

THE EFFECTS OF TWO READING
INTERVENTIONS WITH SMALL-GROUPS OF
SECOND GRADE ENGLISH LANGUAGE LEARNERS
ON FLUENCY AND COMPREHENSION

By

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Abstract: The study was designed to evaluate the effectiveness and efficiency of the HELPS-SG curriculum and a small group repeated reading (RR) intervention on oral reading fluency and comprehension. The participants of this study were 42 second-grade ELL's who attended an elementary school in the southwestern United States. The participants were either a part of a RR intervention or the HELPS curriculum in a small group of students who were randomly assigned to a condition. Student's oral reading fluency (ORF), operationally defined as Correct Words per Minute (CWPM), was the targeted behavior. Woodcock-Johnson Comprehension and ORF growth were examined with a pre- and post-test, while the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) was used to track reading growth across sessions. The study used a Multivariate Analysis of Variance (MANOVA) to test for between groups, within groups, and the interaction effects while controlling for violations of sphericity. Visual analysis was used to determine intervention effects for DIBELS effectiveness and efficiency. There was no statistical significance between the HELPS and RR intervention, although both groups grew over time. Through descriptive analysis of the pre- and post-test data and visual analyses, the RR intervention appeared to result in more improvement overall and took less time to implement. The RR intervention group improved on all three post-test, while the HELPS intervention group did not improve on one post-test. The RR intervention also took less time to implement and less cumulative number of instructional minutes. Overall, even though there was no significance between the groups, the RR intervention group involved fewer steps and was faster to implement, and was therefore determined to be favored over the HELPS-SG program.

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CHAPTER I

Effects of Two Reading Interventions with Small-Groups of Second Grade English Language Learners with Fluency and Comprehension

The United States is facing a rapid change in its demographic population. As of the U.S. Census Bureau (2009) in 2008, Latinos are the largest minority in the United States (as cited in Ross & Begeny, 2011). Along with the make-up of the population comes the language used by the minority groups. The population of persons whose native language is not English continues to increase rapidly, affecting the school system greatly each year. This large population of English Language Learners (ELL's) tend to have lower reading skills than their monolingual peers, because of the challenge of becoming literate and their high risk for reading difficulties (Farver, Lonigan & Eppe, 2009). The need for reading interventions for the ELL population continues to be of importance, as few studies have researched this area.

The ELL population is projected to comprise of more than 50% of U.S. children from racial/ethnic minority groups at some point between 2020 and 2030 (Espinosa, 2005). In 2000 the U.S. Bureau of the Census projected that the Latino population would be the largest minority group by 2050. The U.S. Bureau of the Census also projected that the non-Hispanic white population will decline from 72% to 40% and continues to fall after 2100, while the Hispanic population will jump from 12% to 32% and continue to rise (Kolankiewicz, 2001). With the growth of the minority population, schools need to focus on improving the reading achievement of the students in the minority populations. Minority students often score below on tests of

reading achievement as they usually attend high poverty and underachieving schools (Yesil-Dagil, 2011).

The number of students in our schools who are learning English as a second language has increased greatly (Gyovai, Cartledge, Kourea, Yurick, & Gibson, 2009). Passel and Cohn (2008) reported that school-aged children from immigrant families have been projected to increase from 2005 to 2020 from 12.3 million to 17.9 million (as cited in Han & Bridglall, 2009). In 2002, the National Institute of Child Health and Human Development found that as many as 45% of teachers reported having at least one student for which their first language was not English. It was found that these students account for approximately 6% of the school-aged population (Gyovai et. al., 2009). It is imperative that schools understand the particular needs and are competent in the unique supports these students, who come from a home where English is not their first language, require (Brown & Sanford, 2011).

Currently the large population of ELL's continues to have lower reading skills than their English first language peers because of the challenge of becoming literate and high risk for reading difficulties. With the growing population of students who are learning English as a second language, it is imperative that reading interventions that are effective and efficient are identified for Spanish speaking students. This is necessary as research has found that Spanish-speaking students who are struggling readers benefited from participation in a small group (SG) supplemental instruction provided to them in addition to core reading instruction (Mathes et. al., 2007). There is a great need of research for interventions on comprehension as well. A lack of strong evidence on methods, effects of comprehension, and adequate evidence to guide decision making about how to best intervene with students who are learning English as a second language and are struggling readers (Solari & Gerber, 2008).

The ELL population is overrepresented in special education because of the difficulty of determining if learning problems are due to a lack of language proficiency, a language disorder, or a lack of educational opportunity. The need of reading interventions for the ELL population continues

to be of importance, as few studies have researched this area. For this study the HELPS-SG reading intervention program was compared to another evidence-based fluency intervention for fluency and comprehension outcomes of ELL students. The study was designed to evaluate the effects of the HELPS curriculum and repeated reading intervention on oral reading fluency and comprehension. This study addressed the questions: Will the HELPS curriculums have a greater effect on oral reading fluency and/or comprehension than the Repeated Reading (RR) intervention? Will the HELPS curriculum be more time efficient than the RR intervention? It was hypothesized that reading growth (fluency and comprehension) from the HELPS curriculum would surpass the growth from the RR condition, but the RR intervention would be more time efficient than the HELPS curriculum.

CHAPTER II

Review of Literature

English Language Learners

English Language Learners are one of the fastest growing groups of the pre-kindergarten to 12th grade student population. As defined by the federal legislation, an ELL is one that has difficulty learning successfully in primarily English language classrooms (Han & Bridglall, 2009). English Language Learners have limited English skills, which do not allow them to profit from instruction given to them in English without special language support (Wilkinson, Robertson & Kushner, 2006). There has been a 58% increase between 1995 to 1996 (Linan-Thompson & Ortiz, 2009) in the ELL population. It has been reported that approximately 8.4% of all public school students in the U.S. are ELL students (Han & Bridglall, 2009). The Spanish-speaking students comprise the greatest ELL population. In the year 2000 about 3.9 million ELL's were enrolled in grades K-12 and about 17% of that population were students who spoke primarily Spanish (Farver, Lonigan, & Eppe, 2009). It is projected with the rapid growth of Spanish-speaking students that by the year 2030 school age Latino students will reach 16 million, or 25%, of the total student population (Farver et al., 2009).

Students with limited English proficiency tend to have poor literacy outcomes, lower academic achievement and higher grade-repetition, which might lead to higher school dropout rates (Farver et al., 2009). Farver and colleagues (2009) studied approaches for English-only instruction and transitional Spanish-to-English instruction for reading skills. Children were assessed in both Spanish and English prior to the intervention stage. The intervention stage included small-group activities from the Literacy Express Preschool Curriculum (Farver et al., 2009). The study found that both the English-only and the transitional Spanish-to-English models were both effective when compared to the control group. Farver and colleagues (2009) also studied the effect of the children's skills in Spanish and found that the English-only instruction model had no negative effect on the children's Spanish. The result of Farver and colleagues study provides evidence to support the benefit of intensive small-group instruction for ELL students on early literacy skills.

Learning about the academic performance of ELL's is legally imperative because of the No Child Left Behind Act of 2001, which holds public schools accountable for their ELL's (Han & Bridglall, 2009). Since the act passed, it requires ELL's to take standardized tests in English within three years of entering the school system (Han & Bridglall, 2009). Past research has shown that teaching ELL's in content areas (e.g., math, science, social studies, etc.) is associated with higher long-term achievement than the pull-out method (Han & Bridglall, 2009). The pull-out method is defined as a student being taken out of their regular classroom for small-group or one-to-one instruction for English-only instruction (Han & Bridglall, 2009). The problem with the pull-out method is that the student is often being taught unrelated content from the instruction of the regular classroom (Han & Bridglall, 2009). Learning unrelated content when they are pulled out puts ELL's at greater risk for falling behind on school work as well as adjusting to the general classroom, where one-on-one attention is more difficult to attain than in ELL classrooms. English Language Learners oral language skills have also been found to lag behind their peers for Hispanic children whose language of schooling is not the same as the language of the home

(Bialystok, 2007). Although much research has shown that instruction in their own language is the best method when working with ELL students, only 20% of ELL students received instruction in their native language and only 20% receive some instruction in their native language (Han & Bridglall, 2009).

The National Assessment of Educational Progress (2009) reported that about 73% of ELL's in fourth grade scored below basic levels on English reading measures. Xu and Drame (2008) examined the learning context of ELL's and reported that ELL's, as compared to their monolingual counterparts, demonstrated lower academic achievement. Zehler and colleagues (2003) reviewed reports of Limited English Proficient (LEP) students on performance assessments in 740 elementary schools. They found that in 76% of the schools, LEP students in American schools are performing below grade level in English reading (Zehler, Fleischman, Hopstock, Stephenson, Pendzick & Sapru, 2003).

Swanson, Rosston, Gerber and Solari (2008) reported that school achievement is lower for Latino children than many other groups, as well as having greater reading difficulties than other minority and Caucasian children. This is the case because not only do ELL's have to learn the curriculum, but they must also close the vocabulary knowledge gap to reach the level of their monolingual peers. Research shows that ELL's require two to three years to develop peer appropriate communicative language, but between five and seven years to develop cognitive/academic language proficiency (Hutchinson, Whiteley, Smith, & Connors, 2003).

Cummins (1981) originally observed this distinction between language acquisitions with bilingual and monolingual children. Cummins (1981) described peer appropriate communication as Basic Interpersonal Communicative Skills (BICS) and academic language as Cognitive Academic Language Proficiency (CALP). BICS and CALP are sets of skills that ELL's acquire through acquisition into the English culture. Basic Interpersonal Communicative Skills is a set of communication skills that facilitate day-to-day or practical oral communication; it is used to communicate in social situations and takes about two years to acquire a functional level.

CALP is more cognitively demanding and often takes at least five years to acquire. These skills are abstract, decontextualized communications that takes place in the classroom. Cognitive Academic Language Proficiency is what enables students to problem-solve, hypothesize, reason and project into situations in which they have no personal experience using English. Cognitive Academic Language Proficiency is needed before students can learn to read and write proficiently (Crockett & Brown, 2009). Concurrent with CALPs and BICS, Solari and Gerber (2008) reported that in districts that have been successful in teaching ELL's, students still took three to five years to develop oral proficiency and up to seven years for academic English proficiency (e.g., reading comprehension).

As it was stated previously, after three years of entering into the school system, ELL's are expected to take the standardized test in English. Based on BICS and CALP, ELL's will most likely perform poorly compared to their English speaking peers. Many Latino students experience difficulties when learning to read, with only about 50% of Latino fourth-grade students reading at a basic level in 2007 (Ross & Begeny, 2011). Therefore, school districts must work to improve their achievement and comply with the No Child Left Behind Act. Learning what helps improve an ELL's achievement would help the school system bridge the achievement gap with the ELL population.

When a student experiences early reading difficulties, they continue to experience difficulty in later grades and in life (Haager & Windmueller, 2001), including a higher risk of drop-out. The Latino population, which comprises most of the ELL population, has the highest dropout rate. Those Latino students who are immigrants have nearly double the dropout rate relative to their native-born peers (Linan-Thompson & Ortiz, 2009). This population is also overrepresented, beginning in fifth grade through high school, in special education. The ELL population is overrepresented because of the difficulty of determining if the language and learning problems are because of a lack of language proficiency, a language disorder, or a lack of educational opportunity (Linan-Thompson & Ortiz, 2009). Additional research is needed on the

identification of proper interventions for ELL's to avoid making mistakes on instructional and eligibility decisions.

Reading Fluency

Reading abilities emerge as early as preschool, which is before most children begin to receive any formal instruction on reading. Research has found that early oral language development has been linked to later reading abilities (Davison, Hammer & Lawrence, 2011). Davison and colleagues (2011) studied the growth of children's' English and Spanish receptive language as predictors of first grade reading outcomes in English. Participants of Davison and colleagues (2011) study were Spanish-speaking children who were expected to communicate in English at home before Head Start and children who were not expected to communicate in English until they began Head Start. Findings of the study revealed that children's' English receptive language during Head Start positively predicted children's' reading outcomes in English by the end of first grade (Davison, Hammer & Lawrence, 2011). Reading problems have continued to be a problem in the United States, where it has been found that about 40% of fourth grade students in the U.S. are not fluent readers (Begeny, Ross, Greene, Mitchell, & Whitehouse, 2012). This is of great concern, since reading research suggests that students should develop fluency with grade-appropriate material sometime between first and third grade (Begeny, Laugle, Krouse, Tayrose, & Stage, 2010). Although reading fluency has been shown to be of great importance, it has been widely neglected in core reading curricula throughout classrooms in the U.S. (Begeny, et. al., 2012; 2010).

