



# Peer-Assisted Learning Strategies for ELLs

## SUMMARY

The number of English language learners in public schools has increased significantly. This study describes one approach to reading instruction that helps to build students' abilities to collaborate successfully with their peers.

### Correction made on 2/4/19:

This research was supported in part by a Memorandum of Understanding between the New York State Education Department, Office of Special Education and the State University College at Buffalo, Project Title: NYS Response to Intervention Technical Assistance Center, Contract Number: C009953 Extension, Principal Investigator: Dr. Theresa Janczak.

## *English language learners (ELLs)*

constitute one of the fastest growing student populations in the United States. Nearly one in five students in public schools are ELLs, and the numbers continue to increase (Chu & Flores, 2011). Currently, about 70 percent of ELLs are Spanish speaking (Klingner, Boardman, Eppolito & Almanza Schonewise, 2012). ELLs also represent one of the lowest academically achieving student groups. In New York State, 1 percent of ELLs in eighth grade perform at or above proficient on the English Language Arts (ELA) Common Core exam (NAEP, 2013). This is alarming as it means 99 percent of ELLs failed to read at a level to fully and deeply comprehend informational and narrative text at their grade level.

With the implementation of the Common Core State Standards

(CCSS), expectations for adolescent literacy achievement have increased (Reed & Vaughn, 2012). The expectations now include knowledge and skills necessary for college and career readiness (Reed & Vaughn). Some ELLs with reading difficulties are unable to gain proficiency in the content knowledge they require to successfully earn a high school diploma (Klingner, Boardman, Eppolito, & Almanza Schonewise, 2012). In New York State, only 31.4 percent of English language learners graduated from high school in 2014.

Earning a high school diploma is vital to successful participation in today's global economy. Yet, English language learners with reading difficulties are unable to compete in today's workforce, as they are required to apply levels of academic literacy well beyond the basic level (Klingner, Boardman, Eppolito, & Almanza Schonewise, 2012). In order to obtain better paying

*Gliset Colón is a doctoral student in the Joint Doctoral Program in Special Education at the University at Buffalo and a member of NYSUT. She teaches college courses on inclusion. Colón also serves as a bilingual teacher for the Buffalo Public Schools.*

## Gliset Colón, University at Buffalo

jobs, ELLs require a higher level of reading proficiency. Unfortunately, too many ELLs fail to graduate from high school because of substandard reading performance.

Substandard academic achievement may also contribute to the disproportionate representation of ELLs in special education. English language learners who struggle with reading have an increased likelihood of being referred for special education placement (McCardle, Mele-McCarthy, Cutting, Leos, & D’Emilio, 2005). This is problematic as research indicates ELLs who are inappropriately placed in special education regress even further academically (Huang, Clarke, Milczarski, & Raby, 2011). Despite the mandate of the Individuals with Disabilities Education Act (2004) to minimize cultural bias in special education, disproportionality still exists (Liu, Ortiz, Wilkinson, Robertson, & Kushner, 2008).

The raised expectations and high-stakes assessments have also resulted in an increase in expectations for teachers’ instructional practices. Teachers are

are also facing an increasingly diverse student population. Many teachers, however, still find it challenging to address students’ literacy needs particularly in the content areas (Reed & Vaughn, 2012).

### **Peer-Assisted Learning Strategies**

English language learners in middle school require instruction that simultaneously supports acquiring content area knowledge while supporting language acquisition and reading comprehension (Klingner, Boardman, Eppolito, & Almanza Schonewise, 2012). Approaches to teaching ELLs should target multiple components of reading (Cirino, Romain, Barth, Tolar, Fletcher, & Vaughn, 2013). Reading intervention for this student population should serve a dual purpose and address literacy skills while simultaneously increasing content-area knowledge. The causes of reading difficulties in adolescent students are numerous. Therefore, multicomponent programs that integrate instruction in fluency and comprehension are recommended (Cirino, Romain, Barth, et al., 2013).

*continued on following page*

## Peer-Assisted Learning Strategies for ELLs

The use of a partner who is more fluent in reading and English language skills may be a viable option for supporting language acquisition and reading in content area classes.

Peer-assisted learning strategies or PALS is a program that incorporates multiple components using partner reading with three different comprehension strategies; paragraph shrinking, prediction relay and retelling (Fuchs, Fuchs, Mathes, & Simmons, 1997). Components of PALS can be implemented in content-area classrooms without the need for formal training on the commercial PALS program. This is particularly important as teachers require approaches that can be readily used in the classroom.

Paragraph shrinking is one example, and can easily be used with partner reading without using the commercial PALS program (Archer, Gleason, & Vachon, 2003). Paragraph shrinking with a partner, allows struggling readers to identify the main idea, a comprehension strategy, while engaging in repeated oral reading practice, a fluency strategy. Implementing this modified version of PALS using content-related text may simultaneously support acquiring content area knowledge and reading comprehension.

Partner reading, as one component within a reading curriculum, is an effective strategy for adolescent readers (Archer, Gleason, & Vachon, 2003). Partner reading allows middle school students who struggle with reading, to connect with peers. It encourages student engagement, and includes

comprehension strategies (Archer, Gleason, & Vachon). The use of a partner who is more fluent in reading and English language skills may be a viable option for supporting language acquisition and reading in content area classes.

### Purpose of Study

The purpose of this study was to investigate the effectiveness of two peer-assisted learning strategies on specific reading skills and content knowledge of middle school ELLs. More specifically, the study examined the effects of a partner reading and paragraph shrinking strategy on the oral reading fluency and science and social studies content knowledge of ELLs with and without disabilities. The current body of research literature on PALS with ELLs is limited. This study will add to the research base on effective literacy interventions for adolescent ELLs with and without disabilities.

It should be noted that while there was a heavy focus on fluency via standardized measures, comprehension of content area text was also a focus. Comprehension is the ultimate goal of reading and the purpose of this research project was to incorporate both reading fluency and comprehension as they are part of the five essential components of reading (phonemic

awareness, phonics, fluency, vocabulary, and comprehension). All five elements are integral to the reading process and the primary researcher does not claim that fluency is the most important, they are all essential for successful reading.

### Research Questions

1. Does the use of modified peer-assisted learning strategies improve the oral reading fluency of middle school English language learners with and without disabilities?
2. Does the use of modified peer-assisted learning strategies improve science and social studies content knowledge (comprehension) of middle school English language learners with and without disabilities?
3. What is the feasibility of the implementation of modified peer-assisted learning strategies in a middle school classroom?
4. How socially valid is the use of modified peer-assisted learning strategies?

