

Professional Development in Reading Instruction for Secondary Teachers in Cameroon

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Abstract

This study was a pretest-posttest design that examined secondary teachers' perceptions of reading and growth about their knowledge of reading instruction and assessment over a seven-month period. One researcher facilitated a one day professional development workshop to secondary teachers' (N=24) that focused on effective reading instruction components, reading assessment, and how to use the data in their classrooms, specifically for struggling readers. The survey results indicated there was a significant difference on multiple items about reading assessment, but no significant difference in teachers' attitudes and perceptions about reading following the training. Implications for future research are addressed.

Keywords: reading, literacy, professional development, assessment and reading instruction

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Cameroon is a Central African bilingual country with ten regions. Eight of the ten regions are French speaking while the other two regions are English speaking. This research was carried out in the North West region, which is one of the English speaking regions of Cameroon.

According to the Central Intelligence Agency World Factbook, 71.3% of Cameroonians age 15 and above can read and write. This figure is lower than the neighboring Gabon with a literacy rate of 89% but higher than Chad with a literacy rate of 35.4%. The literacy rates show that Cameroon is not among the countries with the lowest literacy rates, but literacy is an area that need to be improved for the betterment of the children and youth. According to UNESCO (2015b), Africa is the only continent where more than half of parents cannot read well-enough to help their children with homework.

While the statistics overwhelmingly point to the fact that many children in Cameroon go to school at some point in their lives, there is also the day to day reality that formal education does not equip the students with the mechanics of how to read intelligently and how to write with clarity. This point is also highlighted with the growing concern that 20% of primary school students are functional illiterate (Gordon, 2005). Not surprisingly, a cross section of students who graduate from high school with a high school diploma still face many problems with reading and writing. It is common place in the educational system to see that students make use of rote memorization for the purpose of passing to the next grade and they soon forget what they have learned (Greaney & Neuman, 1990) as they are not able to apply and generalize this knowledge. In order to help students become life-long learners, it is imperative to have an educational program that teaches them how to read and write so that they can internalize what they learn and continue to use it beyond high school.

Cameroon participated at the United Nations Educational, Scientific and Cultural Organization (UNESCO) Education For All (EFA) forum in Dakar and committed to the six goals of EFA to provide education for all children by 2015. The sixth goal was to improve the quality of education for all children especially in the area of literacy, numeracy and essential life skills (Barry & Brun, 2000). Cameroon is years away from meeting the sixth goal. The challenge of improving the quality of education for all children in Africa especially, in Cameroon, begins with the quality of teachers, the learning environment for the students, and availability of resources for instruction and learning. There is a growing concern that African children do not engage in voluntary reading, because they do not have the resources available to them, which will continue the illiteracy cycle for many children and youth (Commeryras & Inyega, 2007).

During the third Pan African Conference: Reading for All, Gordon (2005) highlighted that 20% of children who leave the primary schools are functionally illiterate. Gordon (2005) implied that students leave the primary school with only a minimum level of reading. Trudell, Dowd, Piper, & Bloch (2012) reported that pilot projects on early literacy in Africa identified that professional development, materials for students including lesson plans for teachers and continuous support for teachers are successful indicators for improving literacy in Africa, therefore additional training efforts must address teacher support.

According to Reutzel and Cooter (2012), there are seven pillars of effective reading instruction: teacher knowledge, classroom assessment, evidence-based teaching practice, response to intervention, motivation and engagement, technology and new literacies and family and community connections. The seven pillars of reading instruction should provide teachers with the tools to motivate lifelong readers and should be incorporated into daily literacy instruction.

According to Popoola, Ajidade, Etim, Olayode, and Adeleke (2010) only 11% of secondary school teachers in Ogun State in Nigeria spend more than two hours a week recreationally reading and most had poor attitudes towards reading, which negatively impacts classroom environment. Popoola et al (2010) also pointed out that the reason for this poor attitude is due to the lack of knowledge of the benefits of reading on the part of the teachers. This is a concern and Reutzel and Cooter (2012) reiterated:

...master teachers of reading have a unique skill set. For one thing, they are readers themselves. They read for pleasure and personal growth and in the process serve as great role models to their young charges. Master teachers know that they can't "sell" what you don't do (p. 6).