Reading fluency is defined as an "individual's ability to read with speed, accuracy, and proper expression" (Begeny, et. al., 2010, p. 137). Reading fluency is considered one of the strongest predictors of students' overall reading ability, which includes reading comprehension and performance on end-of-grade tests (Begeny et. al., 2012; Begeny, 2010). It is important that students acquire literacy skills early in their elementary grades, because students who fall behind

will not only have to catch up on reading, but also have difficulty keeping up with new lessons and skills (Gunn, Smolkowski, Biglan & Black, 2005). Those students that fail to catch up are usually referred for special education or retention, which causes special education and dropout rates to continue to increase. Latino ELL's aged 16-19 have a 59% school dropout rate (United States Commission, 2009) and about 357,325 ELL's received special education services, with an estimate of about three-fourths of those ELL's being improperly placed (United States Commission, 2009). It has also been found that most students can obtain basic reading and writing academic success if struggling readers are given the opportunity to participate in intense, data-guided and evidenced based instruction (Begeny, Yeager, & Martinez, 2012).

Vocabulary

The National Reading Panel (NRP) determined the five pillars of reading after a two-year study of the scientifically based reading research (NRP, 2000). The fourth pillar is vocabulary, which is when the reader is taught to translate unfamiliar words in print into speech. The NRP found that with 4th graders vocabulary instruction had a strong relation with text comprehension and that inclusion of redundant information and instruction on difficult words facilitated comprehension (NRP, 2000).

Reading researchers have found that vocabulary is needed in order to comprehend text and decode words (Davison, Hammer, & Lawrence, 2011). Oral comprehension is also believed to support decoding abilities, which requires the ability to understand words, concepts, and grammatical structures (Davison, Hammer, & Lawrence, 2011). Vocabulary learning in the early years is learned from adult/child verbal interactions, which puts ELL students behind monolingual students due to their lack of interaction in English at home.

Comprehension

Comprehension is defined as a type of reasoning process that is conditioned by the content and cognitive requirements of text when trying to understand oral and written text (Solari & Gerber, 2008). Reading comprehension requires that the student construct a coherent representation of the text (Solari & Gerber, 2008). The more comprehension the child has of the text the greater their opportunity to learn vocabulary and increased vocabulary knowledge increases the chances that they understand the text (Hutchinson, et al., 2003; Proctor, Silverman, Haring, & Montecillo, 2012). Lipka & Siegel (2012) have reported that approximately 10% of students' ages 7-11 have poor reading comprehension, which should increase the interest of the understanding and assessment of comprehension. Helping ELL children to comprehend not only the text but language as well is important, due to the No Child Left Behind Act of 2001.

Research on reading comprehension with ELL's is lacking and has found contrasting results. Low and Siegel (2005) found that ELL students struggle with reading comprehension and perform significantly lower than their monolingual peers on reading comprehension measures (as cited in Lipka & Siegel, 2012). Lipka and Siegel (2012) found that in grade 7 ELL's were able to perform similar to English monolingual students in reading comprehension but by grade 6 the ELL's performed lower on reading comprehension than the English monolingual students. Another study had ELL students receive a balanced acquisition program in kindergarten and in grade 1 (Lesaux, Rupp & Siegel, 2007). The balanced acquisition program was developed by the school district and included phonological awareness instruction and their own published reading curriculum for elementary grades and kindergarten early literacy curriculum. This study found no difference between the ELL's and students that learned English as a first language on reading comprehension predictors by fourth grade. Letter identification, working memory, rhyme detection and oral cloze were identified as significant predictors of fourth grade reading comprehension in the study. By fourth grade, the gap had generally disappeared. Therefore, if

school personnel continue to give evidence-based instruction and extra programs to EL's, it will help bridge the achievement gap with monolingual students. When ELL's learn a second language, their knowledge of that language will be a predictor of reading comprehension in that second language learned. Once they develop fluency in the second language, their comprehension skills will increase (Lesaux, Rupp & Siegel, 2007).

Evidenced Based Interventions

Solari and Gerber (2008) found that ELL's as young as kindergarten grade level can be taught comprehension skills. The findings of this study are some of the first to present these results, as many reading theories suggest that comprehension instruction should not begin until student has mastered decoding. The study looked at the effects of three instructional groups (treatment group, phonological awareness concentration or learning comprehension concentration) on ELL's. The students were placed in small ability level groups of four or five students. The interventions included: modeling, frequent opportunities to respond, corrective feedback, and an instructional pace dedicated to student engagement (Solari & Gerber, 2008). The study found that those students that received the learning comprehension emphasis performed equally to those students who received interventions that emphasized phonological awareness and alphabet knowledge or the intervention that only taught phonological awareness and alphabet knowledge. The intervention that only taught phonological awareness and alphabet knowledge was the control group, which received only word-level skill instruction (e.g., alphabet knowledge and phonological awareness component of the intervention). Students that received the emphasized phonological awareness intervention spent 70% of each session on phonological awareness, 10% on alphabetic knowledge, and 20% on listening comprehension and vocabulary (Solari & Gerber, 2008). These results show that students can be taught to use comprehension strategies to take advantage of valuable instruction time instead of waiting for decoding mastery

and increasing the reading gap, because decoding might not come until later school grades (Solari & Gerber, 2008).

Mathes, Pollard-Durodola, Cardenas-Hagan, Linan-Thompson and Vaughn (2007) conducted a study with Spanish-speaking children that were struggling readers. The study used proactive reading interventions, which have been proven to be effective with native English struggling readers, with modifications to reflect best ELL practice. Proactive reading incorporates the use of clear and repetitive language, repetitive routines, gestures, and high levels of student teacher interaction. The intervention also fully specified daily teacher lesson plans that addressed development in phonemic awareness, alphabetic knowledge and skills, fluency, vocabulary, and comprehension in both English and Spanish (Mathes, et al., 2007). A second intervention was created in Spanish, which used identical instructional design principles. The main finding was that Spanish speakers who are struggling readers can benefit with the strategies that are used with English speaking struggling readers (Mathes, et al., 2007). It was observed that instruction in English to read in Spanish had a higher transfer, as one would imagine since students possessed higher language proficiency in the language to which transfer occurred (i.e., Spanish). Vaughn and colleagues (2006) gave Spanish-speaking students an intervention in Spanish and found that there was generalized growth on related reading measures in English. The intervention included the teacher modeling new content, providing guided practice, and implementing independent practice while following predetermined lesson plans that included letter-sound knowledge, phonemic awareness, speeded syllable reading, word recognition, fluency, and comprehension strategies (Vaughn et. al., 2006). Currently most of the effective interventions known for ELL's are variants of what is known to work with struggling readers that are monolingual English speakers.

Previous research has found that systematic and explicit interventions in reading have resulted in significant progress on English speaking struggling readers (Vaughn et al., 2006).

Although early research has found that strategies used for monolingual English speakers can be applied to ELL's, there is still a gap in research about what is known to be effective for ELL's with reading difficulties (Vaughn et al., 1996). Vellutino and colleagues (1996) found that poor readings students who received tutoring daily for 30 min in word reading skills became average readers. Students were provided with daily one-to-one tutoring and tailored to the child's individual needs and typically included approximately 15 min per session to reading connected text. Torgesen and colleagues (1999) also found that 20 min sessions of one-to-one interventions that were performed with poor readers per week for two and a half years, (e.g., bottom 10% for reading ability) resulted in the overall group mean increasing to the population average. The intervention was the Auditory Discrimination in Depth Program, which provided explicit instruction in phonemic awareness. Overall, research has shown that monolingual English speakers that are at-risk for reading difficulties will benefit from intense, small group instruction that focuses on reading skills (Vaughn, et al., 2006). Therefore, interventions should be given to struggling readers to reduce the gap between the students' achievement in reading and their average achieving peers.

Results from previous studies have also found supporting evidence for supplemental instruction in decoding skills for improving students' success in reading achievement. Gunn, Biglan, Smolkowski, and Ary, (2000) extended this line of research by looking at Hispanic students who had reading difficulty and found supporting data that supplemental instruction made a difference regardless of the students' ethnic background or if the student was ELL. Vaughn, Mathes, Linan-Thompson, and Francis (2005) also found that proper supplemental instruction with specific instructional techniques benefit ELL's, regardless of the language of the instruction. This includes the use of repetitive language, routines with new information modeled, and providing opportunities to dialogue and practice.

Gunn and colleagues (2005) continued to research Hispanic students who had reading difficulty. The study found that Corrective Reading and Reading Mastery were effective in improving reading achievement of struggling ELL's. In conclusion, these findings support the assumption that the students' dominant language at the time of instruction is not a factor in their ability to benefit from supplemental instruction in English. Teacher modeling, direct instruction, and immediate feedback are of value regardless of native language. Gunn and colleagues (2005) suspected that structured teaching, clear expectations, and progress monitoring would be most beneficial to ELL's.

Helping Early Literacy with Practice Program

The Helping Early Literacy with Practice (HELPS) program was developed to assist students with their reading development. The intention of the program is to strengthen students' reading fluency and improve reading comprehension (Begeny, 2009). This program can be used with students of all reading-abilities. The program integrates eight evidence-based fluency building instructional strategies (Begeny, 2009; Begeny, Ross, Greene, Mitchell & Whitehouse, 2012). The eight strategies are:

1. Repeated Reading - Requires students to orally read a given passage multiple times across at least two sessions.
2. Model reading - Have students listen to a more skilled reader read aloud (such as an adult).
3. Systematic error-correction procedures - Involves the skilled reader to model the appropriate way to read a difficult word and phrase and ask the student to repeatedly practice a difficult phrase from text.
4. Verbal cues for students to read with fluency - Student is told to do their best reading.

5. Verbal cues for students to read for comprehension - Remind students they must remember what they read, not simply read with fluency, which includes the retell check.
6. Goal setting - Used to motivate students to achieve a certain level of reading fluency with each passage they practice. Have student practice text until a pre-determined performance criterion is met.
7. Performance feedback - Give students' feedback on performance combined with graphical displays of student progress. Adult should do the following: accurately record the students' academic performance, report scores to the student, provide visual representation of performance, and give specific feedback of the extent of the performance improved over time.
8. Use of systematic praise and a structured reward system - Used for student reading behaviors and accomplishments.

The HELPS program has been scientifically evaluated across multiple studies and has been shown to increase students' reading fluency and comprehension (Begeny, 2009). The HELPS program was developed to be used by teachers with students on different reading levels. It takes approximately 10 min per day, can be used in all primary grades, and a scripted curriculum is provided (Begeny, 2009).

Recent studies have found that the implementation of the HELPS program two to three times per week - approximately 20-30 minutes weekly - is effective in improving students' reading fluency and comprehension (Begeny, Ross, Greene, Mitchell & Whitehouse, 2012). Research also found that the HELPS program was significantly beneficial to second-grade students who received the HELPS program when compared to a control group, but there was no statistical significance between HELPS program and Great Leaps (Begeny et al. 2010). Begeny and colleagues (2010) had 68 second-grade students that were assigned to one of these three conditions (25 per condition). Each condition was implemented in a one-to-one format in a quiet

hallway outside the participant's classroom (Begeny, et al., 2010). The Great Leaps Reading program includes a sequence of reading probes in letter recognition and phonics, high frequency words and phrases, and stories. The Control group received their typical language arts curriculum.

Begeny and colleagues also found in another study similar results; ELL students that received the HELPS program significantly outperformed a control group (Begeny, Ross, Greened, Mitchell & Whitehouse, 2012). Begeny and colleagues (2012) conducted this study with 21 second-grade ELL students. The study had students randomly assigned to the HELPS program or control group, which only received the core reading curriculum. All sessions were implemented in a one-to-one format in a quiet hallway outside the participant's classroom.

The HELPS research has focused on a one-on-one program that is time consuming (i.e., one-on-one, multiple steps), which may negatively affect teachers' ability to implement the program. The current study focused on the HELPS small-group program that is currently in the developmental stages. Scruggs and Mastropieri (1996) reviewed literature on teacher perceptions of mainstreaming and inclusion and reported that less than one third of teachers believed that they are sufficiently trained, have resources, skills or time to include students who have learning difficulties into mainstream classrooms (as cited in Fletcher, Bos & Johnson, 1999). Past studies have looked at the effectiveness of interventions delivered individually versus small groups (SG) and some of the studies have shown positive effects of small-group interventions to improve English-speaking students' reading fluency. Begeny and Martens (2006) looked at group-based reading fluency interventions versus regular classroom instruction and found that students improved their oral reading fluency of trained passages with group-based intervention. The study also found that the group-based intervention increased reading comprehension as well. This study adds to existing literature suggesting that interventions can be used effectively with small groups.