### Participants and Setting

The study took place in an urban elementary school in Western New York serving students in grades K-8. The sample for this study included 35 ELLs in middle school, 22 students were in seventh grade general education classrooms and 13 students were

in an eighth grade bilingual self-contained classroom. The students ranged in age from 12 years to 15 years. Of these participants, 54 percent were female and 46 percent were male. Of the 35 ELLs, 16 (46 percent) were classified as both ELLs and students with disabilities. Finally, 100 percent of the participants were Hispanic whose native language was Spanish. The current study was part of a larger study which examined a middle school reading intervention for students struggling with reading.

### Procedures

**Teacher Training.** Prior to the start of the intervention, teacher training involving the standard administration of AIMSweb assessments and for classroom implementation of the two modified learning strategies occurred. Teachers were given a tutorial on the use of the Web-based AIMSweb program. The teachers then practiced together until 100 percent inter-rater reliability was obtained. For the classroom implementation of PALS, an outside consultant visited the school and modeled the PALS procedures using an eighth grade classroom that was not participating in the study. After the presentation, a debriefing session was held with the literacy coach and consultant to answer any questions the teachers had.

*continued on following page*

## Five essential components of reading:

- phonemic awareness
- phonics
- fluency
- vocabulary
- comprehension.

**ReadWorks** Non-fiction: The Industrial Revolution – The Legend of John Henry

## The Industrial Revolution The Legend of John Henry

*During the Industrial Revolution, machines started doing the work of people. They were used to make yarn, weave cloth, and saw wood. They were even used to make furniture. However, the changes taking place filled some people with sadness. Many craftsmen, who took pride at their trade, suddenly couldn't find work. They resented that machines were replacing men. This famous American legend tells about one man determined to prove he could beat a machine.*

No one's really sure where John Henry came from. Some people say Alabama. Some folks say West Virginia. But one thing's for sure. John Henry was a big man. He could tackle anything, even Big Bend Tunnel. That is where he died.

John Henry was a steel-driving man. That means he helped make railroads. He used a big ol' hammer and a stake to punch holes clean through mountains made of solid rock. He would whistle and sing all day working away. But ol' John Henry was stubborn as an ornery<sup>1</sup> mule.

One day John Henry showed up at a camp yonder in Virginia. A team of men was building a railroad up the East Coast. The team's captain was a wiry<sup>2</sup>, little man. He says to John, "What can you do?"

John Henry took a deep breath and puffed himself up just like a rooster. "I'm a steel drivin' man," he said. "I'm goin' to take my hammer and my stake and work for you. If you give me a chance, I'll work from 8 to 5. I can crumble more mountain than any man you've ever seen."

---

<sup>1</sup> Ornery – stubborn and mean  
<sup>2</sup> Wiry – thin but tough

**ReadWorks.org** THE SOLUTION TO READING COMPREHENSION  
© 2010 ReadWorks®, Inc. All rights reserved.

Example of expository text.

**Student Training.** Student training occurred for three instructional days in social studies. Using expository text or passages, teachers modeled the use of

PALS, including the error correction and paragraph shrinking procedures. Students were then given guided practice for each step of the modified PALS procedures. [See Appendix 1 for a detailed script the teachers used during the training sessions].

**Intervention.** After the training sessions, the intervention was implemented across 15 instructional sessions within seventh and eighth grade science, social studies or ELA classrooms. For seventh grade, the science teacher provided intervention in the science class; the social studies teacher in the social studies class, and the ESL or grade-level special education teacher in the ELA class. For eighth grade, the special education teacher provided all interventions. If there was a teacher absent, the primary researcher provided the intervention. The classroom periods for the middle school were 42 minutes each. Each instructional session lasted approximately 20 minutes.

Seventh grade received eight instructional sessions in science. Four of these sessions were in science class and four were in the ELA class using science content. Seventh grade also received six instructional sessions in social studies; four of the sessions were in social studies class and two in the ELA class using social studies content. Eighth grade received nine instructional sessions using science content, four sessions in science class and five sessions

in ELA class. For social studies, eighth grade received six instructional sessions. Four of the sessions were in social studies class and two in the ELA class using social studies content.

Students from the same classroom were paired into two-person teams and cycled through two specific peer-assisted reading activities, 10 minutes per activity. The students were listed based on reading Lexile levels. The Lexile level is a scale for measuring both reading ability of a student and the text complexity of materials he or she reads. As with any other measure, however, there are limitations. The Lexile measure is not directly related to the curriculum or state standards. Subsequently, a Lexile score may not be a measure of the components of reading being taught through the grade-level curriculum (i.e., identifying main ideas and author's purpose, understanding idioms, locating details in a passage, etc.). A teacher's knowledge of students' strengths and weaknesses usually contributes significantly to the selection of appropriate curricular materials. The Lexile scores used in this study merely provided a measure of the students' reading ability on a basic scale. The Lexile scores were automatically provided along with the AIMSweb oral reading fluency scores, thus this measure was used for grouping but other grouping options should always be considered.

Next, the list of students based on Lexile levels was split in half. The highest student from the first list was paired with the highest student from the second list and so on. [See Appendix 2 for sample pairs]. The students participated in partner reading and paragraph shrinking of expository text. The texts were written at the reading level of the lower student to accommodate the instructional reading levels of students who were not performing at grade level expectations. Descriptions of each PALS strategy are provided below.

**Materials.** Materials included informational texts that reflected current units of study in seventh and eighth grade science or social studies. Each pair received a folder with their names written on the outside, expository texts, and mini posters for the error correction and paragraph shrinking procedures as well as the PALS rules. Large foam posters of the PALS rules were also posted in plain view so all students could refer to them as needed. (See example at right.)




*Rules are posted in plain view so students can refer to them as needed.*

*continued on following page*

## Peer-Assisted Learning Strategies for ELLs

**Correction Procedures**



STOP. That word is \_\_\_\_\_

What word?  
\_\_\_\_\_

Good Job!

Go back and read that line again.

### **Partner Reading.**

Each student took turns reading content-related text (in science or social studies) for a total of 10 minutes (five per partner). The more proficient reader or the “first reader” read for five minutes. While the first reader read aloud, the second reader (lower performing student) coached or monitored the student. If a mistake was made, an error correction procedure was used to correct the errors.