Effective reading instruction is important for literacy improvement in the school environment. Teachers need to be familiar with assessment practices that inform their ability to provide effective reading instruction, so they can support a variety of learners in their classrooms. According to Campbell (2001), teachers are faced with the challenge of literacy assessment and how to use the data to inform instruction. Teachers in this study examined the assessment practices of their schools and the various tools that are used to assess literacy, which was new to many of them. Campbell (2001) concluded that teachers' perceptions of all reading assessment had some degree of merit. Abrams, Varier and Jackson (2016) concluded that teachers must use a variety of data sources and types of assessments to guide instructional practices, therefore it is essential that teachers are aware of how to use these tools.

Additionally, research on reading assessment suggests that there is need for teachers to link reading assessment with instruction (Afflerbach, 1998; Clay, 2001). The approach of using assessment to drive instruction provides teachers with alternatives to determine the capabilities

of students (Fisher, Lapp, Flood, & Moore, 2006). The assessment-instruction approach to reading instruction has a positive influence on teachers in relation to knowledge, skills, and disposition.

Research on reading instruction for secondary school teachers is very scarce in Cameroon. Reading is not a subject of its own in the Cameroon educational system at the secondary level, but English language is taught in the secondary schools and literature is optional for students in the sciences and commercial and technical education. The regulations and syllabuses for the Cameroon General Certificate Education (GCE) examinations provides a guideline for instruction and assessment, and since students are assessed in listening comprehension, reading comprehension, grammar, vocabulary, directed writing, and composition (GCEBoard, 2007), there should be more of a focus for secondary teachers to become knowledgeable about reading instruction.

In a study conducted in Kenya, the researchers used a variety of methods to support effective professional development to improve the literacy instruction for first graders. Jukes et al. (2017) found that with the use of training workshops, scripted lessons and text-messages, the professional development improved teachers' instruction and consequently improved the students' literacy achievement and decreased school drop-out rates. This study provides support that teachers need professional development in literacy instruction to support all learners.

The purpose of this study was to determine teachers' perceptions and attitudes of reading and reading instruction in the secondary schools in Cameroon. Teachers' knowledge and skills on reading assessment was also examined. The impact of a one day professional development on reading instruction and assessment was evaluated after seven months.

Three research questions were used to guide this study: 1) What are the attitudes and beliefs of Cameroon secondary teachers towards reading and reading instruction? 2) How do teachers identify reading abilities of the students in their class? and 3) What impact did a one day workshop have on secondary teachers' attitudes and beliefs on reading instruction and assessment?

Methods

Participants

Participants included (n=24) general education secondary teachers in the Northwest regions of Cameroon. There were 22 Catholic teachers and two government teachers. There were 13 females and 11 males. The age range of the teachers was from 26 to 50+ years with the highest number of teachers between the ages of 26 and 30 (n=7) and lowest 50+ (n=2). The teachers' educational background included Master's Degree (n=1), bachelor's degree (n=20), high school diploma (n=1), and other (n=2). The average teaching experience was 10.25 years.

The participants of this study were teachers who attended a professional development on reading instruction with emphasis on reading assessment. Some requirements for participating in the professional development included: being a general education content area teacher, taking a pre-test before the professional development, using the knowledge gained at the professional development in their classrooms, and taking the post-test seven months later.

The one-day workshop focused on the importance of reading instruction and general knowledge that there are many contributors to success. According to the National Reading Panel Report (2001), the five components of effective literacy instruction are: phonemic awareness, phonics, fluency, vocabulary and comprehension.