Begeny, Krouse, Ross and Mitchell (2009) investigated the impact of small groups repeated readings, listening passage preview, and listening only strategies for reading fluency. The intervention strategies were implemented in isolation from other interventions and compared to a control group (e.g., no –instructional intervention). Begeny and colleagues (2009) found when evaluating immediate words correct per minute gains, that the repeated reading condition was more effective than the other conditions. Ross and Begeny (2011) also completed a study that investigated the effectiveness of a reading fluency intervention delivered individually or in SGs. The study showed that the small group intervention was as effective as individualized interventions for nearly all students. Ross & Begeny (2011) found that both one-on-one and SG had significant Words Correct Per Minute (WCPM) gains for some students. With research providing feedback on the effectiveness of SG interventions, school personnel can provide interventions for struggling readers in a SG format to be more time efficient. Educators are encouraged to provide interventions in more time and resource efficient in a small group, while evaluating each student’s progress with that intervention alone for at least three weeks.

Future research needs to look into the effects of the HELPS-SG on Spanish-speaking ELL’s. Begeny and colleagues (2012; 2011) have also recommended that future research needs to look at comparing the HELPS program to something other than a no-treatment control condition, such as other evidence-based interventions. For this study we looked at HELPS-SG relative to another known fluency intervention to compare the fluency and comprehension outcomes of ELL’s.

Purpose of Study

This study was designed to evaluate the effects of the HELPS-SG curriculum and a SG repeated reading (RR) intervention on oral reading fluency and comprehension. It was hypothesized that based on previous research findings the reading fluency from the HELPS

curriculum would surpass the growth from the RR condition (Begeny et al., 2012; Begeny, Yeager & Martinez, 2012; Begeny, 2011). It was also hypothesized that reading comprehension from the HELPS curriculum would surpass the growth from the RR condition (Begeny et al., 2012; Begeny, Yeager & Martinez, 2012; Begeny, 2011). However, it was also hypothesized the RR intervention would be more time efficient than the HELPS curriculum based on previous research (Begeny et al., 2012; Begeny, Yeager & Martinez, 2012; Begeny, 2011). The following research questions were addressed:

1. Will the HELPS curriculum have a greater effect on oral reading fluency than the RR intervention group?
2. Will the HELPS curriculum have a greater effect on comprehension than the RR intervention group?
3. Will the HELPS curriculum be more time efficient than the RR intervention on both fluency and comprehension?

CHAPTER III

Methodology

Participants

The participants of this study were 42 second-grade ELL's who attended an elementary school(s) in the southwestern United States. Their general education teacher identified the child participants as students needing additional reading assistance. Informed consent was obtained from the parents of the students participating prior to data collection (see Appendix B), as well as from the principal of the school (see Appendix C). Verbal assent was also obtained from each child participant (see Appendix D).

Trainer

The lead researcher, a doctoral student in school psychology was a certified trainer in the HELPS program. Graduate students in the School Psychology program at Oklahoma State University and two support staff members at the school implemented intervention conditions after being trained by the lead researcher. All experimenters had to sign a Team member confidentiality agreement (see Appendix E). The lead researcher was trained on the implementation of the HELPS interventions and had demonstrated mastery in the intervention, according to a procedural protocol criterion, developed by the author of the intervention. During every phase of the study, all researchers' implementing the intervention were monitored for integrity with a procedural checklist and given support/feedback when needed.

Interventionist Training

Graduate research assistants enrolled in the school psychology program and two support staff at the school served as the implementers for this study. All examiners received training to ensure the proper implementation of the HELPS curriculum and the RR intervention. Training methods included a presentation of the HELPS program and curriculum by the lead examiner. The interventionists also received training on the proper steps of the RR intervention. Each observer reached 85% reliability on the Observation Checklist for implementing the HELPS curriculum and the RR intervention, to demonstrate mastery. Observation checklists for the HELPS program and the RR intervention had been developed and used for the skill check and integrity checks. Interventionists received continued practice and feedback until they reached criteria. The training was completed in two sessions, to avoid fatigue of the interventionists.

Setting and Materials

Interventions were conducted in a quiet area in the elementary school. The participants were either a part of a RR intervention or the HELPS curriculum in small group of students who were randomly assigned to a condition. In the RR intervention the students were in a small group of 4-5 students where they practiced reading the same passage as a group four times. The experimenter introduced guided choral reading to the group and directed them to start reading at her signal. The experimenter began the reading with the students for the first couple of sentences. After the experimenter heard the group reading in sync, they would stop reading along and walk around the group to help the readers falling behind or those who had lost their spot. The children then completed their first choral reading of the passages as a group while being timed by the examiner for a minute. The next two reads were also guided choral reads. The groups re-read the same passage again for a minute and a half. The group then complete their last choral read over

the same passage and was timed by the examiner for a minute. The readings were all guided choral reads with the same passage with all four reads in the small group.

The group was given feedback on how they read after the fourth read. This intervention took on average 20 minutes to implement. The students receiving the HELPS intervention were in a small group of 4-5 and took about 30 minutes to implement (Begeny, Yeager, Martinez, 2012). The participants received RR, model reading by an adult, systematic error correction, verbal statements provided by adult, ongoing progress monitoring, and a reinforcement system to help motivate the student with the HELPS program intervention (Begeny et al., 2012).

Reading Passages

The passages for the repeated reading interventions were downloaded from the Dynamic Indicators of Basic Early Literacy Skills Next (DIBELS Next; <https://dibels.org/next/index.php>) assessment program (see Appendix F). This assessment package uses two different types of DIBELS passages: benchmark and progress monitoring passages. The DIBELS Oral Reading Fluency (DORF) is a measure of advanced phonics and word attack skills, accurate and fluent reading and connected text, and reading comprehension (Dynamic Measurement Group, 2011). To assess participants' Oral Reading Fluency (ORF) with the DIBELS, participants were given second grade-level benchmark passages to read aloud for a minute. After the participants read all three passages, the median score was recorded as their ORF score. DIBELS provides researched-based criteria to place students in three categories for reading: at or above benchmark, below benchmark, or well below benchmark (Dynamic Measurement Group, 2011).

The students received a new passage from DIBELS every day and separate reading passages for each of the phases of baseline, intervention and follow up in this study. Each of the passages was only used once with each small group of students. The second type of DIBELS reading passage used in this study was the progress monitoring probes. These probes were used

for one-time assessment and to monitor students' ORF throughout the study as well as oral retell fluency throughout the whole study.

The students in the HELPS intervention used the passages provided by the HELPS materials (see Appendix G). The HELPS materials were developed in hopes of creating a large set of reading passages that can be effectively used with elementary-aged students at any age level from Kindergarten to sixth grade. Dolch High Frequency Word-Lists are included in the passages. These words are included because many of the words cannot be sounded out or represented by pictures. Having such words increases the likelihood that the repeated practice with the words is the reason for the reading success (Begeny, 2009).

Dependent Variables

This study used two dependent variables relating to reading proficiency: correct words per minute (CWPM) and comprehension. The CWPM are words that are read correctly from a passage in one minute from DORF passages (Dynamic Measurement Group, 2011). CWPM was the primary metric during assessment and intervention phases.

Oral Reading Fluency. Student's ORF, operationally defined as CWPM, is the targeted behavior that was documented for each participant weekly. CWPM is measured using curriculum measurement procedures. Correctly read words are words that are read by the student that are not counted as errors. Errors are words that are substituted, omitted, or words that the student was hesitant for more than 3 seconds. The participant is given instructional level passages and asked to read for one minute as the examiner follows along on a separate copy and places a slash mark (/) through words that the participant mispronounced or omitted. If the participant paused for more than three seconds, the examiner would instruct the participant to continue reading. For the weekly assessment of DORF the student is given three grade-level passages to read for a minute each (Dynamic Measurement Group, 2011). The median (middle) score of the 3 grade-level

passages is recorded weekly. The CWPM is calculated based on the words read per minute minus the errors. The growth of the participant on oral reading fluency is measured using weekly growth rates.

Comprehension.

Selected subtests of the Woodcock-Johnson III Achievement (WJ III Ach; Woodcock, McGrew & Mather, 2001) were used for pre- and post-test measurement to evaluate the reading growth of the participants. The subtest Letter-Word Identification, Reading Fluency, and Passage Comprehension were used to find the Broad Reading score for each child participant. The Letter-Word Identification plus the Word Attack subtest were used to identify the Brief Reading score. The subtest Passage Comprehension and Reading Vocabulary are used for the Reading Comprehension score. Letter-Word Identification measures a student's word identification skills. The Reading Fluency subtests measures a student's ability to read simple sentences quickly and the Passage Comprehension subtest measures a student's understanding of written text. The Word Attack subtest measures a student's ability to apply phonic/decoding skills to unfamiliar words and Reading Vocabulary measures a student's ability to provide synonyms, antonyms and complete analogies (Woodcock, McGrew & Mather, 2001).

The WJ III ACH provided alternate forms for the participants for pre- and post-test. Form A was used during the pre-test and Form B was used during post-test. The WJ III ACH measures specific reading areas (fluency and comprehension) and meets standards for reliability and validity (Woodcock, McGrew & Mather, 2001). The WJ III Ach. Reliabilities fall at the desired level of .80 or higher for each test. The WJ III Ach Clusters are the recommended scores and the median reliabilities for each cluster reveals that all three clusters used are .90 or above. The WJ III Ach was informed by the CHC theory. The WJ III Ach measures were developed to sample

the major aspects of oral language and academic achievement (Woodcock, McGrew & Mather, 2001).

Independent Measures

HELPS Program. The participants in this group were randomly assigned and received the same language arts instruction as the general classroom. Participants received the HELPS curriculum from an examiner during the scheduled time designated for language arts instruction. The examiner timed each session from start of assessment for each individual until the end of the session (see Appendix H). The HELPS curriculum includes eight evidenced-based strategies that have been previously shown to improve students' reading fluency by past research (Begeny et al., 2012). Before the group session, the examiner pulled out each child to complete a one-on-one assessment. During this assessment the participant read a new passage, CWPM was recorded, he/she was given specific feedback, and whether he/she met the reading goal.

After completing assessment with each participant:

- The examiner began each session by reading introductory statements (see Appendix I).
- The group read an instructional passage aloud as the examiner followed along choosing different children to read aloud.
- The examiner then asked the group to give a brief retell of what they could remember, and from the performance of the group, the examiner determined if the group met the group reading goal.
- The group-reading goal was met when at least half of the group's students met individual reading goal.
- If the group met their goal the group would begin to read the next story in the curriculum.

- If the group did not meet the goal the examiner would have the group continue practicing the passage read at the beginning of the session and follow the instructional procedures (Begeny, 2009).
- With either the previous passage or a new passage the examiner modeled fluent oral reading by reading aloud to the group while the participants followed and they were called on to fill in the word the examiner stopped on (this task makes sure students are following along with examiner).
- The group then read the passage a second time and the examiner implemented phrase-drill error correction. The group read the passage a third time and then the examiner provided feedback and praise.

Repeated Readings. The participants in this group were randomly assigned and received the same language arts curriculum as students in the general education classroom, plus a repeated reading intervention. Participants received the RR intervention from an examiner during the block of time designated for language arts curriculum. The examiner timed each session from start of assessment of each individual until the end of the session (see Appendix J). The examiner began each session by having the group read aloud the passage as a group (see Appendix K). For the first few sentences the examiner read along with the group until the group was at the same pace. After reading along with the group the examiner would stop reading along and walk around the group to guide the struggling readers to the correct spot. Once the group had read the passage, the examiner had the participants tell what they remembered about the passage. After the first reading and retell was completed the group was asked to read the passage three more times with no error corrections by the examiner. The participants during group time completed guided choral reads during the four practices of the passage (Tyner, 2004).

Procedural Integrity

The examiner had a second researcher observing a proportion of the sessions to determine the fidelity of procedures. The observer filled out a fidelity checklist that describes the necessary steps for each condition and record whether steps were completed (see Appendix L). Procedural integrity was be measured for at least 20 percent of the sessions to ensure and provide support/feedback procedure.