The error correction procedure consisted of the second reader saying “STOP. That word is \_\_\_\_\_. What word? \_\_\_\_\_. Good job! Go back and read that line again.” (Fuchs, Fuchs, Mathes, & Simmons, 1997). After five minutes, the students switched roles. (See example at left for Correction Procedures.)

**Paragraph Shrinking.** Each student again took turns reading content-related text. The first reader began reading content-specific text in science or social studies. After reading one paragraph, the reader restated the main idea of the paragraph in 10 words or less. After five minutes, the students

switched roles with the second reader reading new content and identifying the main idea of each paragraph read.

### **Measures**

The content knowledge in science and social studies was measured via the same pre- and post- teacher-made tests. The science test consisted of 20 items, composed of multiple choice and short answers. The topics were related to unit of study currently being taught. For both seventh and eighth grade, the unit of study was chemistry (e.g., periodic table, atoms, or molecules). The social studies test consisted of 16 items, also multiple choice and short answer. The unit of study for seventh grade was The Constitution and Bill of Rights. For eighth grade, the unit of study was The Industrial Revolution.

Oral reading fluency was measured using AIMSweb Reading-curriculum based measurements (R-CBM). The AIMSweb assessment, data management, and reporting system accommodates multi-tiered systems of support for students in kindergarten through twelfth grade (AIMSweb, 2012).

AIMSweb includes nationally normed assessment tools for universal screening and progress monitoring in the areas of reading, language arts, mathematics, and behavior (AIMSweb, 2012).

**Baseline Data.** Baseline data were

gathered by administering content specific, teacher-developed tests in science and social studies (pre-test). AIMSweb R-CBM probes were individually administered over a period of four days in order to determine baseline oral reading fluency scores. After baseline data were established, the intervention began.

**Post-intervention.** Once the instructional period ended, AIMSweb R-CBM probes were again individually administered over a period of two days in order to assess oral reading fluency. Additionally, post-tests for content knowledge in science and social studies were administered.

### Data Analysis

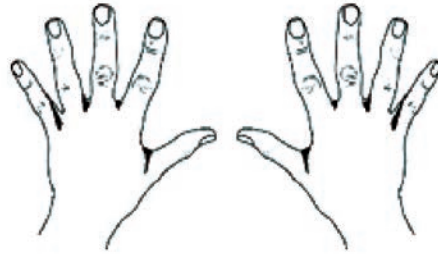
The functional relationship between PALS and the reading skills of ELLs was determined via a review of graphed data. Visual analysis determined whether there was a magnitude of change from baseline data to post-intervention for both oral reading fluency and content area tests.

Additionally, the rate of improvement (ROI) for oral reading fluency from baseline to post-intervention was examined.

The rate of improvement demonstrates how students are responding to the intervention (Shapiro, 2011). The students' performance on the AIMSweb R-CBM probe was

## PARAGRAPH SHRINKING

- 1. Name the most important who or what.**
- 2. Tell the most important thing about the who or what.**
- 3. Say the main idea in 10 words or less.**



compared to the normative population. The difference between participants of the study and the normative sample was determined by comparing their scores to the benchmark scores expected for a student of that same grade, at that same time of the year.

Three different rates of improvements were examined. First, the typical ROI that students typically attain was determined. Typical ROI is based on the normative sample at the 50th percentile. Second, the targeted rate of improvement was determined. The targeted ROI is the needed growth a student needs to attain in order to meet grade level benchmark. Third, the attained rate of improvement was

*continued on following page*



examined. The attained ROI is the actual rate of improvement the student achieves as a function of his/her particular progress across the year (Shapiro, 2011).

## Results of the Study

### 1. Oral Reading Fluency

The results indicate all student groups increased in oral reading fluency over the course of this three week study.

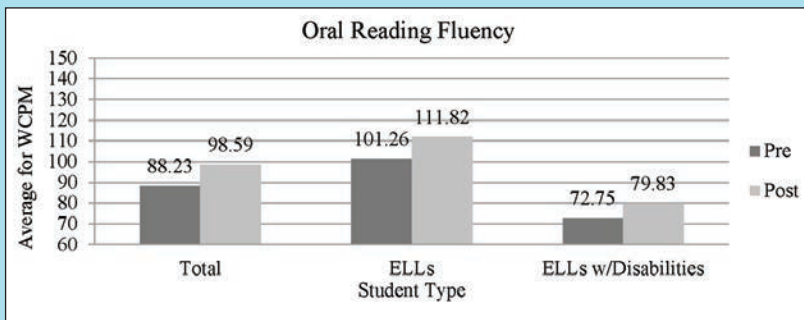
The total intervention group increased the number of words correct per minute (WCPM) by an average of 10.36

words. The ELLs increased the WCPM by an average of 10.56 words. The ELLs with disabilities increased the WCPM by an average of 7.08 words. [See Figure 1]. When looking at grade level, both seventh and eighth grade students increased the WCPM with an average of 10.11 and 5.94 words, respectively. [See Figure 2].

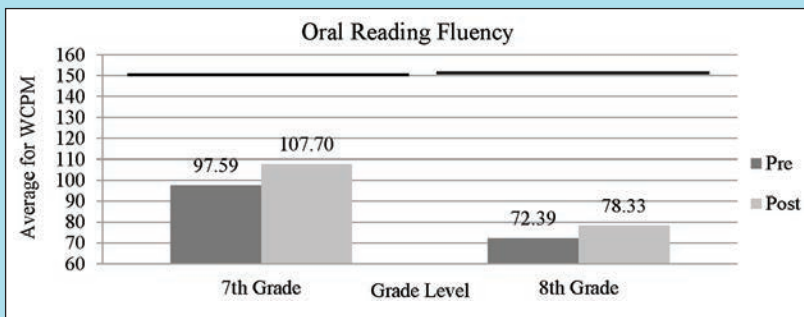
The rate of improvement refers to the increase or gains in the number of words students read correctly on a weekly basis. According to AIMSweb (2012), the typical or average weekly growth at the 55th percentile for students in the seventh grade ranges from .67 to .82 words per week from winter to spring. The typical weekly growth for students in the eighth grade ranges from .48 to .60 words per week from winter to spring.

