2. Quand pensez-vous les élèves peuvent correctement écrire des mots fréquents ? (LISEZ LES OPTIONS A L'ENSEIGNANT)

- □ A partir du 1e trimestre de la 1e année
- □ A la fin de la 1e année
- □ A la fin de la 2e année
- □ A la fin de la 3e année
- □ Ceci n'est pas une compétence importante

MERCI POUR VOTRE PARTICIPATION!

Fin de l'entretien	l__l__l:l__l__l H H M M

Grade 3 and 4 interview tool:

Consentement:

Je vais vous poser quelques questions sur la lecture, l'écriture et d'autres pratiques de classe. Je vous prie de répondre honnêtement et selon vous. Il n'y a pas de bonne ou de mauvaise réponse. Si vous n'avez pas d'avis, ce n'est pas grave. Si vous ne comprenez pas une question, s'il vous plaît faites le moi savoir. Si vous ne vous sentez pas à l'aise, vous n'avez pas à répondre. Ce n'est pas une évaluation pour vous.

Pouvons-nous commencer ? ☐ **Oui** ☐ **Non**

Date (jour/mois/année)	I__I__I/I__I__I/I__I__I__I__I		
Province (encerclez)	BANDUNDU ORIENTALE EQUATEUR		
Sous-Division (encerclez)	Kikwit Kisangani Mbandaka Gungu Isiro Gemena Kenge Bunia Zongo Masi-Manimba Boende Bandundu-ville Gbadolite		
Nom de L'Ecole	----------		
Nom de l'enseignant	----------	**Classe enseignée (encerclez)**	**3e 4e**
Sexe de l'enseignant (encerclez)	**F M**	**Nombre d'année enseigné**	----------
Nom de l'enquêteur	----------		
Nom du superviseur	----------		
Début de l'entretien	I__I__I:I__I__I H H M M		

1. La lecture en générale

Commençons à discuter sur ce que vous pensez de l'enseignement de la lecture en générale. Si vous avez besoin d'une explication sur une question, n'hésitez pas à me demander. Allons-y !

1.1. Est-ce qu'il est mieux de mener des activités de lecture et d'écriture séparément, plutôt que dans la même leçon ?

- □ Oui
- □ Non
- □ Pas Certain/pas d'avis

B. Discussion:

Posez les questions suivantes:

1.2. Parlons de votre réponse à la question—" Est-ce qu'il est mieux de mener des activités de lecture et d'écriture séparément, plutôt que dans le même leçon "?

a) Expliquez pourquoi vous avez répondu comme ca. (ACCEPTEZ PLUS D'UNE REPONSE ET ENCERCLEZ-LES)

7. *« parce que c'est mon expérience dans la salle de classe »*

8. *« parce que c'est ce que j'ai appris dans les formations »*
9. *« parce que c'est ce que les enseignants plus anciens m'ont dit »*
10. *« parce que c'est ce que mon directeur ou l'inspecteur m'a dit »*
11. *« parce que c'est ce que j'ai appris dan mon cours de pédagogie a l'école »*
12. *Autre (spécifier :_____)*

888. Pas d'avis

b) S'il vous plaît donner un exemple de votre expérience de classe pour soutenir votre point de vue? (GUIDEZ-LES DANS LEUR REPONSE ET REQUISITIONEZ **UN SEUL** EXEMPLE)

Ecrivez un sommaire de leur exemple.

c) Discutez-vous de comment vous enseigné la lecture avec vos collègues*?*

5. *« Oui, souvent »* (1 fois par semaine)
6. *« Oui, parfois »* (1 fois par mois ou par trimestre)
7. *« Seulement quand j'ai un problème »*
8. *« Non, jamais »*

1.3 Est-il important pour vous de donner des occasions aux élèves de lire à haute voix (tout seul, avec un ami, ou tous ensemble avec la classe)?