Data Analysis

This study used a mixed design in order to determine the effects of differing comprehension and ORF treatments. The study used a Multivariate Analysis of Variance (MANOVA), which can test for between group, within group, and interaction effects while controlling for violations of sphericity (Cohen, Cohen, West & Aiken, 2003). Comprehension and ORF growth were examined with a pre- and post-test. In this analysis, it was hypothesized that reading growth (fluency and comprehension) from the HELPS curriculum, based on previous research findings, would surpass the growth from the RR (Begeny et al., 2012; Begeny, Yeager & Martinez, 2012; Begeny, 2011). Visual analyses for each session were also used to show the in-session growth of the groups (Figures 1-10). Through the use of the visual analyses, trends would be spotted easily as well as visually identify which intervention took more instructional time.

CHAPTER IV

Findings

Fidelity of Implementation

The researcher ensured at least 85% level of accurate implementation of the academic interventions during the training phase. After two training days, all five-research assistants reached at least 85% treatment integrity. The researcher continued to monitor the implementation of the academic intervention to ensure and provide support/feedback after each observed session (see Table 1). Procedural integrity was measured for 42% of the sessions. All research assistants had treatment integrity above 90% throughout the duration of the experiment. Researcher five was the only researcher to have treatment integrity below 100% and was given feedback by the primary researcher at that time. Researcher five was observed again after feedback and integrity was at 100% at the second observation.

Table 1

Fidelity and Interobserver Reliability of Researchers

	Fidelity (%)	Interobserver Reliability (%)
Researcher 1 (4-17-14)	100	98
Researcher 2 (4-17-14)	100	97
Researcher 3 (4-14-14)	100	90
Researcher 4 (4-17-14)	100	95
Researcher 5 (4-17-14)	92	94
Researcher 6 (4-23-14)	100	

Measurement Reliability

Interobserver reliability was measured for 41.60% of the sessions to ensure that 85% agreement was maintained (see Table 1) for scoring of the fluency probes. The interventionists were the same experimenters that scored the outcome measures. The average percent agreement for passage coding was 94%.

Analysis of Effectiveness

WJ III Ach. Results. Data in the current study were analyzed with a 2x2 Multivariate Analysis of Variance (MANOVA) across the two dependent variables of the WJ III Ach. MANOVA tests for between group and within group main effects and interaction effects of time and group. A table of descriptive information is reported in Table 2. Each condition had 21 participants throughout the interventions.

Table 2

Descriptive Statistics

	Condition	Mean	SD
Pre Broad Reading	HELPS	93.14	10.565
	RR	90.57	13.753
Post Broad Reading	HELPS	94.48	10.699
	RR	94.38	12.504
Pre Basic Reading	HELPS	100.81	8.512
	RR	99.43	8.565
Post Basic Reading	HELPS	100.48	9.988
	RR	100.57	9.405
Pre Reading Comprehension	HELPS	84.24	11.251
	RR	83.19	13.265
Post Reading Comprehension	HELPS	86.67	9.795
	RR	87.76	11.912

There was no significant difference between HELPS and RR when considered jointly on the variables WJ Comprehension, WJ Broad Reading, and WJ Basic Reading, Wilk's $\lambda = .949$, $F(3,38) = .685$, $p = .567$. Both groups grew at a slight and reasonably similar positive rate. However, a significant main effect for time was found, Wilk's $\lambda = .814$, $F(3, 38) = 2.88$, $p = .048$. Post-hoc univariate tests demonstrated that this increase in reading over time held for Broad Reading, $F(1, 40) = 5.15$, $p = .029$, $d = .38$, and Reading Comprehension, $F(1, 40) = 8.56$, $p = .006$, $d = .28$, but not Basic Reading, $F(1, 40) = .17$, $p = .68$.

DIBELS Results, Visual analyses of growth per session can be found in Figures 1-5. The groups did not show an upward trend; it can be seen that most groups scored higher or the same on the twelfth session as they had scored on the first session. It is visible that on most figures HELPS participants scored slightly higher than the RR participants, except for Figure 4 where the RR participants scored higher throughout the twelve sessions. Overall both conditions showed similar patterns of growth.

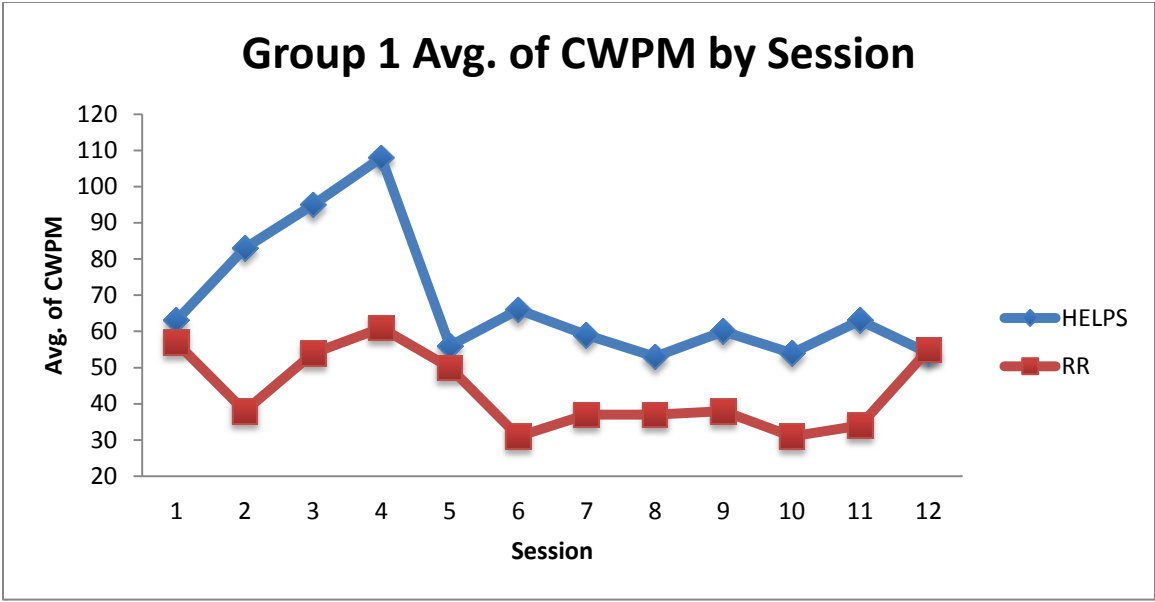


Figure 1. Cumulative rate of words read accurately on HELPS and DIBELS probes for group 1 across sessions

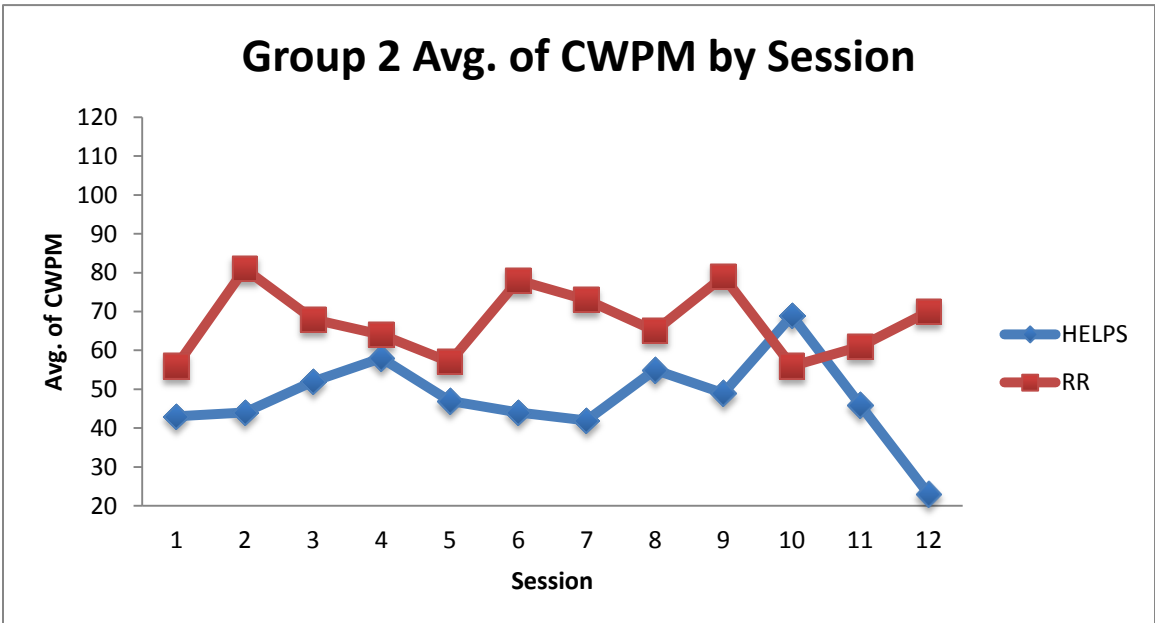


Figure 2. Cumulative rate of words read accurately on HELPS and DIBELS probes for group 2 across sessions

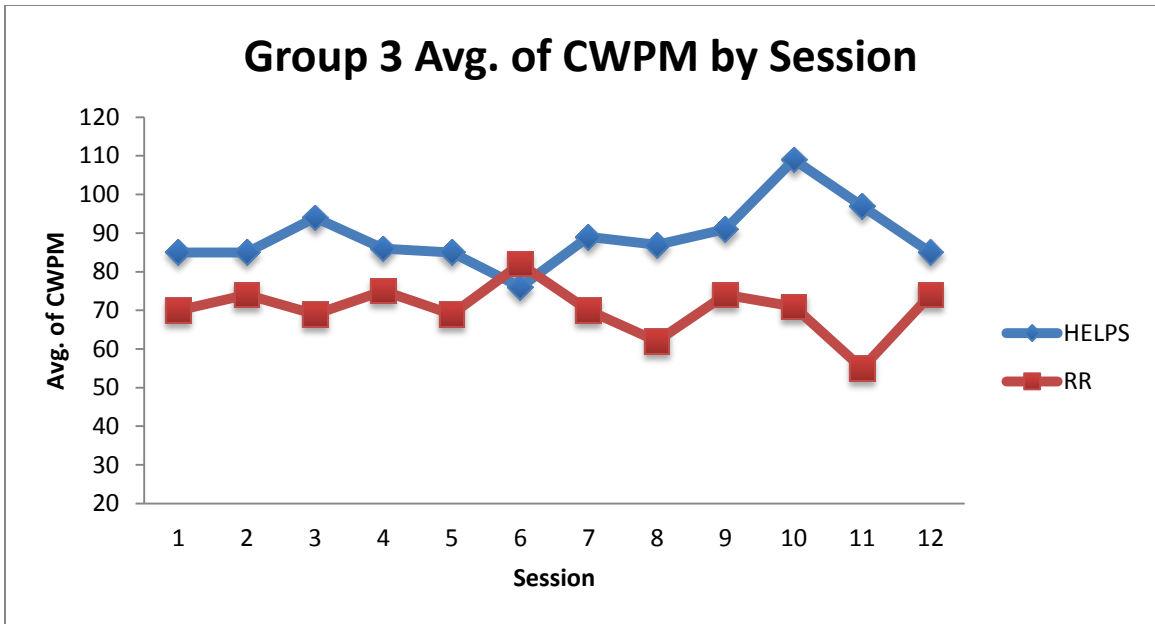


Figure 3. Cumulative rate of words read accurately on HELPS and DIBELS probes for group 3 across sessions