The results indicate all student groups in both seventh and eighth grade exceeded the typical rate of growth. [See Figure 3]. The attained ROI for seventh grade was 3.37 words per week. This exceeds the typical rate of growth of .82. When looking specifically at the ELLs and ELLs with disabilities in seventh grade, both groups also exceeded the typical rate of growth with an improvement of 3.52 and 3.33 words per week. The attained ROI for eighth grade was 1.98 words per week. This exceeds the typical rate of growth of .60.

**Figure 1: Oral reading fluency results by student subgroup**



**Figure 2: Oral reading fluency results by grade level**



The target rate of improvement was also calculated for this study. In order for the seventh grade students to ultimately meet the benchmark of 150 words correct per minute they would need to make an improvement of 2.91 words per week. Both the ELLs and ELLs with disabilities in the seventh grade exceeded this target ROI. In order for the eighth grade students to meet the benchmark of 151 WCPM, they needed to make an improvement of 4.37 words per week. The ELLs with disabilities in the eighth grade did not meet or exceed this target ROI.

## Content Knowledge

### 2. Science Scores.

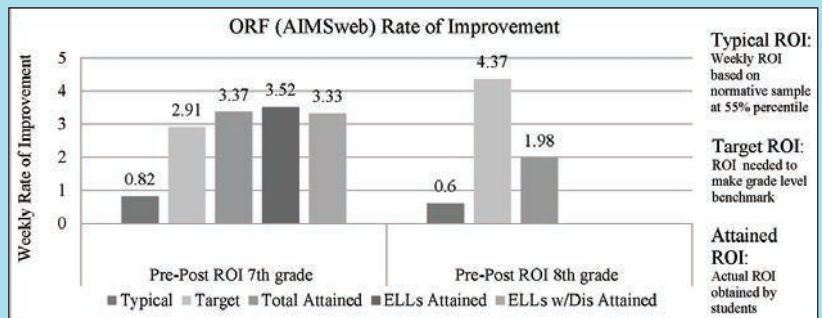
The results indicate all student groups increased in science knowledge over the course of this three-week study. The science scores for the total treatment group increased by 20 percent. The science scores for ELLs increased by 22 percent. For ELLs with disabilities, the science scores increased by 16 percent. [See Figure 4]. When looking at grade level, both seventh and eighth grade students increased in science knowledge with an average increase of 22 percent and 15 percent, respectively. [See Figure 5].

### 3. Social Studies Scores

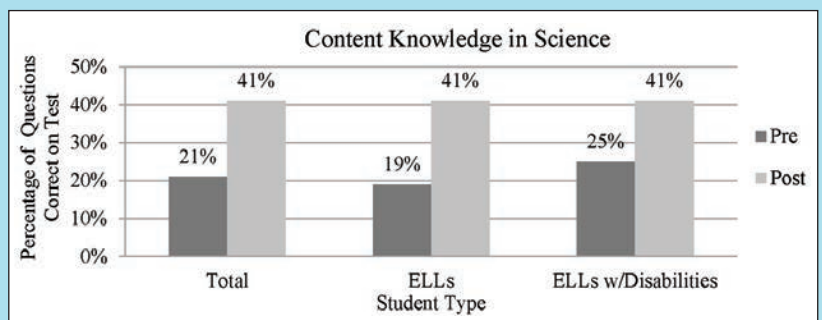
Overall, the social studies scores for the total group increased by 6 percent. [See Figure 6]. The results indicate only ELLs with disabilities however, increased in social studies knowledge

over the course of this three-week study, with an increase of 21 percent. The social studies scores for ELLs without disabilities decreased on average by 1 percent. When looking at

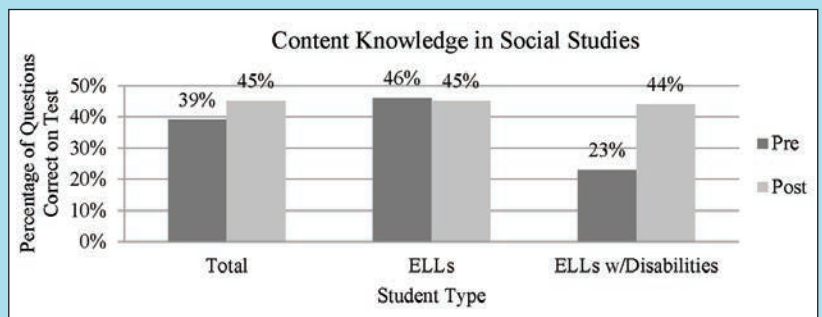
**Figure 3: Rate of improvement results**



**Figure 4: Science scores by student subgroup**



**Figure 5: Science scores by grade level**



# Peer-Assisted Learning Strategies for ELLs

grade level, the social studies scores for seventh grade remained the same while the eighth grade students demonstrated an increase of 23 percent. [See Figure 7].

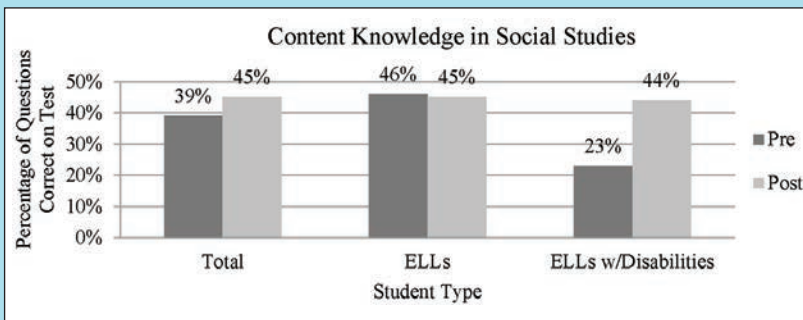
The results of this study indicate the modified PALS intervention had an overall positive effect on the reading skills of middle school ELLs with and without disabilities. All student groups, both ELLs with and without disabilities in the seventh and eighth grade made gains in oral reading fluency. Additionally, both the seventh and eighth grade groups exceeded the

typical or expected rate of improvement as a result of the modified PALS intervention. While neither group achieved an average passing grade for the content-area tests, both groups increased their performance from baseline to post-intervention. More specifically, the students made greater gains in science with an increase in test scores of 20 percent, whereas the overall increase in social studies was only 6 percent.