- □ Oui
- □ Non
- □ Pas Certain/pas d'avis

1.4 Pensez-vous que « pointer les mots au tableau lorsque les élèves lisent » les aides à lire plus rapidement et facilement ?

- □ Oui
- □ Non
- □ Pas Certain/pas d'avis

1.5 Pour aider les élèves a facilement lire et écrire des mots, est-il utile de leur demander de catégoriser des mots par des sons, lettres ou terminaisons communs ?

- □ Oui
- □ Non
- □ Pas Certain/pas d'avis

3. La pré-lecture

Continuons à discuter sur ce que vous pensez de l'enseignement de la pré-lecture c'est-à-dire, ce que vous pensez est utile et important à faire avant de commencer la lecture d'un nouveau texte.

2.1. Avant de demander aux élèves de lire un nouveau texte, est-il utile pour vous d'avoir une discussion avec toute la classe pour ressortir ce qu'ils savent déjà du thème?

□ Oui
□ Non
□ Pas Certain/pas d'avis

2.2. Pensez-vous qu'il est utile de parler du **nouveau vocabulaire** avec élèves **avant** de lire un texte?
□ Oui
□ Non
□ Pas Certain/pas d'avis

B. Discussion:
Posez les questions suivantes:

2.2. Parlons de votre réponse à la question —" Pensez-vous qu'il est important de parler du **nouveau vocabulaire** avec élèves **avant** de lire un texte "?

d) Expliquez pourquoi vous avez répondu comme ca. (ACCEPTEZ PLUS D'UNE REPONSE ET ENCERCLEZ-LES)

7. « parce que c'est mon expérience dans la salle de classe »
8. « parce que c'est ce que j'ai appris dans les formations »
9. « parce que c'est ce que les enseignants plus anciens m'ont dit »
10. « parce que c'est ce que mon directeur ou l'inspecteur m'a dit »
11. « parce que c'est ce que j'ai appris dan mon cours de pédagogie a l'école »
12. Autre (spécifier :_____)
889. Pas d'avis

e) S'il vous plaît donner un exemple de votre expérience de classe pour soutenir votre point de vue? (GUIDEZ-LES DANS LEUR REPONSE ET REQUISITIONEZ **UN SEUL** EXEMPLE)

Ecrivez un sommaire de leur exemple.

f) Discutez-vous de comment vous enseigné le nouveau vocabulaire avec vos collègues*?*

1. *« Oui, souvent »* (1 fois par semaine)
2. *« Oui, parfois »* (1 fois par mois ou par trimestre)
3. *« Seulement quand j'ai un problème »*
4. *« Non, jamais »*

2.3. Pensez-vous qu'il est utile que les élèves parcourent les images et lisent le titre d'un livre pour les aider à comprendre le nouveau vocabulaire?
□ Oui
□ Non
□ Pas Certain/pas d'avis

2.4. Pensez-vous qu'il est mieux d'enseigner le nouveau vocabulaire sous forme de liste plutôt que de les apprendre à l'aide d'un texte ou d'une histoire ?

- □ Oui
- □ Non
- □ Pas Certain/pas d'avis

3. Le décodage et la fluidité

Continuons à discuter sur ce que vous pensez de l'enseignement du décodage et de la fluidité en lecture, c'est-à-dire l'association lettres-sons qu'on a besoin de faire pour lire les mots et puis la facilité et rapidité du décodage qu'il faut pour devenir un bon lecteur. Si vous avez besoin d'une explication sur une question, n'hésitez pas à me demander.