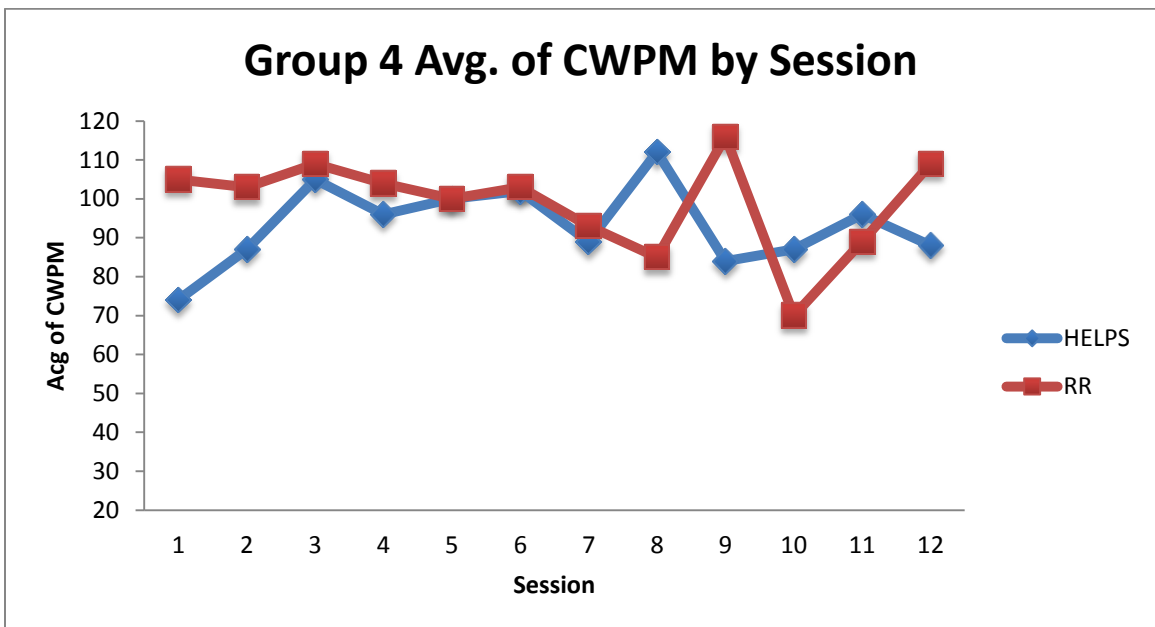


Figure 4. Cumulative rate of words read accurately on HELPS and DIBELS probes for group 4 across sessions

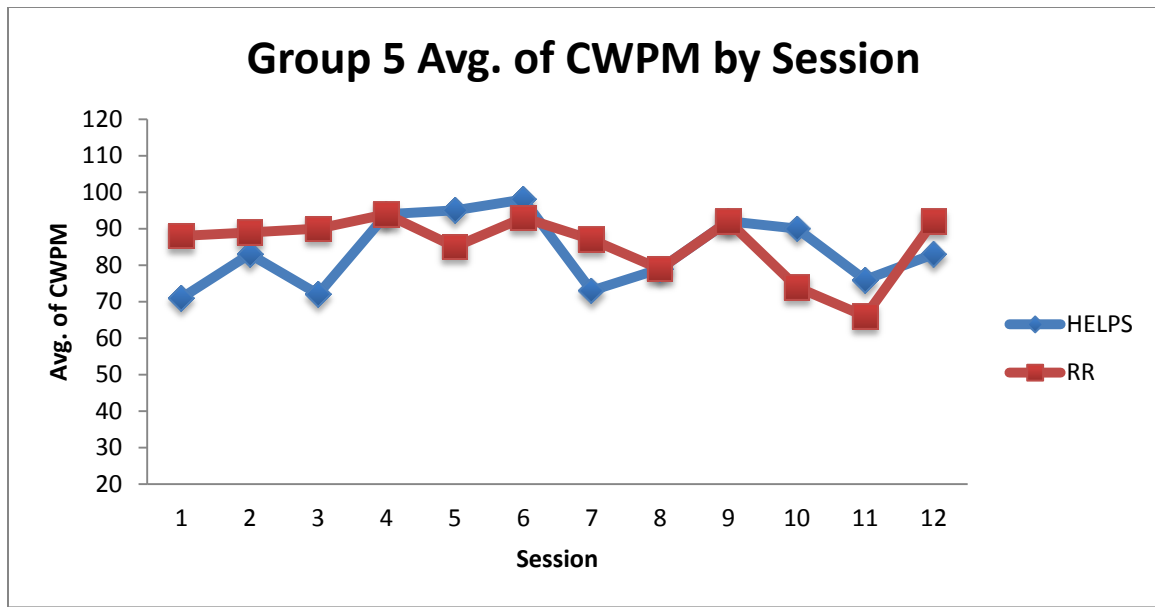


Figure 5 Cumulative rate of words read accurately on HELPS and DIBELS probes for group 5 across sessions

Analysis of Efficiency

During each intervention session the interventionist timed when the first student in the group was assessed until the last reading the group read. Table 3 includes the average time for each group with the average time it took for each intervention. The average time for the implementation of the HELPS intervention was 30 min, while the RR intervention time was 19.2 min, therefore showing that the RR intervention took less time to implement than the HELPS intervention. Average group time varied between 18.6 min to 20.5 min on the RR intervention, while the HELPS intervention varied between 23.9 min to 36 min. As the study continued and the intervention became more familiar to the interventionist, the time it took to complete the HELPS intervention began to decrease.

Table 3

<i>Average Intervention Time per Group</i>		
	HELPS Intervention Times	RR Intervention Times
Group 1	36 minutes	19.5 minutes
Group 2	28.7 minutes	18.6 minutes
Group 3	23.9 minutes	18.6 minutes
Group 4	31.3 minutes	18.8 minutes
Group 5	24.9 minutes	20.5 minutes
Average Time	30 minutes	19.2 minutes

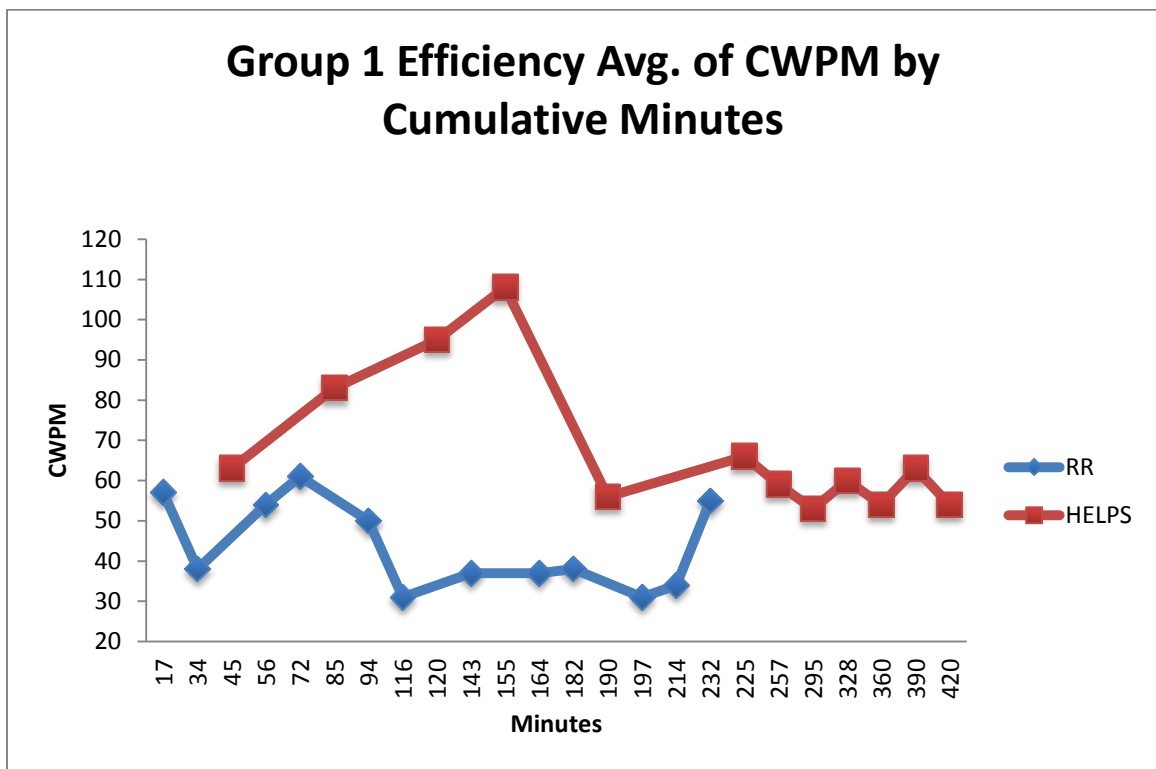


Figure 6. Cumulative rates of words read accurately on HELPS and DIBELS probes for group 1 across sessions and cumulative number of instructional minutes.

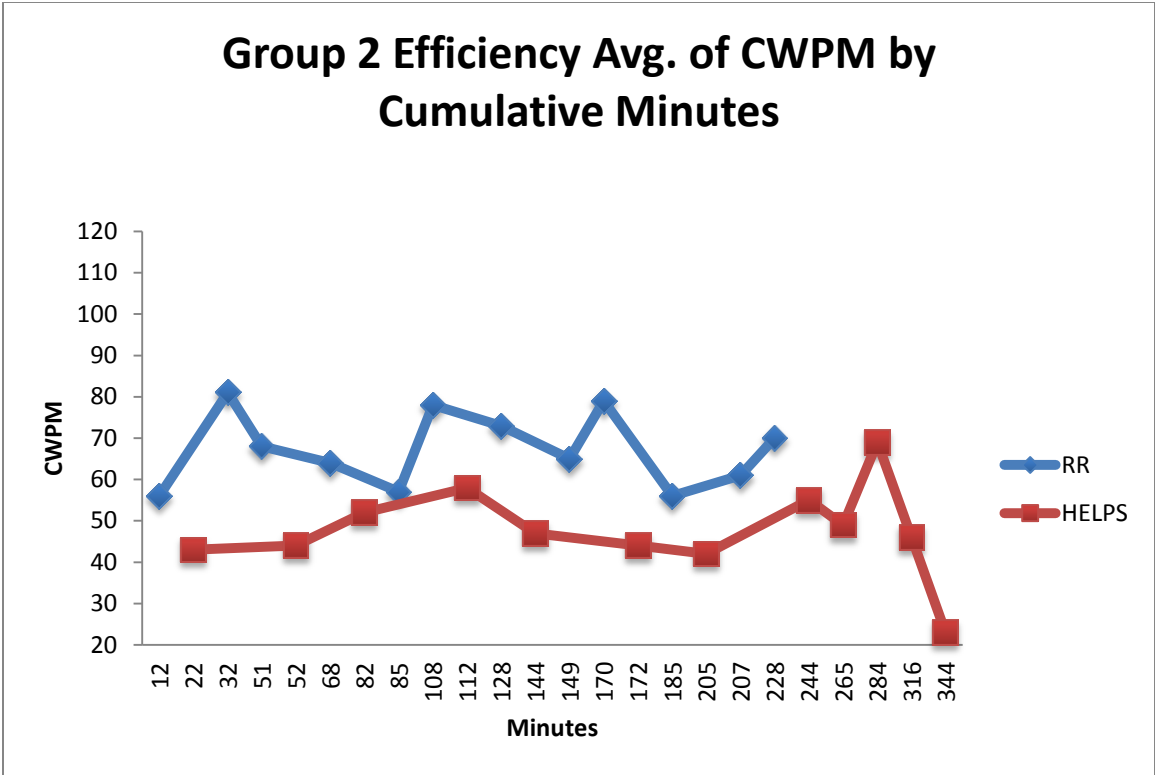


Figure 7. Cumulative rates of words read accurately on HELPS and DIBELS probes for group 2 across sessions and cumulative number of instructional minutes.

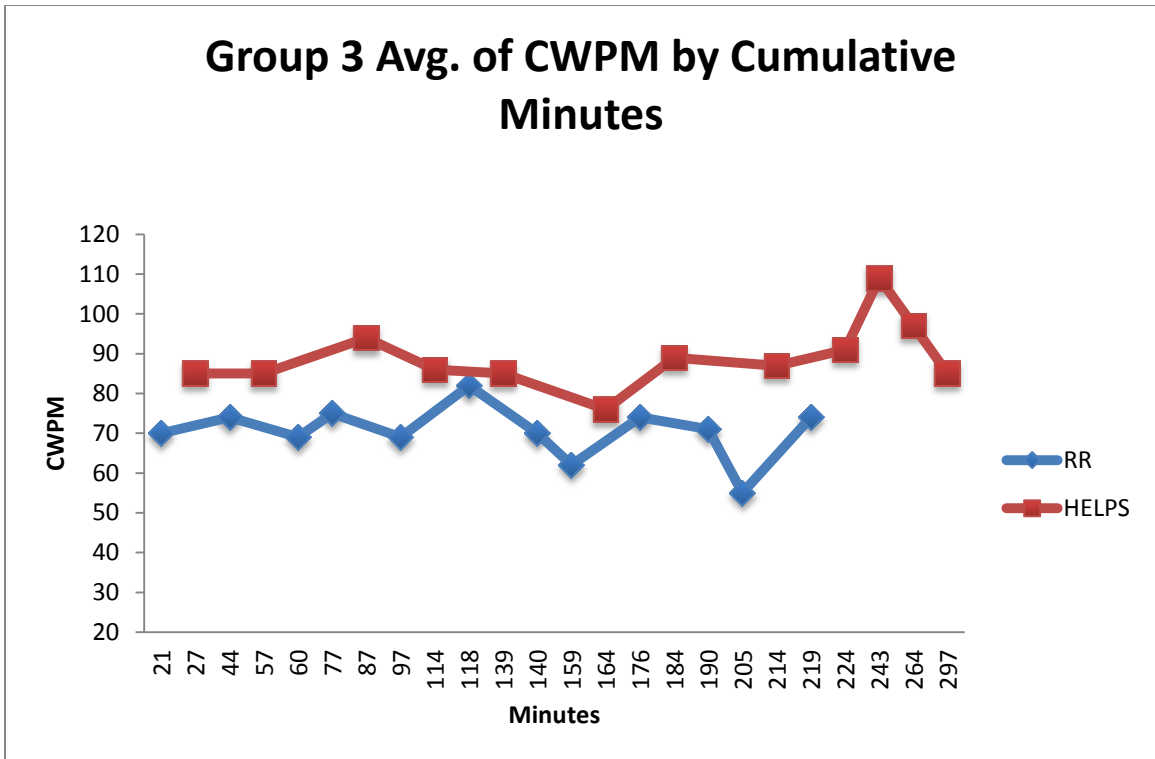


Figure 8. Cumulative rates of words read accurately on HELPS and DIBELS probes for group 3 across sessions and cumulative number of instructional minutes.