Instrumentation

TRAPS. The survey instrument, Teaching and Reading: Attitudes and Practices Survey (TRAPS), was adapted and modified for the goals of this study (Fogarty, Little, & Reis, 2005). In adapting the survey the researchers took into consideration that the students had a variety of reading levels and were not solely gifted students. The Likert scale format included 23 items asking participants to indicate their agreement or disagreement with the statements presented to them by selecting one of the choices: Strongly Agree (SA), Agree (A), Disagree (D), or Strongly Disagree (SD). A five-item section was added to the survey on reading assessment.

Open-ended questions. Three open-ended questions were asked following the training session. These questions were 1) Identify three aspects about reading instruction you have learned from this workshop, 2) How do you plan to use the information in your class?, and 3) What is your goal for implementing effective reading instruction information in your classroom?

Procedures

Prior to conducting the professional development, one of the researchers contacted the principals of the two host schools and offered an opportunity for professional development in reading instruction. The principals were also asked to invite neighboring schools that may be interested. Participation by teachers was on a voluntary basis and not a requirement by their principals. All of the teachers in the host schools did not participate in the professional development and data collection.

A seven-hour workshop on effective reading instruction and reading assessment was delivered to the participants. The text for instruction was Informal Reading Inventory (IRI): Preprimer to Twelfth (Roe & Burns, 2011). There were three parts to the workshop. First, was an overview for the workshop, which consisted of the goal and objectives. The goal was to provide secondary teachers with additional knowledge about effective reading instruction and tools to assess the reading levels of their students. Second, was focus on effective reading instruction and why it is important for secondary teachers to support reading instruction in their content area

classrooms. Finally, there was a significant focus on reading assessment to drive instructional practices. The morning was spent on effective literacy instruction and the afternoon was spent on understanding, practicing and administering the reading assessment, IRIs.

The information on reading instruction provided teachers with information on the seven pillars of reading instruction and the importance of including reading in content areas. Areas specifically addressed in the morning session were explicit instruction, modeling reading, reading to children and providing time for independent reading in content areas.

The afternoon session focused on reading assessment. The main purpose of reading assessment is to provide the teacher with information of areas where students struggle and determine how they could support them within the classroom environment. The researcher taught teachers about the process of administering reading assessment using the Burns-Roe informal reading inventory. Areas addressed were the advantages of using and IRI, how the instrument is applicable to content area teachers, and how IRI's can help teachers know the reading level of students, which can impact instructional practices. The teachers were taught how to use the IRI to find the instructional reading levels of students. After explaining the steps of administering the IRI, the process was modeled to the teachers. Teachers were then put into groups of four to practice administering the IRI. After the practice, teachers shared their experiences with the whole group.

At the end of the professional development, the teachers completed the three open-ended questions. The posttest survey was administered by the principals of the host schools 7 months following the workshop, and then the principals mailed back the surveys to the researcher.

Data Analysis

Descriptive statistics and t-tests were used to analyze the quantitative data for which *p* values were generated. Qualitative data was transcribed and analyzed by both researchers using constant comparative analysis to develop themes from the teachers' responses to the open-ended responses.

Results

The results of the TRAPS examined personal reading factors, attitudes and perceptions of reading and reading assessment. In addition, thematic analysis of the open-ended questions will be discussed.

Personal reading factors

Personal reading factors included interest level, reading for pleasure, number of books in personal library, types of books interested in reading, and number of minutes read per day. Teachers maintained a moderate interest level in reading following the training. There was a slight increase, from 11 to 13 teachers who indicated they read for enjoyment following the training, but only 17 teachers reported that they owned 1-50 books in their personal library. (see table 1)

Differences in attitudes and perceptions towards reading

Teachers' attitudes and perceptions towards reading were positive. The analyses of the data revealed that there was a statistically significant difference on the item about teachers enjoying reading young adult literature with a *t* score of 2.2. (see table 2)

Knowledge of Reading Assessment

There were statistical significant changes from pre to post test on three specific items related to reading assessment. According to the survey, teachers indicated they received training in basic reading assessment, that reading assessment is given to every student in their school and that they use reading assessment to drive their instruction. The analyses of knowledge of reading

assessment identified that teachers' knowledge of reading assessment improved after the professional development. (See table 3.)