3.1. Pour aider les élèves à apprendre à lire, est-il important de faire répéter la lecture des mots après vous?
- □ Oui
- □ Non
- □ Pas Certain/pas d'avis

3.2. Pensez-vous qu'il est important que les élèves apprennent à lire rapidement des mots fréquents (ex. est, ca, les, dans, sous, des, etc.)?
- □ Oui
- □ Non
- □ Pas Certain/pas d'avis

3.3. Pour aider les élèves à devenir bon lecteur, pensez-vous qu'il est important qu'ils s'entrainent à lire des phrases entières rapidement et avec intonation ?
- □ Oui
- □ Non
- □ Pas Certain/pas d'avis

3.4. Pour apprendre à lire plus rapidement un mot, pensez-vous qu'il est important que les élèves apprennent à reconnaitre automatiquement un groupe de lettre (ex. tim-bre—*la division des mots en syllabe ou en morceau*)
- □ Oui
- □ Non
- □ Pas Certain/pas d'avis

B. Discussion:

Posez les questions suivantes:

3.2. Parlons de votre réponse à la question—" Pour apprendre à lire plus rapidement un mot, pensez-vous qu'il est important que les élèves apprennent à reconnaitre automatiquement un groupe de lettre "?

d) Expliquez pourquoi vous avez répondu comme ca. (ACCEPTEZ PLUS D'UNE REPONSE ET ENCERCLEZ-LES)

7. *« parce que c'est mon expérience dans la salle de classe »*
8. *« parce que c'est ce que j'ai appris dans les formations »*
9. *« parce que c'est ce que les enseignants plus anciens m'ont dit »*
10. *« parce que c'est ce que mon directeur ou l'inspecteur m'a dit »*
11. *« parce que c'est ce que j'ai appris dan mon cours de pédagogie a l'école »*
12. *Autre (spécifier :_____)*

889. Pas d'avis

e) S'il vous plaît donner un exemple de votre expérience de classe pour soutenir votre point de vue? (GUIDEZ-LES DANS LEUR REPONSE ET REQUISITIONEZ **UN SEUL** EXEMPLE)

Ecrivez un sommaire de quelques exemples partagé.

f) Discutez-vous de comment vous enseigné le décodage avec vos collègues*?*

1. *« Oui, souvent »* (1 fois par semaine)
2. *« Oui, parfois »* (1 fois par mois ou par trimestre)
3. *« Seulement quand j'ai un problème »*
4. *« Non, jamais »*

4. La compréhension

Continuons à discuter sur ce que vous pensez de l'enseignement de la compréhension c'est-à-dire, ce que vous pensez est utile et important à faire pour aider les élèves à comprendre ce qu'il lise.

4.1 Est-il important de laisser les élèves parler entre eux de ce qu'ils ont lu ou écouté pour les aider a comprendre un texte ?

- □ Oui
- □ Non
- □ Pas Certain/pas d'avis

4.2 Après avoir lu un texte, pensez-vous qu'il est important de demander aux élèves d'expliquer ce qu'ils ont lu ?

- □ Oui
- □ Non
- □ Pas Certain/pas d'avis

B. Discussion:
Posez les questions suivantes:

4.2 Parlons de votre réponse à la question —" Après avoir lu un texte, pensez-vous qu'il est important de demander aux élèves d'expliquer ce qu'ils ont lu "?

d) Expliquez pourquoi vous avez répondu comme ca. (ACCEPTEZ PLUS D'UNE REPONSE ET ENCERCLEZ-LES)

7. *« parce que c'est mon expérience dans la salle de classe »*
8. *« parce que c'est ce que j'ai appris dans les formations »*
9. *« parce que c'est ce que les enseignants plus anciens m'ont dit »*
10. *« parce que c'est ce que mon directeur ou l'inspecteur m'a dit »*
11. *« parce que c'est ce que j'ai appris dan mon cours de pédagogie a l'école »*
12. *Autre (spécifier :_____)*

889. Pas d'avis

e) S'il vous plaît donner un exemple de votre expérience de classe pour soutenir votre point de vue? (GUIDEZ-LES DANS LEUR REPONSE ET REQUISITIONEZ **UN SEUL** EXEMPLE)

Ecrivez un sommaire de leur exemple.

f) Discutez-vous de comment vous enseigné la compréhension avec vos collègues*?*

1. *« Oui, souvent »* (1 fois par semaine)
2. *« Oui, parfois »* (1 fois par mois ou par trimestre)
3. *« Seulement quand j'ai un problème »*
4. *« Non, jamais »*