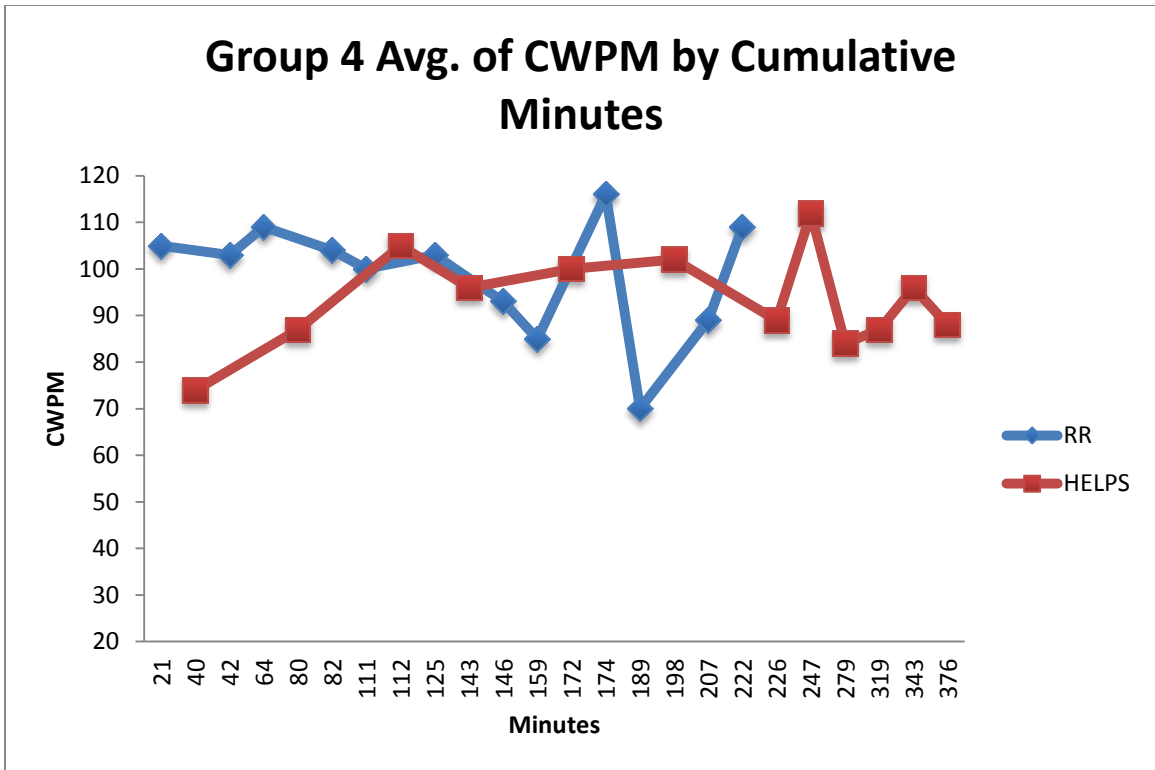


Figure 9. Cumulative rates of words read accurately on HELPS and DIBELS probes for group 4 across sessions and cumulative number of instructional minutes.

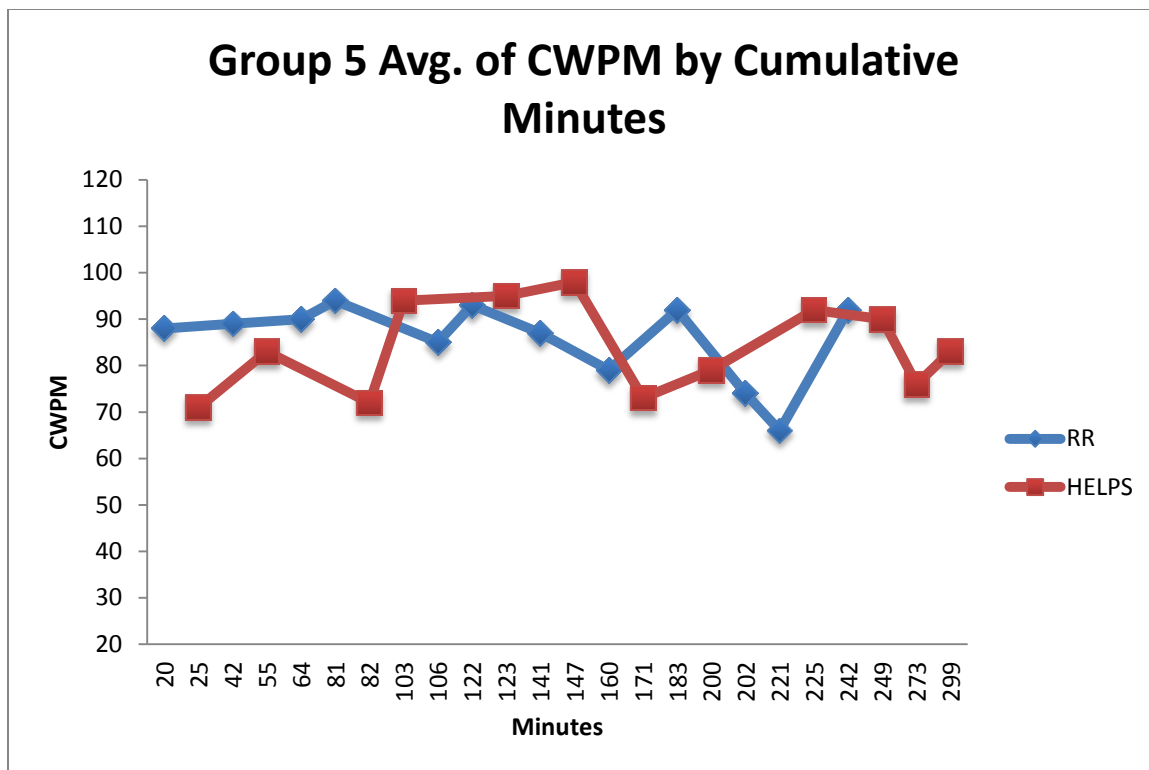


Figure 10. Cumulative rate of words read accurately on HELPS and DIBELS probes for group 5 across sessions and cumulative number of instructional minutes.

Visual analyses of this data demonstrates the importance of considering instructional time (IT) when attempting to detect differences in learning across conditions. Figures 6-10 displays the cumulative average number of words read accurately and the cumulative learning rates across all sessions for each group. The vertical axis for each graph represents the cumulative number of wcpm. The horizontal axis represents the number of instructional minutes spent in intervention.

When the data is visually inspected with respect to IT it can be concluded that the HELPS and RR intervention participants had comparable levels of efficiency. In other words, the additional IT of HELPS posed no benefit to students. These figures also show an inconsistent pattern for both interventions. The reason for such variation between sessions could be the change of difficulty between passages in both interventions, which is dictated by the HELPs manual.

CHAPTER V

Discussion

The current study evaluated the effects of the HELPS curriculum as compared to a RR intervention on ORF and comprehension. These two reading interventions were introduced to second-grade ELL's in small groups. Prior research has found that Spanish-speaking struggling readers benefited from similar interventions in addition to core reading instruction (Mathes, et al., 2007; Torgesen, et al., 1999; Solari & Gerber, 2008). Vughn, Mathes, Linan-Thompson, and Francis (2005) also found that proper supplemental instruction with specific instructional techniques benefited ELL students. Prior studies have found that the HELPS program implemented two to three times per week is effective in improving students' reading fluency and comprehension (Begeny, Ross, Greene, Mitchell & Whitehouse, 2012). The current study extends the research on the HELPS program as compared to other evidence-based interventions.

Research Question 1

The first question addressed whether the HELPS curriculum would have a greater effect on ORF than the RR intervention. Both groups' Broad Reading score increased at a similarly significantly positive rate. The HELPS curriculum group improved, on average, 1.4 standardized points, from pre-test to post-test 93.1 to 94.5 (see Table 1). The RR groups, in contrast, improved 3.8 points. The RR intervention showed slightly more improvement from pre-to post- test on all three subtests (Table 2), while the HELPS intervention showed growth only on Broad Reading and Reading Comprehension subtest.

Although statistically there was no significant difference between conditions, the RR intervention showed to improve all areas assessed, while HELPS did not improve Basic Reading post-test. Within-session growth is also shown on figures 1-5 for each group. Figures 1-5 show the average scores of CWPM for each group throughout the intervention. These visual analyses show similar results to the pre- and post-test. The groups showed similar trends and there was no visual difference on all groups that either one showed great growth from first session to last.

Overall, both interventions showed similar improvement for struggling readers. The reason for such results might be due to the fact that within HELPS one of the main steps in the intervention is a RR intervention. The RR intervention within HELPS is a “round robin” style while for this study the RR intervention was a guided coral read. Although the RR intervention used within the HELPS intervention is different from the RR intervention from this study, the content of repeating the passage is the same and that might be the reason for such similar scores.

These findings must also be interpreted in light of the fact of that the RR intervention required fewer steps and took a shorter amount of time. Therefore, even though the difference between the conditions wasn't significant, RR has the advantage of being easier and faster to implement given that both interventions yielded comparable results.

Research Question 2

The second question addressed whether the HELPS curriculum would have a greater impact on reading comprehension than the RR intervention. The RR group scored higher than the HELPS curriculum group on the Reading Comprehension at post-test, but the difference wasn't significant. Both intervention groups increased at a reasonably similar positive rate. The HELPS curriculum group increased from pre- to post-test 84.2 to 86.7, while the RR group increased from pre- to post-test 83.2 to 87.8 (see Table 11). Again, given that RR is both simpler and faster, a null result (i.e., parsimony) favors the RR intervention.

Research Question 3

The third question addressed whether the HELPS curriculum is more time efficient than the RR intervention. The RR intervention's average time in intervention was 19 min, while the HELPS intervention's average time in intervention was 30 min. Therefore the RR intervention took less time to run than the HELPS intervention (See Table 3). Group time averages varied between groups on both interventions. Visual analyses for each session also show the variation throughout the sessions (Figure 6-10). The group times varied on the amount of assistance certain students needed, as well as the familiarity of the intervention by the assistant researcher. As the study continued and the intervention became more familiar, the time it took to complete the HELPS intervention began to decrease. Through the visual analyses it can also be seen that although the graphs don't show growth for either group, they do show that RR groups scored similar to the HELPS groups with less instructional minutes. The DIBELS results are limited however, since as dictated by the HELPS manual, passage difficulty changed over time. Therefore, conclusions about growth are better understood using the WJ results, since test difficulty remained the same over time.

In conclusion, there was no statistical significance between the HELPS and RR intervention. Through pre- and post-test data and visual analyses, RR intervention showed more improvement overall and took less time to implement. Table 2 shows that the RR intervention group improved on all three post-test, while the HELPS intervention group did not improve on one post-test. Based on Table 2, the RR intervention group also scored higher on the Reading Comprehension post-test than the HELPS intervention group. The RR intervention also took less time to implement and less cumulative number of instructional minutes, as seen on Table 3 and Figures 6-10. Overall, based on the results of this study, even though there was no significance

between the groups, RR intervention group appeared to outperform the HELPS intervention group in all areas of the post-test and would take less time and be easier to implement for educators.