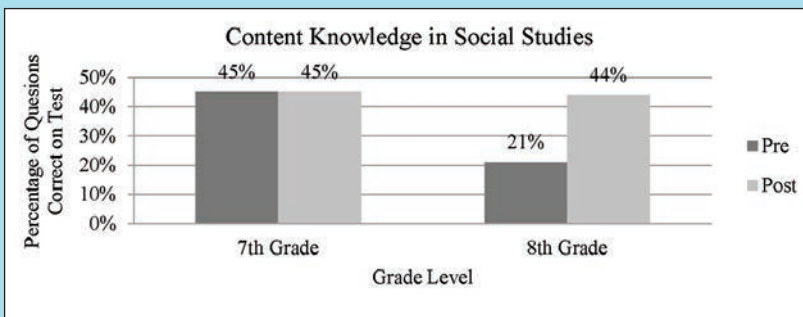
Students engaged in repeated reading with error correction procedures. The use of reading materials at the instructional reading level of students also proved to be beneficial. For English language learners in particular, the opportunity to read with a more fluent reading role model provided these students with language support embedded in content instruction. More specifically, the increase in gains in content knowledge may be attributed to the alignment between reading materials, curriculum, and assessment. The use of a reading comprehension strategy, in this case identification of main idea, simultaneously supported literacy instruction and content knowledge instruction.

The third research question addressed the feasibility of implementation of the PALS intervention. The teachers were given a questionnaire to fill out during a focus group meeting. [See Appendix

**Figure 6: Social studies scores by student subgroups**



**Figure 7: Social studies scores by grade level**



3]. Seven questions on the teacher questionnaire addressed the feasibility of implementation.

Results indicated five out of the six teachers agreed the PALS intervention was easy to implement in a reasonable amount of time. All of the teachers agreed they possessed the skill level to implement the PALS intervention. The middle school teachers also agreed their participation in the PALS intervention was relatively easy and agreed PALS fit into their regular schedule. Four out of the six teachers agreed they had the necessary materials to implement this program accurately.

The final research question addressed the social validity of the PALS program. The students were asked a series of questions post intervention by the primary researcher and a graduate

student. [See Appendix 4]. The answers were then recorded on the student questionnaire. The remaining 13 questions on the teacher questionnaire also addressed social validity.

#### 4. Student Questionnaire

The results of the student questionnaire (see Table 1) indicate the majority of students who received the PALS program liked it and believed they were taught important reading skills and strategies that can be used in other classes. While many of the students did not believe reading was difficult, most agreed both understanding what is read and identifying the main idea of a paragraph are important skills.

The students also provided feedback by giving additional comments or thoughts on the modified PALS. Comments from students included:

**Table 1: Student Questionnaire Results**

	<b>Yes</b>	<b>No</b>
1. The PALS intervention taught me important reading skills.	93%	7%
2. The PALS intervention helped me do better in science and social studies.	63%	37%
3. Reading is difficult for me.	44%	56%
4. The PALS intervention helped me feel better about my reading in English.	81%	19%
5. If my friend were having trouble with reading, I would tell him/her to try the PALS intervention.	86%	14%
6. I liked the PALS intervention.	68%	32%
7. It is important to understand what I read.	95%	5%
8. It is important to identify the main idea of a paragraph.	96%	4%
9. I would use the paragraph shrinking strategy in other classes	70%	30%
10. Did you use skills or strategies while reading before the PALS intervention?	53%	47%

# Peer-Assisted Learning Strategies for ELLs

*“I liked working with partners closer to my reading level.”*

*“It helps us read better, helps us take time to read, the paragraph shrinking helps.”*

*“It helped me with my science test!”*

*“Paragraph shrinking helped a lot.”*

*“Being pre-taught reading information about the reading helped. Example learned about atoms, then read about atoms.”*

*“It worked, what I didn’t know my partner would tell me and vice versa.”*

The interviews revealed a little more than half of the students reported to have used some type of reading skill or strategy prior to learning PALS. The

most commonly used skills or strategies were rereading the text and asking a friend or teacher. Table 2 provides a summary of all of the reading strategies identified by the students.

## 5. Teacher Questionnaire

Analysis of the remaining questions from the teacher questionnaire indicated five out of the six teachers agreed the PALS intervention quickly improved students’ reading skills. All of the teachers agreed the PALS intervention focused on important behaviors, specifically oral reading fluency and content knowledge. The middle school teachers believed the intervention was beneficial for students with disabilities and for ELLs. More specifically, they felt the intervention increased the reading fluency of ELLs and provided

**Table 2: Reading skills or strategies used by students**

### Student Answers:

Underline important words	Reread	Say the word in Spanish
Point out details in a paragraph	Color coded paragraphs	Main idea
Use pictures	Think of one word to describe the	Topic sentences, body, details
Take notes on the side/highlight	whole paragraph	Ask an English speaking friend
Self-correct	Paraphrase	Read carefully
Break down unknown words	Looking for synonyms	Sometimes use dictionary
Use a dictionary	Use vocabulary	Track reading
Ask a friend		Ask a teacher for help
Ask the teacher		keep trying
Use context clues		Use vocabulary words

these students with appropriate models for reading. All of the teachers agreed the PALS intervention improved the students' overall reading performance, and reported observable gains. The teachers also agreed the PALS intervention was acceptable to students given the classroom culture. Finally, when asked if they will use PALS in the future, all of the teachers agreed they would use it again and recommend the modified PALS intervention to other teachers, classrooms, and schools.

The additional comments written by the teachers further corroborate their positive feelings about the PALS intervention. The teachers made comments such as:

*“Thank you —Look forward to start working with students in 2015–16.”*

*“Thank you for the training and support during this pilot program.”*

*“I love this intervention and continue to use elements of it.”*

When listing any concerns or additional comments, the teachers suggested the PALS intervention begin at the start of the school year. The teachers also suggested planning time to make sure the materials used are in direct correlation with content, particularly for the ESL teachers. The teachers also agreed data should be provided to plan partnerships throughout the year and share results with students.

## Conclusions

### **Oral Reading Fluency**

The results of this study demonstrate modified PALS was effective in increasing the oral reading fluency of English language learners with and without disabilities in both seventh and eighth grade. More specifically, ELLs who received PALS, exceeded the typical rate of improvement expected for an average student in the same grade at the same time of year (Shapiro, 2011). When looking specifically at the target rate of improvement, the ELLs in seventh grade both with and without disabilities did exceed the target ROI. The ELLs with disabilities in the eighth grade did not meet or exceed this target ROI. This is particularly noteworthy as ELLs must make greater gains in order to close the gap in reading achievement.