4.3 Est-il important de poser des questions aux élèves sur un texte après l'avoir lu?

- □ Oui
- □ Non
- □ Pas Certain/pas d'avis

4.4 Pensez-vous qu'un élève devrait être capable de réagir à ce qu'il a appris ou aimé dans un texte lu?

- □ Oui
- □ Non
- □ Pas Certain/pas d'avis

5. L'écriture

Continuons à discuter sur ce que vous pensez de l'enseignement de l'écriture c'est-à-dire, enseigner l'orthographe, la grammaire, la composition, la convention des textes. Ici, nous ne parlons pas de la calligraphie.

5.1 Est-ce grave si un élève fait des erreurs d'orthographe lors qu'il écrit pour la première fois un nouveau mot qu'il n'a pas étudié en classe ?

- □ Oui
- □ Non
- □ Pas Certain/pas d'avis

5.2 Est-ce que vos élèves ont beaucoup de difficultés à apprendre à écrire ?

- □ Oui
- □ Non
- □ Pas Certain/pas d'avis

5.3 Pensez-vous qu'il est important que chaque élève devrait avoir des occasions pour écrire des mots ou des phrases qu'il entend ou qu'il conçoit tout seul?

- □ Oui
- □ Non
- □ Pas Certain/pas d'avis

B. Discussion

1. Posez les questions suivantes:

5.4. Parlons de votre réponse à la question —" Pensez-vous qu'il est important que chaque élève devrait avoir des occasions pour écrire des mots ou des phrases qu'il entend ou qu'il conçoit tout seul?"

d) Expliquez pourquoi vous avez répondu comme ca. (ACCEPTEZ PLUS D'UNE REPONSE ET ENCERCLEZ-LES)

7. *« parce que c'est mon expérience dans la salle de classe »*
8. *« parce que c'est ce que j'ai appris dans les formations »*
9. *« parce que c'est ce que les enseignants plus anciens m'ont dit »*
10. *« parce que c'est ce que mon directeur ou l'inspecteur m'a dit »*
11. *« parce que c'est ce que j'ai appris dan mon cours de pédagogie a l'école »*
12. *Autre (spécifier :_____)*

889. Pas d'avis

e) S'il vous plaît donner un exemple de votre expérience de classe pour soutenir votre point de vue? (GUIDEZ-LES DANS LEUR REPONSE ET REQUISITIONEZ **UN SEUL** EXEMPLE)

Ecrivez un sommaire de leur exemple.

f) Discutez-vous de comment vous enseigné l'écriture avec vos collègues*?*

1. *« Oui, souvent »* (1 fois par semaine)
2. *« Oui, parfois »* (1 fois par mois ou par trimestre)
3. *« Seulement quand j'ai un problème »*
4. *« Non, jamais »*

6. Vos attentes

Terminons notre discussion en parlant de vos attentes par rapport aux capacités de vos des élèves.

6.1 Quand pensez-vous que les élèves peuvent écrire leurs propres idées ? (LISEZ LES OPTIONS A L'ENSEIGNANT)

- □ A partir de la 1e année
- □ A la fin de la 2e année
- □ A la fin de la 3e année
- □ A la fin de la 4e année
- □ A la fin de la 5e année
- □ A la fin de la 6e année
- □ Ceci n'est pas une compétence importante

6.2 Quand pensez-vous qu'un élève peut lire un texte à son niveau et comprendre ce qu'il lit sans assistance de l'enseignant ? (LISEZ LES OPTIONS A L'ENSEIGNANT)

- □ A partir de la 1e année
- □ A la fin de la 2e année
- □ A la fin de la 3e année

□ A la fin de la 4e année
□ A la fin de la 5e année
□ A la fin de la 6e année
□ Ceci n'est pas une compétence importante

MERCI POUR VOTRE PARTICIPATION!