Limitations

There are limitations that should be considered with this study. The first limitation is the small sample size. Although power was estimated a priori, with a larger sample size there would be more generalization of the results. Another limitation of this study is that interventions were implemented in one school. Therefore, results cannot be generalized to a larger population.

A third limitation is the implementation factors. In this study university students and two volunteer teachers (support staff) implemented both interventions rather than school based staff. Therefore, the study is not able to clarify the effects of the interventions when implemented by classroom teachers. Classroom teachers are busy and may not have the time to pull out of the classroom a group of students while leaving the rest of the class unattended. It would be beneficial for future research to look at classroom teachers implementing these interventions during their day to identify the feasibility of these interventions in the classroom. Haager and Windmueller (2001) found positive growth for ELL's students in the study where classroom teachers and support personnel implemented a reading intervention. The Haager and Windmueller (2001) also collected data on teachers' perception of interventions and they found that teachers reported that DIBELS provided an expanded awareness of the students' performance. It was also found that more than half the teachers had positive perceptions of the ongoing consultation regarding their students (Haager & Windmueller, 2001). Begeny and colleagues have stated that future research needs to look at the implementation of the HELPS intervention by a classroom teacher (Begeny, et. al., 2012, Begeny, 2011, Begeny, Yeager, & Martinez, 2011).

The study did not specifically evaluate the effects of the interventions with a homogenous group of low-performing ELL readers. This study evaluated ELL readers in general education and therefore the external validity is limited to the application of the interventions in general education settings. A final limitation is the measurements used for the ORF measurement during each session. The difficulty variation between groups and passages complicates our ability to track the growth over time. Future studies would need to have an additional measurement period outside the cold read where ORF could be tracked over time.

Future Research

Further research on instructional strategies for ELL students is warranted. As Begeny and colleagues (2012; 2011) have recommended, research needs to look at continue comparing the HELPS intervention to other evidence-based interventions in small groups. Surprisingly, there are very few studies that have evaluated reading interventions applied in small groups. Applying evidence-based intervention in small groups has many practical applications in that it is more feasible to complete in a school. In this study, such an intervention required little training and time for the implementers, which is promising for social validity.

If this study were to be replicated, a few variables should be considered. With the inclusion of other grades, schools, and school districts the results of the study will be able to be generalized to a larger ELL population. It would be helpful to have classroom teachers run either intervention, as opposed to trained interventionists, during the school hours to add to the implementation feasibility. Future work will need to identify practical options for efficiently implementing either group intervention.

Future studies could look at guided RR versus choral reading as a next step to identify the best use of RR in a group setting. Future replications of this study should look at using the same probes for both conditions for progress monitoring. As seen in Figures 6-10, there was wide

variation between conditions because of different probes used. Lastly, future research should include more than twelve sessions to each condition; to see if that would improve the post-test results.

CHAPTER VI

Conclusion

Although the present study is limited in certain aspects, it represents the first evaluation of the HELPS intervention compared to another empirically based reading intervention with small groups of ELL students. Both intervention groups grew at a slight and reasonably similar positive rate as seen in Figures 6-10 for the progress monitoring of each session and Table 2 for the post-test. Even though one intervention wasn't significantly better than the other, Table 2 showed slight growth for all post-test for the RR intervention while the HELPS intervention showed slight growth on Broad Reading and Reading Comprehension post-test only. This study offers several directions for future research that should help identify the types of instructional strategies and conditions that will improve learning outcomes for ELL students. Overall, there is no evidence that HELPS offers meaningful benefits above that of RR, particularly considering the more complex and time heavy implementation of the HELPS program.

The results of the current study support previous findings that suggest that ELL students' learning is enhanced by increased practice and extra IT (Vaughn, et al., 2005). The instructional efficiency is especially important when recommending instructional procedures to educators. Due to their daily school schedules, teachers have limited time and must organize their time in an efficient manner. Therefore, when given a choice between multiple interventions, teachers should choose the intervention that gives the best results in the least amount of IT. When a school psychologist offers interventions to a teacher, considering IT along with the respective choices of

intervention might help the teachers make a better choice.

Another implication for our findings is that educators with scarce personnel resources could benefit from implementing small group intervention instead of one-on-one interventions. This is important to consider with the growing ELL population in the United States; as the large numbers of low-performing readers in the ELL population continue to increase. The implication of an efficient and cost effective supplement to an educator's regular instructional activity to improve the reading fluency and comprehension for ELL students is of great importance.

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APPENDICES

Appendix A

Oklahoma State University Institutional Review Board

Date: Thursday, November 21, 2013
IRB Application No ED13155
Proposal Title: Examining the effects of two different reading interventions on oral reading fluency and comprehension for English Language Learners
Reviewed and Processed as: Expedited

Status Recommended by Reviewer(s): Approved Protocol Expires: 11/20/2014

Principal Investigator(s):

Cristina S. Villanueva 809 S Washington Downstair Stillwater, OK 74074	Benjamin Solomon 443 Willard Stillwater, OK 74078
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The IRB application referenced above has been approved. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

The final versions of any printed recruitment, consent and assent documents bearing the IRB approval stamp are attached to this letter. These are the versions that must be used during the study.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted with the appropriate signatures for IRB approval. Protocol modifications requiring approval may include changes to the title, PI, advisor, funding status or sponsor, subject population composition or size, recruitment, inclusion/exclusion criteria, research site, research procedures and consent/assent process or forms.
2. Submit a request for continuation if the study extends beyond the approval period of one calendar year. This continuation must receive IRB review and approval before the research can continue.
3. Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and impact the subjects during the course of this research; and
4. Notify the IRB office in writing when your research project is complete.

Please note that approved protocols are subject to monitoring by the IRB and that the IRB office has the authority to inspect research records associated with this protocol at any time. If you have questions about the IRB procedures or need any assistance from the Board, please contact Dawnett Watkins 219 Cordell North (phone: 405-744-5700, dawnett.watkins@okstate.edu).

Sincerely,



Shelia Kennison, Chair
Institutional Review Board

Appendix B

Parent/Guardian Permission (Consent) Form

Oklahoma State University

Student Name: _____

Dear Parent(s),

This is a letter informing you of and requesting parent permission (consent) to include your child in a brief research project (which will take 15-20 minutes once a day) focused on child literacy within his/her classroom. Please have your child return this form signed (last page) if you give permission for your student to participate.

Project Title: Examining the Effects of Two Different Reading Interventions on Oral Reading Fluency and Comprehension for English Language Learners

Researchers: Cristina Villanueva, M.S., Graduate Student at Oklahoma State University

Benjamin Solomon, Ph.D., Assistant Professor at Oklahoma State University

Purpose: The need for reading interventions for the English Language Learner population continues to be of importance, as few studies have researched this area. The study is designed to evaluate the effects of an experimental reading program and a more well-known reading intervention on oral reading fluency and comprehension.

Project Procedures: All the students in this project will be in the second or third grade. Every student who returns this parent/guardian permission and agrees to participate will be a part of this project. Each student will be tested for approximately 15-20 minutes once a day 3-4 times a week. They will be given a reading fluency intervention. Each student will either randomly be given one of two reading interventions, which will take 10 to 15 minutes to give. Sessions in the first intervention entail introduction read, student timed reading, retell check, student timed reading, phrase drill procedure, student timed reading, modeling procedure, student timed reading, graphing timed readings, and fill out star chart with student.

The students in the second intervention read the passage aloud as a group. The group will read the passage four times with no error corrections by the examiner. The participants during group time will read aloud together. Both interventions contain elements (e.g., repetition, timing, graphing) that have been shown to improve readings. We expect students in both groups to benefit.

Risks of Participation: This project will not affect the activities of the general classroom or your child's grades. This project involves minimal risk, as the tests used will be similar to ones used in the everyday classroom. The amount of time that students will be removed for testing will be 15-20 minutes once a day for up to 12 weeks.

Benefits: This research will help find interventions that benefits ELL students. If differences are found in effectiveness and/or efficiency of either intervention, this will have implications for the intervention programs school chooses to assist their ELL population.

Confidentiality: All research project records will be kept at Oklahoma State University and only the research project assistants will have access. Electronic records will be stored on a password-protected computer with password access only available to the research project assistants. Each student will be assigned a participant number. Confidentiality and privacy will be maintained by the absence of participant names on test materials, absence of participant numbers on permission forms, and the shredding of the assignment list of participant numbers to participant names. All research assistants will be informed that all identifying information regarding student names, classroom teachers, schools, etc. is confidential, and all research assistants will sign a confidentiality agreement.

Compensation: No monetary compensation is offered for participation in this research project. The benefits provided by the study are explained above.

Contacts: If you have any questions with regard to you or your students' involvement in this study please contact us at your earliest convenience:

Cristina Villanueva, M.S., Graduate Student at Oklahoma State University, 817-994-1197

Benjamin Solomon, Ph.D., Assistant Professor at Oklahoma State University, 405-744-3307

If you have questions about your rights as a research volunteer, you may contact Dr. Shelia Kennison, IRB Chair, 219 Cordell North, Stillwater, OK 74078, (405) 744-3377 or irb@okstate.edu.

Participant Rights: Participation in this study is voluntary and you may choose to withdraw from the assessment at any time. No risks from withdrawal or termination are anticipated.

Parental Signature for Minor: I give my permission for faculty and/or students from Oklahoma State University to assess my child/student for the purposes of this research and include them in the described interventions.

I have read and fully understand the consent form. I sign it freely and voluntarily. A copy of this form has been given to me. As parent or guardian I authorize _____ (*print student's name*) to participate in the described research.

Parent/Guardian Name (printed)

Date

Signature of Parent/Guardian

Date

I certify that I have explained this document before requesting that the participant's parent/guardian sign it.

Signature of Researcher

Date

Appendix C

Informed Consent Form; Principal/Teacher

Oklahoma State University

Project Title: Examining the Effects of Two Different Reading Interventions on Oral Reading Fluency and Comprehension for English Language Learners

Investigators: Cristina Villanueva, M.S., Graduate Student at Oklahoma State University

Benjamin Solomon, Ph.D., Assistant Professor at Oklahoma State University

Purpose: For this study we will be looking at the experimental reading intervention program relative to another evidence-based fluency intervention to compare the fluency and comprehension outcomes of ELL students. The study is designed to evaluate the effects of the experimental curriculum and another more well-known intervention on oral reading fluency and comprehension.

Project Procedures:

The participants in the current study will include second and third grade students. Each student will be individually removed for 15 to 20 minutes from the classroom to a location close to the classroom. They will be administered one of two fluency based interventions, both of which have elements that have been shown to increase reading speed.

Materials

Assessments: The passages for the repeated reading interventions are downloaded from the Dynamic Indicators of Basic Early Literacy Skills Next (DIBELS Next; <https://dibels.org/next/index.php>) program.

The students in the intervention I will be using the passages provided by the program materials, although, as discussed above, will be assessed using the DIBELS materials.

Procedures

Intervention I: Each student will be administered one of the two interventions as a group. Each group will be administered one 15 minute intervention, including individual assessments.

The curriculum includes eight evidenced-based strategies that have been previously shown to improve students' reading fluency by past research. Session entails introduction read, student timed reading, retell check, student timed reading, phrase drill procedure, student timed reading, modeling procedure, student timed reading, graphing timed readings, and fill out star chart with student.

Intervention II: The examiner begins each session by having the group read aloud the passage as a group. Once the group has read the passage, the examiner has the participants tell what they remember about the passage they read. After the first reading and retell is complete the group will be asked to read the passage three more times with no error corrections by the examiner. The participants during group time will complete choral reads during the four practices of the passage.

Risks of Participation: The assessment will in no way affect the activities of the general curriculum. Since these activities, such as curriculum-based measurement, are part of the typical classroom activity, there are no known risks associated with this project which are greater than those ordinarily encountered in the classroom setting.

Benefits: This research will give a deeper understanding to the benefits of such interventions with ELL'S. If differences are found in effectiveness and/or efficiency of either intervention, this will have implications for the intervention programs school chooses to assist their ELL population.

Confidentiality: Every effort will be made to maintain the confidentiality of the data obtained from this study. The data will be housed at Oklahoma State University and only the PI and the research assistants working on the project will have access to it. Electronic data will be stored on a password-protected computer with password access only available to the researchers working on this project. The records of this study will be kept private. Any written results will discuss group findings and will not include information that will identify you or your students. It is possible that the consent process and data collection will be observed by research oversight staff responsible for safeguarding the rights and wellbeing of people who participate in research.