Reading Instruction

This section of the survey provided a lot of useful data, as it identified that 21 teachers, (85%) indicated that they did not receive any training on reading instruction while getting their degree. There was a difference between the pretest and posttest on the minutes per week spent teaching reading. Teachers (n=17, 85%) indicated on the pretest that they spend 0-60 minutes teaching reading and on the post test (n=15, 75%) indicated they spend 0-60 minutes teaching reading. There was a slight increase for teachers who indicated using 61 plus minutes in teaching reading, pretest (n=3, 15%) and posttest (n=5, 25%). The number of teachers who use textbooks daily increased from (n=5, 25%) to (n=9, 39%) for posttest. Important to note is that all the teachers believed that reading should be taught in all subject areas, which is a shift in thinking.

Open-Ended Questions

Themes that emerged from the open-ended questions were: 1) increased knowledge of administering IRI's and assessing students, 2) knowing the reading levels of students allows them to use the information to teach better, and 3) there must be a school wide approach to improve literacy.

Discussion

Professional development for literacy instruction in Cameroon at the secondary level is an important endeavor that must be continuously pursued. Most secondary teachers are so focused on their content that they forget that there are many students who are struggling in their classes because they can't read and write at the level that is expected. If we want children to become adults that can sustain jobs and help be part of a literate society, then we must put more effort into support/training for teachers. Since the majority of the teachers at this workshop

(85%) stated they did not receive training in their preservice education, this is highly concerning. According to Klapwijk (2012) pre-service teachers need explicit instruction on reading strategies during their training and professional development as teachers in-service, because teachers need to teach reading explicitly in a structured and systematic way to students who are struggling and determine how to incorporate specific strategies into their daily teaching.

From this research it was found that the majority of teachers in this study (67%) indicated they had moderate interest level in reading, but that only 54% of the teachers read for pleasure. This is an important finding because if only half of the secondary teachers read for pleasure, they will be unable to model that for the students. This is an issue that must be addressed with the secondary teacher training programs. Additionally, when asked “How many books you have in your personal library?” the majority of teachers, (75%) indicated they had 1-50 books in their personal library. This is an indication that access to books seems to be a challenge for the teachers. Without access to books, teachers may not engage in personal reading for pleasure, which will influence how they discuss reading and engage with students in the classroom. It would be interesting to know the type of books that the teachers possess. According to Greaney, (1996) supplementary reading materials are a challenge to both teachers and students in developing countries due to access. This explains why most teachers in this study have limited number of books.

The data points out teachers in this study had positive attitudes towards reading prior to the training; therefore little growth was seen in this area. Teachers’ positive attitude towards literacy in the content areas is perhaps one of the principle factors that impact on reading achievement in the secondary school (Nourie & Lenski, 1998), so this is a positive finding because they understand the importance of reading.

The area the teachers felt they grew the most was reading assessment. This could be due to practicing the IRI during the workshop. Additionally, some teachers were able to assess each of their students at the beginning of the year and see what grade level each of their students were reading at, which was eye-opening for some teachers. This result points to the need for more professional development to secondary teachers who may not have had some or any training on reading instruction and assessment. Responses from the teachers' post training exit slip indicate that teachers had a better understanding of reading assessment after the training. A participant's quote provides additional support for this conclusion by stating:

I have learned that there are many ways to acquire information to make necessary instructional decisions; I have learned to identify struggling readers, find out their areas of weakness and help them, that it is best to give reading assessment to students at the beginning of the academic year.

This quote provides additional evidence of the impact the training had on knowledge gained from the training and a plan of action for the next school year. Teachers in this study are beginning to change the way they look at students who struggle in reading by administering reading assessment at the beginning of the school year and thinking about how they can include and support them in the classroom environment.