Fin de l'entretien	I__I__I:I__I__I H H M M

Grade 5 and 6 interview tool

Consentement:

Je vais vous poser quelques questions sur la lecture, l'écriture et d'autres pratiques de classe. Je vous prie de répondre honnêtement et selon vous. Il n'y a pas de bonne ou de mauvaise réponse. Si vous n'avez pas d'avis, ce n'est pas grave. Si vous ne comprenez pas une question, s'il vous plaît faites le moi savoir. Si vous ne vous sentez pas à l'aise, vous n'avez pas à répondre. Ce n'est pas une évaluation pour vous.

Pouvons-nous commencer ? ☐ **Oui** ☐ **Non**

Date (jour/mois/année)	l__l__l/l__l__l/l__l__l__l__l		
Province (encerclez)	BANDUNDU ORIENTALE EQUATEUR		
Sous-Division (encerclez)	Kikwit Kisangani Mbandaka Gungu Isiro Gemena Kenge Bunia Zongo Masi-Manimba Boende Bandundu-ville Gbadolite		
Nom de L'Ecole	----------		
Nom de l'enseignant	----------	**Classe enseignée (encerclez)**	**5e 6e**
Sexe de l'enseignant (encerclez)	**F M**	**Nombre d'année enseigné**	----------
Nom de l'enquêteur	----------		
Nom du superviseur	----------		
Début de l'entretien	l__l__l:l__l__l H H M M		

1. La lecture en générale

Commençons à discuter sur ce que vous pensez de l'enseignement de la lecture en générale. Si vous avez besoin d'une explication sur une question, n'hésitez pas à me demander. Allons-y !

1.1 Est-ce qu'il est mieux de mener des activités de lecture et d'écriture séparément, plutôt que dans la même leçon ?

- □ Oui
- □ Non
- □ Pas Certain/pas d'avis

B. Discussion:

Posez les questions suivantes:

1.1. Parlons de votre réponse à la question—" Est-ce qu'il est mieux de mener des activités de lecture et d'écriture séparément, plutôt que dans le même leçon "?

d) Expliquez pourquoi vous avez répondu comme ca. (ACCEPTEZ PLUS D'UNE REPONSE ET ENCERCLEZ-LES)

13. *« parce que c'est mon expérience dans la salle de classe »*

14. *« parce que c'est ce que j'ai appris dans les formations »*
15. *« parce que c'est ce que les enseignants plus anciens m'ont dit »*
16. *« parce que c'est ce que mon directeur ou l'inspecteur m'a dit »*
17. *« parce que c'est ce que j'ai appris dan mon cours de pédagogie a l'école »*
18. *Autre (spécifier :_____)*

888. Pas d'avis

e) S'il vous plaît donner un exemple de votre expérience de classe pour soutenir votre point de vue? (GUIDEZ-LES DANS LEUR REPONSE ET REQUISITIONEZ **UN SEUL** EXEMPLE)

Ecrivez un sommaire de leur exemple.

f) Discutez-vous de comment vous enseigné la lecture avec vos collègues*?*

9. *« Oui, souvent »* (1 fois par semaine)
10. *« Oui, parfois »* (1 fois par mois ou par trimestre)
11. *« Seulement quand j'ai un problème »*
12. *« Non, jamais »*

1.2 Est-il important pour vous de donner des occasions aux élèves de lire à haute voix (tout seul, avec un ami, ou tous ensemble avec la classe)?

- □ Oui
- □ Non
- □ Pas Certain/pas d'avis

1.3 Pour aider les élèves a facilement lire et écrire des mots, est-il utile de leur demander de catégoriser des mots par des sons, lettres ou terminaisons communes ?

- □ Oui
- □ Non
- □ Pas Certain/pas d'avis

2. Le décodage et la fluidité

Continuons à discuter sur ce que vous pensez de l'enseignement du décodage et de la fluidité en lecture, c'est-à-dire l'association lettres-sons qu'on a besoin de faire pour lire les mots et puis la facilité et rapidité du décodage qu'il faut devenir un bon lecteur. Si vous avez besoin d'une explication sur une question, n'hésitez pas à me demander.