The increase in oral reading fluency can be attributed to several factors. The modified PALS intervention provided students with opportunities for repeated reading of instructional level text. Repeated reading has been proven effective for increasing the oral reading fluency of adolescent readers (Archer, Gleason, & Vachon, 2003; Begeny, Ross, Greene, Mitchell, & Whitehouse, 2012; Castillo, 2011; Denton, Wexler, Vaughn, & Bryan, 2008; Malloy, Gilbertson, & Maxfield,

*continued on following page*

2007; Ross and Begeny, 2011). Additionally, the repeated reading with a peer provided the ELLs with a more fluent reading role model.

The modified PALS intervention also included error correction procedures. This technique provided ELLs with immediate feedback and opportunity to practice reading with less errors. Similar to past research, this most likely contributed to the positive gains in oral reading fluency (Begeny, Ross, Greene, Mitchell, & Whitehouse, 2012; Castillo, 2011; Malloy, Gilbertson, & Maxfield, 2007; Ross and Begeny, 2011).

### **Content Knowledge**

The English language learners in this study increased in science knowledge as reflected by the increase in test scores across both grade levels. The increase in science knowledge can be attributed to several factors. First, the reading materials reinforced the science content being taught. The units of study were reflected in the instructional level passages. Second, there was alignment between the reading materials, curriculum, and final assessment. Finally, the identification of the main idea through paragraph shrinking provided the ELLs with a comprehension strategy they could apply while reading. Multicomponent interventions that integrate strategies for fluency and comprehension are effective, specifically for adolescent readers

(Archer, Gleason, & Vachon, 2003; Cirino, Romain, Barth, et al., 2013; Wanzek & Kent, 2012).

The results for social studies knowledge were less favorable. While the social studies scores for the total group increased by 6 percent, only ELLs with disabilities increased in social studies knowledge over the course of this three-week study. The social studies scores for ELLs without disabilities (7th grade) actually decreased by 1 percent. These results may be attributed to less coherence between the reading materials, curriculum, and assessment. The units of study differed for both seventh and eighth grade. The eighth grade bilingual special education teacher was able to align her reading materials with the curriculum and her final assessment. The reading materials and assessment were less aligned to the seventh grade curriculum being taught. Another possible cause for the limited gains in social studies knowledge may be the fact that students received less PALS sessions covering social studies content. This was a result of the student training only focusing on social studies content as well as scheduling conflicts and school events. It should be noted, while the final scores for science and social studies were still below passing, the ELLs in this study who received the modified PALS treatment outperformed the group that did not receive the treatment in the larger scale study.

## Implications for Practice

Overall, modified PALS is an effective reading strategy for increasing oral reading fluency and science content knowledge of middle school ELLs with and without disabilities. This intervention can be easily implemented in a middle school setting, specifically in context of content-area classrooms. The feedback was positive from teachers and students alike and validate modified PALS is easy to implement and not very time-consuming. Additionally, modified PALS can be an alternative to traditional textbook reading and allow for differentiation of content and materials based on students' reading levels.

## Recommendations for Future Research

Due to the limited gains made by ELLs with disabilities and the limited gains made in content knowledge overall, it is recommended future research on modified PALS embed a vocabulary component. ELLs with disabilities may benefit more from pre-teaching academic vocabulary prior to engaging in the partner reading activities. Additionally, future research should last longer as this study lasted only three weeks. ELLs with disabilities may require longer and more intense intervention before any significant gains are noticed.

It is imperative to understand the difficulties adolescent ELLs face when

acquiring English reading skills. The current body of literature on the research on PALS with ELLs with and without disabilities is limited. This study will add to the research base on effective literacy interventions for adolescent ELLs with and without disabilities.

**Correction made on 2/4/19:** This research was supported in part by a Memorandum of Understanding between the New York State Education Department, Office of Special Education and the State University College at Buffalo, Project Title: NYS Response to Intervention Technical Assistance Center, Contract Number: C009953 Extension, Principal Investigator: Dr. Theresa Janczak.

## REFERENCES

- AIMSweb technical manual. (2012).  
Bloomington, MN: Pearson, Inc.
- Archer, A. L., Gleason, M. M., & Vachon, V. L. (2003). Decoding and fluency: Foundation skills for struggling older readers. *Learning Disability Quarterly*, 26(2), 89-101. doi:10.2307/1593592
- Begeny, J. J., Ross, S., Greene, D., Mitchell, R., & Whitehouse, M. (2012). Effects of the Helping Early Literacy with Practice Strategies (HELPS) reading fluency program with Latino English language learners: A preliminary evaluation. *Journal of Behavioral Education*, 21(2), 134-149. doi: 10.1007/s10864-011-9144-7
- Castillo, W. L. (2011). Repeated reading to improve oral fluency of adolescents with learning disabilities. *National Teacher Education Journal*, 4(4), 35-41.
- Chu, S., and Flores, S. (2011). Assessment of English language learners with learning disabilities. *The Clearing House*, 84(6), 244-248. doi: 10.1080/00098655.2011.590550
- Cirino, P. P., Romain, M., Barth, A., Tolar, T., Fletcher, J., & Vaughn, S. (2013). Reading skill components and impairments in middle school struggling readers. *Reading & Writing*, 26(7), 1059-1086. doi: 10.1007/s11145-012-9406-3