On the survey item: *Reading assessment is provided to every student in the school* there was a significant change from pre to post test, which is important because most of teachers in this study were introduced to reading assessments for the first time. Teachers took action after the professional development to assess the reading levels of students in the school. The informal reading inventory provides teachers with the reading level of students, which help them to understand if students are struggling in decoding or comprehension. It would be beneficial if

assessment of reading levels would be part of the beginning of the school year to assist teachers with understanding the skills/knowledge all students in secondary schools in Cameroon.

Another important finding about reading assessment referred to the question: “I use the data from the assessment to drive my instruction” teachers’ responses had a mean of \bar{x} of 1.92 on the pretest and a mean of \bar{x} of 2.79 on the posttest. This shows that teachers in this study began to use data to inform how they teach. At this time it cannot be determine how they used the data to drive instruction, but this could be an additional areas of inquiry. Research shows that teachers who use data to drive instruction help students to achieve more (Abrams, Varier & Jackson, 2016; Fisher, Lapp, Flood, & Moore, 2006). Data driven instruction can be an area of focus for secondary teachers, especially using the data they get from assessments to inform how they support reading instruction in the secondary classroom.

The time teachers spend preparing to teach reading is a determining factor to reading instruction. When asked “how many minutes per week do you spend preparing to teach reading?” 85% percent of teachers indicated 0-60 minutes on the pretest, but it slightly decreased to 75% on the posttest. This suggests that some teachers are spending more time preparing for reading instruction, which is a positive result. Time spent in reading and preparation to teach reading should impact the way a teacher teaches reading specifically to struggling readers (Milstein, 1990). It is important that teachers engage in reading to learn new strategies they can share with their students.

One-hundred percent of teachers in this study agreed that reading should be taught in all content areas in school. This was an indication that teachers believe reading instruction in content areas was important and should be part of their instruction. Teachers’ beliefs impact the

way they respond to students' needs. Agreeing that reading should be taught in all content area is a positive move towards improving literacy at the secondary level.

Based on the responses to the open-ended questions, teachers were more willing to put the skills and knowledge they learned at the professional development into practice. These responses also confirm the results of the posttest in this study on the use of data to drive instruction. The results of this study concur with Massey and Heafner's (2004) conclusions that providing teachers with skills and support can be beneficial as they incorporate teaching of reading within their content areas.

Limitations

There are many limitations to this study. First, the sample size was small and included only a few schools, therefore generalization of the results is limited. Due to the nature of the study, professional development could not be extended to all the teachers in the area. Secondly, the timeframe of the workshop was only one day, which restricted their ability to master all the knowledge and skills about reading instruction and assessment. Finally, the distance factor may have impacted how the information was used after the researcher left. In other words, there was no direct support to teachers when they were administering the assessment to the students at the beginning of the school year and no one to provide additional support throughout the school year.

Recommendations

Reading instruction and assessment is relatively new concept for secondary teachers in Cameroon, and there is limited literature in the area of reading instruction in content area. Based on the data collected for this study and limited research in the area of reading instruction, it is recommended that there is need for more research in the area of reading instruction and professional development for teachers on literacy instruction in content area.

Recommendations for future research include continuous training on reading instruction and reading assessment throughout the school year to assess additional knowledge and skills. Wilson, Grisham, & Smetana (2009) indicate that professional development throughout the school year provides teachers with added knowledge and support for literacy instruction in content area, which would also assist them with incorporating strategies into their daily teaching practices.

Future researchers need to engage the teachers throughout the school year by consulting with the teachers and providing feedback and support to the teacher within the classroom environment. In this study the researcher left after the training and could only communicate electronically. For future research, hands-on support of the teachers and direct observation of the administration of the IRI with the students are highly recommended. It would be suggested that researchers leading professional development for secondary teachers with limited knowledge of reading instruction and assessment have support in place following the professional development to support the implementation of school wide reading assessment effort. This will increase the probability that teachers will effectively assess students and provide strategies for struggling readers.