2.1 Pour aider les élèves à apprendre a lire, est-il important de faire répéter la lecture des mots après vous ?

- □ Oui
- □ Non
- □ Pas Certain/pas d'avis

2.2 Pensez-vous que pour aider les élèves a plus rapidement lire les mots, il est utile de leur demander d'apprendre à reconnaitre les racines ou les syllabes des mots ?

- □ Oui
- □ Non
- □ Pas Certain/pas d'avis

B. Discussion:

Posez les questions suivantes:

2.2. Parlons de votre réponse à la question—" Pensez-vous que pour aider les élèves a plus rapidement lire les mots, il est utile de leur demander d'apprendre à reconnaitre les racines ou les syllabes des mots "?

g) Expliquez pourquoi vous avez répondu comme ca. (ACCEPTEZ PLUS D'UNE REPONSE ET ENCERCLEZ-LES)

13. « parce que c'est mon expérience dans la salle de classe »
14. « parce que c'est ce que j'ai appris dans les formations »
15. « parce que c'est ce que les enseignants plus anciens m'ont dit »
16. « parce que c'est ce que mon directeur ou l'inspecteur m'a dit »
17. « parce que c'est ce que j'ai appris dan mon cours de pédagogie a l'école »
18. Autre (spécifier :_____)
890. Pas d'avis

h) S'il vous plaît donner un exemple de votre expérience de classe pour soutenir votre point de vue? (GUIDEZ-LES DANS LEUR REPONSE ET REQUISITIONEZ **UN SEUL** EXEMPLE)

Ecrivez un sommaire de leur exemple.

i) Discutez-vous de comment vous enseigné le décodage avec vos collègues*?*

1. *« Oui, souvent »* (1 fois par semaine)
2. *« Oui, parfois »* (1 fois par mois ou par trimestre)
3. *« Seulement quand j'ai un problème »*
4. *« Non, jamais »*

2.3 Pensez-vous qu'il est important de faire des séances de lecture silencieuse en classe ?

□ Oui
□ Non
□ Pas Certain/pas d'avis

2.4 Pour aider les élèves à devenir bon lecteur, pensez-vous qu'il est important qu'ils s'entrainent à lire des phrases entières rapidement et avec intonation ?

□ Oui
□ Non
□ Pas Certain/pas d'avis

3. La pré-lecture

Continuons à discuter sur ce que vous pensez de l'enseignement de la pré-lecture c'est-à-dire, ce que vous pensez est utile et important à faire avant de commencer la lecture d'un nouveau texte.

3.1. Avant de demander aux élèves de lire un nouveau texte, est-il utile pour vous d'avoir une discussion avec toute la classe pour ressortir ce qu'ils savent déjà du thème?

□ Oui
□ Non
□ Pas Certain/pas d'avis

3.2. Pensez-vous qu'il est utile de parler du **nouveau vocabulaire** avec élèves **avant** de lire un texte?
□ Oui
□ Non
□ Pas Certain/pas d'avis

B. Discussion:
Posez les questions suivantes:

3.2. Parlons de votre réponse à la question —" Pensez-vous qu'il est important de parler du nouveau vocabulaire avec élèves **avant** de lire un texte "?

g) Expliquez pourquoi vous avez répondu comme ca. (ACCEPTEZ PLUS D'UNE REPONSE ET ENCERCLEZ-LES)

13. « parce que c'est mon expérience dans la salle de classe »
14. « parce que c'est ce que j'ai appris dans les formations »
15. « parce que c'est ce que les enseignants plus anciens m'ont dit »
16. « parce que c'est ce que mon directeur ou l'inspecteur m'a dit »
17. « parce que c'est ce que j'ai appris dan mon cours de pédagogie a l'école »
18. Autre (spécifier :_____)
890. Pas d'avis

h) S'il vous plaît donner un exemple de votre expérience de classe pour soutenir votre point de vue? (GUIDEZ-LES DANS LEUR REPONSE ET REQUISITIONEZ **UN SEUL** EXEMPLE)