Compensation: No monetary compensation is offered for participation in the study. The benefits provided by the study are explained above.

Contacts: If you have any questions with regard to you or your students' involvement in this study please contact us at your earliest convenience:

Cristina Villanueva, M.S., Graduate Student at Oklahoma State University, 817-994-1197

Benjamin Solomon, Ph.D., Assistant Professor at Oklahoma State University, 405-744-3307

If you have questions about your rights as a research volunteer, you may contact Dr. Shelia Kennison, IRB Chair, 219 Cordell North, Stillwater, OK 74078, (405) 744-3377 or irb@okstate.edu.

Participant Rights: Participation in this study is voluntary and you may choose to withdraw from the assessment at any time. No risks from withdrawal or termination are anticipated.

Signature: I give my permission for faculty and/or students from Oklahoma State University to assess in my school/classroom, for the purposes of this research.

I have read and fully understand the consent form. I sign it freely and voluntarily. A copy of this form has been given to me.

Appendix D

ASSENT FORM

OKLAHOMA STATE UNIVERSITY

(Read to student)

Dear Student,

We want to see how well you can read this passage. You will do this in a group with others. Your parent/guardian is aware of this project.

Please understand that you do not have to do this. You do not have to read if you do not want to. You may stop at any time and go back to your classroom.

Your name will be on this form you fill out, but you will be given a number that we will put on your answer sheets so no one will know whose answers they are. If you have any questions about the form or what we are doing, please ask us. Thank you for your help.

Sincerely,

Cristina Villanueva, M.S.

Graduate Student Oklahoma State University

Benjamin Solomon, Ph.D.

Assistant Professor Oklahoma State University

I have read this form and agree to help with your project. **Check either Yes or No.**

_____ **Yes** _____ **No**

(your name)

(date)

Appendix E

Confidentiality Agreement for Research Team Members

Proposal Title: Examining the Effects of Two Different Reading Interventions on Oral Reading Fluency and Comprehension for English Language Learners

I, _____ have been instructed that all identifying information regarding student names, classroom teachers, schools, etc. that I have access to as a research team member for this research project is confidential. I agree not to share any identifying information with anyone who is not a member of the research team, and agree to protect the confidentiality and identity of all participants involved in this proposed study.

I have read and fully understand the confidentiality agreement. I sign it freely and voluntarily. A copy of this form has been given to me.

Research Team Member Name (printed)

Date

Signature of Research Member

Date

I certify that I have explained this document before requesting that the research team member sign it.

Signature of Researcher

Date

Riding the Bus to School

I ride a big yellow bus to school. I stand on the corner of our street with my friends and we wait for the bus. My friend's grandma waits with us. When it's raining, she holds an umbrella to keep us dry. Sometimes when it's cold she brings us hot chocolate.

I leave my house to walk to the bus stop after my parents go to work. I watch the clock so I know when to leave. Sometimes mom phones me from her office to remind me. Sometimes she can't call, so I have to be sure to watch the time.

Our bus driver puts his flashing yellow lights on and then stops right next to us. When he has stopped he turns the red lights on so all the cars will stop. He makes sure we are all sitting down before he starts to go. He watches out for us very carefully.

My friends and I are the first ones to be picked up by the bus. We like to sit right behind the bus driver and watch while he picks up all the other kids. We know where everyone lives. By the time we get to our school, the bus is almost full. Sometimes the kids get noisy and the driver has to remind us to keep it down. He says their noise makes it hard for him to concentrate and drive safely. I am glad that our bus driver is so careful.

Games that April Likes

April likes to play. She likes to play in the mud, climb trees, and build things. These are things that many boys like also. But April knows she is not a boy. In fact, she loves being a girl! She loves to play dress-up, loves her cute teddy bears, and likes to play with her long hair. When she plays with her hair, she can make it look really pretty.

But there are some games that April will not play with other girls. April does not like to play with dolls, pick pretty flowers, or play with tea sets. There are also games that April does not like to play with boys. For example, she does not like to wrestle or play with toy guns. The games that April loves the most are tag and hide-and-seek. In these games, many boys and girls can play together and all have fun. April likes games the most when all kids can play together.

Appendix H

HELPS-Amount Each Session Takes

(From start of first assessment-to the end of group session)

Session #	Start Time	End Time	If timer was used, amount of time
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			

Appendix I

HELPS Program for Small Groups: Scripted Directions

(For one-on-one assessments) Directions to administer before student reads passage:

1. Place the teacher copy of the reading passage in front of you but shielded so the student cannot see what you record. Present the student copy of the reading passage to the student.
2. Say to the student, "Here is a story that I would like you to read. When I say 'Begin', start reading aloud at the top of the page and read across the page. Try to read each word. If you come to a word you don't know, I'll tell it to you. Do you have any questions? Be sure to read as quickly as you can without making errors, and try to read with good expression."
3. Say, "Begin!" and start the stopwatch when the student says the first word.
4. If the student hesitates on a word for more than 3 seconds, say the word.
5. At the end of one minute, place a closed bracket after the last word.
6. If the student reads so fast that no expression is given, remind the student that when he/she reads the next story, you want him/her to read at a comfortable rate (i.e., with good expression).
7. Remove both copies of the reading passage and record student's score on the Individual Progress Tracking Form.

Introductory statements and expectations (Includes Verbal Cuing Procedure):

As a group, you're going to be doing some reading with me today. As you read, I want you to do your best reading. This means I want you to read as quickly as you can without making mistakes, and try to read with good expression (like I do when I read to you). I also want you to remember what happens in the story and try to remember the difficult words that we practice.

Describing the You/Me Game:

As we read, we will play the You/Me Game. To earn points for your team and win the game, you need to work hard and follow directions throughout today's lesson. For example, when I am reading aloud or another student is reading aloud, you need to read along silently to yourself. If I call on you and you know where we are in the story, your group will earn one point. If you do not know where we are in the story, I will earn one point. At the end of the lesson, if your team earns ~~more~~ [insert # based on recommendations for the Teacher's Manual] more points than I do, your group will earn two stars on your Group Star Chart.

Directions to administer before students read passage aloud (Group Reading Procedure):

1. Say to the group, "Now we are going to practice reading today's story out loud. (Insert student's name) will start reading when I say begin, and then I will call on another student to read. Each of you will take turns reading a few sentences at a time. When you are not reading aloud, you need to read along silently while your classmate reads. If I call on you and you know where we are in the story, your group will earn one point in the You/Me Game. If you do not know where we are, I will earn one point."
2. Say "Begin" and have the designated student start reading aloud. After this student reads 1 to 3 sentences, randomly select another student in the group to read the next 1 to 3 sentences.
3. Continue this procedure of randomly selecting students to read 1 to 3 sentences until the group reads for approximately two minutes or until the students read the entire passage.
4. When calling on a new student to read, if that student immediately starts reading where the previous student left off, record one point for "You" (the students) in the You/Me Game. If the student cannot start where the previous student left off, record a point for "Me" (the teacher).
5. As students read, record students' reading errors on the teacher copy of the passage. Record errors with slashes, underlines, or circles, as instructed for Reading 1, 2, or 3.
6. At the end of the activity, briefly praise the group for their effort (as applicable).

Directions for administering Retell procedure:

1. Say to the group, "Now I would like each of you to tell me one important part that you remember from the story. Try to tell me what happened in the correct order."
 - o For expository text, you should say, "Now I would like each of you to tell me one important thing that you learned from the reading. Starting with the first important thing you learned, tell me about what you learned in the correct order."
2. Randomly select one student to begin the Retell procedure. When that student finishes a brief (approximately 10 seconds) retell, randomly select another student to retell a portion of the passage.
3. Continue this procedure until all students have been called on once. If necessary, give prompts to help students remember key parts of the passage and to correctly sequence the events.
4. At the end of the Retell procedure, briefly praise the group for their effort (as applicable).

Directions for teacher to read passage aloud (Modeling Procedure):

1. Say to the group, "Now I am going to read today's story to you. Please follow along with your finger, reading the words to yourself as I read them. Sometimes I will stop reading to make sure you are following along. If I call your name, you need to tell me the next word in the story. If you read the correct word, this will show me you are reading along with me and your group will earn 1 point in the You/Me Game. If you do not show me you are reading along with me, I will earn one point."
2. Read the passage at a comfortable reading rate and with good expression for approximately 1.5 minutes or until you read the entire passage. Make sure the students are following along with their fingers and prompt students to do this, if necessary.
3. While reading the passage, stop 5-7 times in order to randomly call on a student to read the word that immediately follows the word you stopped at. Record a point for the group (a "You" point in the You/Me Game) when a student reads the correct word. Record a point for the teacher (a "Me" point) when a student cannot immediately read the next word.
7. At the end of the activity, briefly praise the group for their effort (as applicable).

Directions for administering Phrase-drill Error-correction Procedure:

1. Say to the students, "Now we are going to practice some of the difficult words from the story." Have the students sit closely enough so they can all see the one passage you will point to.
2. On a student's copy of the passage, point to the first error word from Group Reading 2, say the word, and then say, "All together, read this after I do, [read the 2-5 word phrase containing the error word and then have the students chorally read the phrase]. Again [students should chorally read the phrase a second time], Again [students should chorally read the phrase a second time]." This procedure should allow the students to chorally read the phrase three times.
 - a. To better ensure all students read the phrase at the exact same time, use a prompt (e.g., snap your finger, tap the back-end of a marker on the table) to signal for students to begin reading the phrase aloud.
3. Make sure students read the phrases rather than simply memorize them and repeat them. (Teachers want students to read, rather than recite). Also be sure that all students read aloud together.
4. Repeat the above procedure for all unique error words from Group Reading 2. If time permits (i.e., very few words were read incorrectly in Group Reading 2), complete the Phrase-drill procedure with words read incorrectly in Group Reading 1.
 - a. If students make 1 or fewer errors total on Readings 1 and 2, practice 1-3 words or phrases the students read less fluently. Use the procedures above.
5. After all phrases are practiced, assign 0-5 points for the You/Me Game, based on collective student effort. Praise students' effort accordingly.

Appendix J

Repeated Reading-Amount Each Session Takes

(From start of first assessment-to the end of group session)

Session #	Start Time	End Time	If timer was used, amount of time
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			

Appendix K

Repeated Reading Script

I will keep track of who is behaving and following along. If I feel like you are not paying attention or reading along with everyone (by following along with your finger and reading at the same speed as the rest of the group) I will write your name in my notes. If your name is on my notes three times, you will not get a surprise at the end of the month. I will keep track of those misbehaving while we are in-group and when you are waiting for your turn to read one on one. Remember we need to get to the bottom of the story, read it together (like when we sing together) and read it three times. Begin reading when I begin.

Appendix L

Repeated Reading Procedure Checklist

- _____ Read Script
- _____ The examiner begins time from start of assessment until the end of session.
- _____ One-on-one assessment.
- _____ Experimenter begins reading first reading with group.
- _____ Ask the group what they remember from the passage.
- _____ Read the passage a second time.
- _____ Read the passage a third time.
- _____ Read the passage a fourth time.
- _____ Stop Timing

HELPS Procedure Checklist

- _____ Record start time
- _____ One-on-one assessment
- _____ Teacher had the following materials available and organized before starting the session: stop watch, examiner passage, student passage, dry erase-marker, pencil, student graph, progress tracking form, star char, bonus bag, implementation flow chart and scripted directions.
- _____ Repeated Reading Procedure
 - _____ After each student oral reading, teacher indicated on the examiner passage (with a bracket) the number of words read in one minute.
 - _____ Put the appropriate number next to the one-minute bracket.
 - _____ Marked student errors differently during each reading.
- _____ Retell Check Procedure
 - _____ Before prompting student to begin the Retell Check, teacher made sure student could not review the passage during the Retell Check.
 - _____ Teacher used broad follow-up questions to solicit student's retell only if student was unable to retell the passage for approximately 30 seconds.
 - _____ Teacher implemented Retell Check for no more than 45 seconds unless he/she made a decision prior to the session to lengthen the Retell Check.
- _____ Goal Setting Procedure
 - _____ Teacher told group if they met the Reading goal.
- _____ Phrase-Drill Error Correction Procedure
 - _____ Teacher asked students to practice "logical" phrases.
 - _____ Teacher told student to "READ" the phrases, and did not ask the student to "SAY" or "REPEAT" phrases.
 - _____ Teacher had student practice all incorrectly read words
 - _____ Teacher pointed (or had the student point) to each word practiced.
- _____ You/Me game
- _____ Record end time.

VITA

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Doctor of Philosophy

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