Conclusions

The trends in the data support other researchers' findings that data informs reading instruction and assessment. When examining the pre and post data as a whole, it is apparent that the teachers understand the importance of reading instruction and have a positive perception about reading, but are unsure of how to proceed and directly teach reading in their content area classrooms. An increased impact will be felt by the teachers, if they are given more support, additional opportunities, and resources to be effective reading teachers in content areas at the secondary level.

References

- Abrams, L, Varier, D., & Jackson, L. (2016). Unpacking instructional alignment: The influence of teachers' use of assessment data on instruction. *Perspectives in Education*, 34 (4), 15-28.
- Afflerbach, P. (1998). Teaching reading assessment. *Leadership Letters: Issues and trends in Reading*.
- Barry, U., & Brun, K. (2000). The Dakar Framework for Action. *World Education Forum*.
Dakar: UNESCO.
- Campbell, R. (2001). *Read-alouds with young children*. Newark, DE: International Reading Association.
- Clay, M. (2001). *Change over time in children's literacy development*. Portsmouth, NH: Heinemann.
- Commeyras, M., & Inyega, H. N. (2007). An integrative review of teaching reading in Kenyan primary schools. *Reading Research Quarterly*, 258–281.
- Education For All. (n.d.). Retrieved January 21, 2017, from United Nations Educational, Scientific and Cultural Organization.
- Fisher, D., Lapp, D., Flood, J., & Moore, K. (2006). Linking literacy teaching with assessment: A continuing professional development initiative for secondary schools. *Literacy*, 40 (2), 115-122.
- Fogarty, E. A., Little, C. A., & Reis, S. M. (2005). *Teaching and reading: Attitudes and practices survey (TRAPS)*. Storrs, CT: Schoolwide Enrichment Model-Reading project, Neag Center for Gifted Education and Talent Development, University of Connecticut.

- GCEBoard. (2007). *Cameroon General Certificate of Education Board: Regulations and Syllabuses*. Limbe: Cameroon GCE Board.
- Gordon, W. (2005). *Lessons from the Cell Phone. Literacy For All in Africa*. Kampala: Fountain Publisher Ltd.
- Greaney, V. (1996). *Promoting reading in developing countries: Views on making reading materials accessible to increase literacy levels* (pp. 148-163). Newark, DE: International Reading Association.
- Greaney, V., & Neuman, S. B. (1990). The functions of reading: A cross-cultural perspective. *Reading Research Quarterly*, 25, 172-195.
- Jukes, M. C. H., Turner, E. L., Dubeck, M. M., Halliday, . E., Inyega, H. N., Wolf, S., Zuilkowski, S . S. & Brooker, S. J. (2017). Improving literacy instruction in Kenya through teacher professional development and text messages support: A cluster randomized trial. *Journal of Research on educational effectiveness*, 10, (3), 449-481.
- Klapwijk, N. M. (2012). Reading strategy instruction and teacher change: Implications for teacher training. *South African Journal of Education*, 32, 191-204.
- Massey, D. D., & Heafner, T. L. (2004). Promoting reading comprehension in social studies. *Journal of Adolescent & Adulity Literacy*, 48 (1), 26-40.
- Milstein, M. (1990). The implication of educator plateauing for staff development. *Journal of Staff Development*, 11 (1), 48-52.
- Nourie, L. B., & Lenski, D. S. (1998). The (in)effectiveness of content area literacy instruction for secondry pre-service teachers. *Clearing House*, 71 (6), 372-379.