## Peer-Assisted Learning Strategies for ELLs

- Denton, C. C., Wexler, J., Vaughn, S., & Bryan, D. (2008). Intervention provided to linguistically diverse middle school students with severe reading difficulties. *Learning Disabilities Research & Practice, 23*(2), 79-89. doi:10.1111/j.1540-5826.2008.00266.x
- Fuchs, D., Fuchs, L.S., Mathes, P.H., & Simmons, D.C. (1997). Peer-assisted learning strategies: Making classrooms more responsive to diversity. *American Educational Research Journal, 34*(1), 174-206. doi: 10.2307/1163346
- Huang, J., Clarke, K., Milczarski, E. & Raby, C. (2011). The assessment of English language learners with learning disabilities: Issues, concerns, and implications. *Education, 131*(4), 732-739.
- Klingner, J. K., Boardman, A. G., Eppolito, A. M., & Schonewise, E. A. (2012). Supporting adolescent English language learners' reading in the content areas. *Learning Disabilities — A Contemporary Journal, 10*(1), 35-64.
- Liu, Y., Ortiz, A. A., Wilkinson, C. Y., & Kushner, M. I. (2008). From early childhood special education to special education resource rooms: Identification, assessment, and eligibility determinations for English language learners with reading-related disabilities. *Assessment for Effective Intervention, 33*(3), 177-187. doi: 10.1177/1534508407313247
- Malloy, K. J., Gibertson, D., & Maxfield, J. (2007). Use of brief experimental analysis for selecting reading interventions for English language learners. *School Psychology Review, 36*(2), 291-310.
- McCardle, P., Mele-McCarthy, J., Cutting, L., Leos, K., & D'Emilio, T. (2005). Learning disabilities in English language learners: Identifying the issues. *Learning Disabilities Research and Practice, 20*(1), 1-5. doi: 10.1111/j.1540-5826.2005.00114.x
- Reed, D. D., & Vaughn, S. (2012). Comprehension instruction for students with reading disabilities in grades 4 through 12. *Learning Disabilities - A Contemporary Journal, 10*(1), 17-33.
- Ross, S. G., & Begeny, J. C. (2011). Improving Latino, English language learners' reading fluency: the effects of small-group and one-on-one intervention. *Psychology in The Schools, 48*(6), 604-618. doi:10.1002/pits.20575
- Shapiro, E. (2011). *Rate of Improvement: Why, How, What Does it Mean?*. [PowerPoint slides]. Retrieved from [http://www.pattan.net/Videos/Browse/Single/?code\\_name=ed\\_shapiro\\_roi](http://www.pattan.net/Videos/Browse/Single/?code_name=ed_shapiro_roi)
- U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2013 Reading Assessment.
- Wanzek, J. J., & Kent, S. C. (2012). Reading interventions for students with learning disabilities in the upper elementary grades. *Learning Disabilities — A Contemporary Journal, 10*(1), 5-16.
- Wilkinson, C. Y., Ortiz, A. A., Robertson, P. M., & Kushner, M. I. (2006). English language learners with reading-related LD: Linking data from multiple sources to make eligibility decisions. *Journal of Learning Disabilities, 39*(2), 129-141. doi: 10.1177/00222194060390020201

## Appendix 1: Teacher Script (part 1 of 3)

Teacher Script

This script is intended for research purposes only.

Did I do this?

Yes	No	Intervention Procedure
		<p><b>1. GATHER AND ORGANIZE MATERIALS:</b> Classroom should already be split into dyads (pairs).</p>
		<p><b>2. ARTICULATE OBJECTIVE:</b> <b>“It’s time for PALS! “PALS” stands for Peer-Assisted Learning Strategies.</b></p> <p>Today, we’ll read about _____ multiple times to work on increasing our fluency. Fluency is the rate, accuracy, and expression that we read—not just how fast we can read. At the end of the passage, we’ll answer some questions together.</p> <p>Please get your materials ready. Remember, First Readers, you are getting the materials from _____. Second Readers, you are putting the materials away after the lesson.”</p> <p>Place a checkmark in their folders for good transitions or award class dojo points.</p>
		<p><b>3. INTRODUCE PARTNER READING:</b> Explain to each student that they will be reading together for 10 minutes (five minutes each).</p> <p><b>“You will read this passage for five minutes. While you read, your partner will read silently and help you with any errors you make (Review error correction procedure). “When you get a word wrong or you don’t know a word, your partner should say: STOP. That word is____, What word? Good Job! Go back and read that line again.</b></p> <p><b>Then you will switch roles. I will be here to monitor the reading and help correct errors.”</b></p> <p><b>REVIEW EXPECTATIONS:</b> Review the PALS Rules by referring to the poster and the rule note card in student folders.</p> <p><b>“The rules are: 1. Talk only to your partner and only about Partner Reading. 2. Keep your voice low. 3. Help your partner. 4. Try your best!”</b></p>
		<p><b>4. CHECK FOR STUDENT UNDERSTANDING:</b> <b>“Does anyone have any questions?”</b></p>
		<p><b>DURING TRAINING ONLY - 5. MODEL THE ACTIVITY: Model as follows:</b> Model reading the passage to the students, explaining to them that they will be working in partnerships to practice rate, accuracy, and expression, <b>“Follow along by reading silently as I model reading the passage fluently</b> (have an example passage projected for all students to see). Model the error correction procedure.</p>

**Appendix 1: Teacher Script (part 2 of 3)**

		<p><b>6. PARTNER READING:</b> Explain that it is their turn to practice reading. Start with the first student(s) or First Readers. <b>“The First Reader will be the reader and the Second Reader is the coach. Ready...begin.”</b></p> <p>Interventionist starts stopwatch/timer. At five minutes, say <b>“Stop”</b>. Students should mark the last word read.</p> <p>Partners should assist with unknown words using error correction procedure.</p>
		<p><b>7. GIVE SPECIFIC FEEDBACK:</b> Circulate around the room and provide feedback or praise. BE SPECIFIC! <b>“Good job correcting that error”, “I noticed you _____, great job!”</b>, <b>“Remember, you must follow along as your partner reads”,</b> etc.</p> <p>Place a checkmark in their folders for on task behavior or award class dojo points.</p>
		<p><b>8. PARTNER READING REPEATED:</b> Explain that it is time to switch roles. <b>“The First Reader will now become the coach and the Second Reader will become the reader. Remember, the Second Raeder will re-read what the First Reader read during the first five minutes. Ready....begin”</b></p> <p>Interventionist starts stopwatch/timer. At five minutes, say <b>“Stop”</b>. Students should mark the last word read.</p> <p>Partners should assist with unknown words using error correction procedure.</p> <p>Remember to provide feedback and praise.</p>
		<p><b>9. INTRODUCE PARAGRAPH SHRINKING:</b> <b>“Time to move to the next PALS activity. It is called Paragraph Shrinking. In Paragraph Shrinking, you’ll shrink the information in each paragraph into a main idea statement using 10 words or less. The main idea statement tells the most important idea in the paragraph. What does the main idea statement tell us?”</b></p> <p><b>Remember, you will follow these 3 steps: “The most important who or what in the paragraph is...”, The most important thing about the who or what is...”, The main idea statement is...”</b></p>
		<p><b>DURING TRAINING ONLY - 10. MODEL THE ACTIVITY:</b> <b>Model as follows:</b> Model reading the passage to the students, explaining to them that they will be working in partnerships to identify the main idea statement in each paragraph, <b>“Follow along by reading silently as I model reading the passage</b> (have an example passage projected for all students to see). Model Paragraph Shrinking by using a Think Aloud. After each paragraph say <b>“The most important who or what in the paragraph is...”, The most important thing about the who or what is...”, The main idea statement is...”</b> Have students count as you say each word to ensure it is 10 words or less. Continue to model several more paragraphs as necessary.</p>