Ecrivez un sommaire de leur exemple.

i) Discutez-vous de comment vous enseigné le nouveau vocabulaire avec vos collègues*?*

1. *« Oui, souvent »* (1 fois par semaine)
2. *« Oui, parfois »* (1 fois par mois ou par trimestre)
3. *« Seulement quand j'ai un problème »*
4. *« Non, jamais »*

3.3. Pensez-vous qu'il est mieux d'enseigner le nouveau vocabulaire sous forme de liste plutôt que de les apprendre à l'aide d'un texte ou d'une histoire ?
□ Oui
□ Non
□ Pas Certain/pas d'avis

3.4. Pensez-vous qu'il est important de donner des occasions aux élèves d'utiliser les nouveaux mots de vocabulaire ou expressions dans différentes phrases qu'ils conçoivent ?
□ Oui
□ Non
□ Pas Certain/pas d'avis

4. La compréhension

Continuons à discuter sur ce que vous pensez de l'enseignement de la compréhension c'est-à-dire, ce que vous pensez est utile et important à faire pour aider les élèves à comprendre ce qu'il lise.

4.1 Est-il important de laisser les élèves parler entre eux de ce qu'ils ont lu ou écouté pour les aider a comprendre un texte ?

- □ Oui
- □ Non
- □ Pas Certain/pas d'avis

4.2 Est-il important pour vous de poser des questions aux élèves sur un texte après l'avoir lu?

- □ Oui
- □ Non
- □ Pas Certain/pas d'avis

4.3 Pensez-vous qu'il est important de demandez aux élèves de réagir à l'oral ou a l'écrit sur ce qu'il a appris ou aimé dans un texte lu?

- □ Oui
- □ Non
- □ Pas Certain/pas d'avis

B. Discussion:

Posez les questions suivantes:

4.3 Parlons de votre réponse à la question —" Pensez-vous qu'il est important de demandez aux élèves de réagir à l'oral ou a l'écrit sur ce qu'il a appris ou aimé dans un texte lu "?

a. Expliquez pourquoi vous avez répondu comme ca. (ACCEPTEZ PLUS D'UNE REPONSE ET ENCERCLEZ-LES)

13. *« parce que c'est mon expérience dans la salle de classe »*
14. *« parce que c'est ce que j'ai appris dans les formations »*
15. *« parce que c'est ce que les enseignants plus anciens m'ont dit »*
16. *« parce que c'est ce que mon directeur ou l'inspecteur m'a dit »*
17. *« parce que c'est ce que j'ai appris dan mon cours de pédagogie a l'école »*
18. *Autre (spécifier :_____)*

890. *Pas d'avis*

g) S'il vous plaît donner un exemple de votre expérience de classe pour soutenir votre point de vue? (GUIDEZ-LES DANS LEUR REPONSE ET REQUISITIONEZ **UN SEUL** EXEMPLE)

Ecrivez un sommaire de leur exemple.

h) Discutez-vous de comment vous enseigné la compréhension avec vos collègues*?*

1. *« Oui, souvent »* (1 fois par semaine)
2. *« Oui, parfois »* (1 fois par mois ou par trimestre)
3. *« Seulement quand j'ai un problème »*

4. *« Non, jamais »*

4.4 Pensez-vous que les schémas peuvent aider les élèves a plus facilement reprendre les événements ou informations d'un texte ?

- □ Oui
- □ Non
- □ Pas Certain/pas d'avis

4.5 Pensez-vous qu'il est utile que les élèves lisent le titre d'un texte, parcourent les images et de dire ce qu'ils pensent qu'ils vont lire avant de lire afin de les aider à comprendre le texte?