- Popoola, B. I., Ajibade, Y. A., Etim, J. S., O., E. O., & Adeleke, M. A. (2010). Teaching effectiveness and attitude to reading of secondary school teachers in Osun State, Nigeria. *African Educational Research Network, 10* (2), 142-154.
- Reutzel, D. R., & Cooter, R. B. (2012). *Teaching Children to Read: The Teacher Makes the Difference*. Boston: Pearson Publishing.
- Reis, S. M., & Fogarty, E. A. (2006). Savoring Reading: The schoolwide enrichment model in reading increases readers' stamina-and their test scores. *Educational Leadership, 32*-36.
- Roe, B., & Burns, P. C. (2011). *Informal Reading Inventory: Preprimer to Twelfth Grade* (8th ed.). Belmont: Cengage Learning.
- Trudell, B., Dowd, A. J., Piper, B., & Bloch, C. (2012). *Early grade literacy in African classrooms: Lessons learned and future direction*. Ouagadougou: Association for the Development of Education in Africa.
- UNESCO. (2015b). Literacy and non-formal education. Retrieved from <http://www.unesco.org/new/en/dakar/education/literacy/>
- Wilson, N. S., Grisham, D. L., & Smetana, L. (2009). Investigating content area teachers' understanding of a content literacy framework: A yearlong professional development initiative. *Journal of Adolescent & Adult Literacy, 52* (8), 708-718.

Table 1*Personal Reading Factors*

Item	Pretest		Posttest	
	N	%	N	%
What is your interest level in reading?				
High	4	17	6	25.00
Moderate	16	67	16	67.00
Low	4	17	2	8.00
Do you read for enjoyment (pleasure)?				
Yes	11	46	13	54
No	13	54	11	46
How many books do you have in your personal library?				
1-50	17	71	18	75
51-100+	7	29	6	25
If you were to choose the type of books to read what would you choose?				
Fiction	6	25	4	19
Non fiction	14	58	12	57
Romance	2	9	1	5
Others	2	9	4	19
How many minutes do you read in a day for enjoyment of reading?				
1-25	9	45	8	38
26-50	7	35	7	33
51+	4	20	6	29

Table 2*Differences in Attitudes and Perceptions Towards Reading*

Item	Pre test		Post test		<i>T</i>
	M	SD	M	SD	
I have enough training in reading to teach readers effectively	2.58	0.72	2.75	0.68	0.84
Students who read are a pleasure to me	3.28	0.70	3.42	0.72	0.33
I am able to teach readers how to analyze what they read	3.04	0.62	3.17	0.70	0.77
I enjoy reading young adult literature	2.68	0.88	3.08	0.58	2.2**
I enjoy talking with students with a large vocabulary	3.00	0.93	2.75	0.97	-0.81
I don't really think of myself as a reader	2.12	0.86	2.25	0.99	0.94
I am able to challenge students to read in my class	3.36	0.51	3.38	0.49	1.28
I have trouble finding reading materials that interest me	3.00	0.72	2.63	1.01	-0.62

I enjoy working with students who want to discuss complex ideas during class	3.12	0.74	3.00	0.78	0.49
I would rather watch TV than read a book	2.44	0.68	2.12	0.78	-1.55
When I have spare time, I choose to read	3.24	0.65	2.92	0.72	0
I am an effective reading teacher	3.00	0.77	2.79	0.66	0.89
I receive personal satisfaction when I read	3.68	0.81	3.33	0.48	0.23
I always have few books around waiting to be read	3.44	0.59	2.63	0.71	-1.81
I am able to modify curricular content to match the ability level of my students	3.16	0.82	2.96	0.69	1.43
I am able to help students choose books that challenge them	3.24	0.69	2.96	0.55	1.29
I am able to help students choose books that will interest them	3.40	0.76	2.79	0.59	-0.22

Note. M=Mean, SD=Standard Deviation

**p<.05

Table 3

Knowledge of Reading Assessment

Item	Pre survey		Post Survey		
	M	SD	M	SD	T
I assess the reading level of students in my class	2.71	0.86	3.04	0.69	1.35
I have received some training on basic reading assessment	2.46	0.83	3.21	0.66	3.42**
Reading assessment is provided to every student in the school	2.04	0.95	2.63	0.88	2.28**
I use the data from the assessment to drive my instruction	1.92	0.78	2.79	0.78	3.49**
I know the reading level of my students	2.83	0.87	3.25	0.74	1.59
I believe that reading assessment is beneficial for instruction	3.71	0.46	3.75	0.44	0.36

Note. M=Mean, SD=Standard Deviation

**p<.05