## Appendix 1: Teacher Script (part 3 of 3)

		<p><b>11. PARAGRAPH SHRINKING:</b> Explain that it is their turn to read and shrink the paragraphs. Start with the first student(s) or First Readers. <b>“The First Reader will be the reader. As in Partner Reading, each reader will read for 5 minutes. At the end of each paragraph read, the Reader will stop to create a main idea statement. The Reader will go through the 3 steps to create a main idea statement that is 10 words or less. Ready...begin.”</b></p> <p>Interventionist starts stopwatch/timer. At five minutes, say <b>“Stop”</b>. Students should mark the last word read.</p> <p>Partners should ensure main idea statement is 10 words or less.</p>
		<p><b>12. GIVE SPECIFIC FEEDBACK:</b> Circulate around the room and provide feedback or praise. BE SPECIFIC! <b>“Good job identifying the main idea”, “I noticed you _____, great job!”</b>, <b>“Remember, you must say it in 10 words or less”, “That is more of a detail and not the main idea”, etc.</b></p> <p>Place a checkmark in their folders for on task behavior or award class dojo points.</p>
		<p><b>13. PARAGRAPH SHRINKING REPEATED:</b> Explain that it is time to switch roles. <b>“The Second Reader will now become the reader. The Second Reader will pick up where the First Reader left off. Ready....begin”</b></p> <p>Interventionist starts stopwatch/timer. At five minutes, say <b>“Stop”</b>. Students should mark the last word read.</p> <p>Partners should ensure main idea statement is 10 words or less.</p> <p>Remember to provide feedback and praise.</p>
		<p><b>14. WHOLE GROUP SHARE:</b> <b>“Let’s review what we read.”</b> Call on volunteers to share their main idea statements. Connect what they’ve read to the content being taught/covered in class.</p>
		<p><b>15. PUT MATERIALS AWAY:</b> End the lesson and give directions: <b>“Great job class! Please put your materials away. Remember, Second Readers, you are putting the materials away after the lesson.”</b></p> <p>Place a checkmark in their folders for good transitions or award class dojo points.</p>

## Peer-Assisted Learning Strategies for ELLs

### Appendix 2: Student Lexile Pairs

	Lexile® Measure		Lexile® Measure
Reader 1	1055L	Reader 2	670L
Reader 1	1030L	Reader 2	640L
Reader 1	1020L	Reader 2	605L
Reader 1	955L	Reader 2	585L
Reader 1	950L	Reader 2	580L
Reader 1	945L	Reader 2	575L
Reader 1	920L	Reader 2	520L
Reader 1	840L	Reader 2	490L
Reader 1	755L	Reader 2	455L
Reader 1	725L	Reader 2	455L
Reader 1	720L	Reader 2	405L
Reader 1	675L	Reader 2	400L
		Reader 3	365L

## Appendix 3: Teacher Questionnaire (part 1 of 2)

### Teacher Questionnaire

Date: \_\_\_\_\_

Teacher Name: \_\_\_\_\_ Subject: \_\_\_\_\_

**Directions:** Please indicate the extent to which you agree or disagree with the following statements regarding PALS by circling a number that most closely reflects your opinion.

	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
	1	2	3	4	5	6
1. The PALS intervention focuses on an important behavior (oral reading fluency and content specific knowledge in science and social studies).	1	2	3	4	5	6
2. I feel my students with disabilities benefited from this intervention.	1	2	3	4	5	6
3. The PALS intervention did not take too much time.	1	2	3	4	5	6
4. English language learners do NOT benefit from this intervention.	1	2	3	4	5	6
5. The PALS intervention was NOT easy to implement and maintain.	1	2	3	4	5	6
6. The PALS intervention was within my skills level to implement.	1	2	3	4	5	6
7. The time requirements of this intervention are reasonable.	1	2	3	4	5	6
8. The PALS intervention was acceptable to students.	1	2	3	4	5	6
9. I believe this intervention provided English language learners with good "models" for reading.	1	2	3	4	5	6

## Appendix 3: Teacher Questionnaire (part 2 of 2)

10. The PALS intervention did NOT improve students' overall performance in reading.

1                      2                      3                      4                      5                      6

11. My participation in the PALS intervention was relatively easy.

1                      2                      3                      4                      5                      6

12. The PALS intervention is one I will recommend to other teachers.

1                      2                      3                      4                      5                      6

13. I would recommend other schools/classrooms implement the PALS intervention

1                      2                      3                      4                      5                      6

14. I do NOT have the necessary materials to implement this intervention accurately.

1                      2                      3                      4                      5                      6

15. The PALS intervention quickly improved the students' reading skills.

1                      2                      3                      4                      5                      6

16. The PALS intervention does NOT fit into my regular schedule.

1                      2                      3                      4                      5                      6

17. The PALS intervention is one I will use again when needed.

1                      2                      3                      4                      5                      6

18. I believe this intervention helped increase the reading fluency of English language learners.

1                      2                      3                      4                      5                      6

19. The PALS intervention will have lasting positive effects.

1                      2                      3                      4                      5                      6

20. The PALS was suitable given the classroom culture.

1                      2                      3                      4                      5                      6

Please list any other comments or concerns: \_\_\_\_\_

---

---























---

---

---

Source: Adapted from K. L. Lane and M. Beebe-Frankenberger. *School-Based Interventions. The Tools You Need to Succeed*. P. 118

## Appendix 4: Student Questionnaire

	Yes 	No 
1. The PALS intervention taught me important reading skills.		
2. The PALS intervention helped me do better in science and social studies.		
3. Reading is difficult for me.		
4. The PALS intervention helped me feel better about my reading in English.		
5. If my friend were having trouble with reading, I would tell him/her to try the PALS intervention.		
6. I liked the PALS intervention.		
7. It is important to understand what I read.		
8. It is important to identify the main idea of a paragraph.		
9. I would use the paragraph shrinking strategy in other classes		
10. What kind of skills or strategies did you use while reading before the PALS intervention?		

What else do you think about the PALS intervention? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_