- □ Oui
- □ Non
- □ Pas Certain/pas d'avis

5. L'écriture

Continuons à discuter sur ce que vous pensez de l'enseignement de l'écriture c'est-à-dire, enseigner l'orthographe, la grammaire, la composition, la convention des textes. Ici, nous ne parlons pas de la calligraphie.

5.1 Est-ce grave si un élève fait des erreurs d'orthographe lors qu'il écrit pour la première fois un nouveau mot qu'il n'a pas étudié en classe ?

- □ Oui
- □ Non
- □ Pas Certain/pas d'avis

5.2 Pensez-vous qu'il est important que chaque élève devrait avoir des occasions pour écrire des mots ou des phrases qu'il entend ou qu'il conçoit tout seul?

- □ Oui
- □ Non
- □ Pas Certain/pas d'avis

B. Discussion

Posez les questions suivantes:

5.2. Parlons de votre réponse à la question —" Pensez-vous qu'il est important que chaque élève devrait avoir des occasions pour écrire des mots ou des phrases qu'il entend ou qu'il conçoit tout seul ?"

g) Expliquez pourquoi vous avez répondu comme ca. (ACCEPTEZ PLUS D'UNE REPONSE ET ENCERCLEZ-LES)

13. « parce que c'est mon expérience dans la salle de classe »
14. « parce que c'est ce que j'ai appris dans les formations »
15. « parce que c'est ce que les enseignants plus anciens m'ont dit »
16. « parce que c'est ce que mon directeur ou l'inspecteur m'a dit »
17. « parce que c'est ce que j'ai appris dan mon cours de pédagogie a l'école »
18. Autre (spécifier :_____)
890. Pas d'avis

h) S'il vous plaît donner un exemple de votre expérience de classe pour soutenir votre point de vue? (GUIDEZ-LES DANS LEUR REPONSE ET REQUISITIONEZ **UN SEUL** EXEMPLE

Ecrivez un sommaire de leur exemple.

i) Discutez-vous de comment vous enseigné la l'écriture avec vos collègues*?*

1. *« Oui, souvent »* (1 fois par semaine)
2. *« Oui, parfois »* (1 fois par mois ou par trimestre)
3. *« Seulement quand j'ai un problème »*
4. *« Non, jamais »*

5.3 Est-ce qu'il est important de corriger toutes erreurs dans les écrits des élèves ?

- □ Oui
- □ Non
- □ Pas Certain/pas d'avis

5.4 Pensez-vous qu'un élève qui écrit bien ne fait pas de fautes d'orthographe ou de grammaire?

- □ Oui
- □ Non
- □ Pas Certain/pas d'avis

5.5 Pensez-vous que pour aider un élève à mieux écrire, il est utile de lui demander de corriger ses propres écrits ou les écrits d'un ami?

- □ Oui
- □ Non
- □ Pas Certain/pas d'avis

6. Vos attentes

Terminons notre discussion en parlant de vos attentes par rapport aux capacités de vos des élèves.

6.1 Quand pensez-vous que les élèves peuvent écrire leurs propres idées ? (LISEZ LES OPTIONS A L'ENSEIGNANT)

- □ A partir de la 1e année
- □ A la fin de la 2e année
- □ A la fin de la 3e année
- □ A la fin de la 4e année
- □ A la fin de la 5e année
- □ A la fin de la 6e année
- □ A la fin de la 6e année
- □ Après la 6e année
- □ Ceci n'est pas une compétence importante

6.2 Quand pensez-vous qu'un élève peut lire un texte à son niveau et comprendre ce qu'il lit sans assistance de l'enseignant ? (LISEZ LES OPTIONS A L'ENSEIGNANT)

- □ A partir de la 1e année
- □ A la fin de la 2e année
- □ A la fin de la 3e année
- □ A la fin de la 4e année
- □ A la fin de la 5e année
- □ A la fin de la 6e année
- □ Après la 6e année
- □ Ceci n'est pas une compétence importante

MERCI POUR VOTRE PARTICIPATION!

Fin de l'entretien	l__l__l:l__l__l H H M M