

USING PAIRED READING TO HELP ESL STUDENTS BECOME FLUENT AND ACCURATE READERS

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Many ESL students with limited English proficiency (LEP) struggle with reading fluency and accuracy. For these students to experience school success, educators must find ways to help them master such reading skills. This study investigated the effects of paired reading on reading fluency and reading accuracy of four ESL students with LEP. Using a single-subject research design, the study paired the students with a skilled reader and examined students' reading performances under different controlled conditions. The results of the study showed that all four students benefited from the paired reading intervention and demonstrated steady improvement in reading fluency and accuracy. This finding indicates that paired reading can serve as a useful instructional alternative to facilitate ESL students in learning to read in English.

Over the past years, schools in the United States have witnessed a big increase in the number of students who speak English as a second language (ESL). Many such students have limited English proficiency. Language barriers can hinder academic progress, as well as social development. To insure the high quality of education in American schools, education programs must take into account the special needs of students from diverse racial and linguistic backgrounds.

One of the central difficulties facing ESL students is reading. Development of proficient reading skills is crucial to school learning for all students. Those who experience difficulties in the development of such skills do not do as well as other students in content area classes, have lower self-esteem, are more likely to pose discipline problems in school, and are less likely to graduate from high school (Shanahan & Barr, 1995). Thus, for every ESL student to succeed in school, it is essential that educators provide

appropriate instruction in reading and create more reading opportunities for these students.

The development of reading fluency is an important aspect of learning to read. Fluent readers read faster and are more likely to absorb more information from the reading content. Research in the psychology of reading suggests that fluent word recognition may be a prerequisite for good comprehension and enjoyable reading experiences (Nathan & Stanovich, 1991). For many ESL students, however, limited English vocabulary slows down their speed of word recognition. This prevents them from reading fluently and enjoying these experiences. To help them become fluent readers, it is important for educators to examine instructional alternatives that consider the unique learning characteristics of students along with an understanding of the reading process. One way to do this is to investigate reading instruction and progress by deeply exploring individual readers within one-to-one reading

instruction.

In recent years, one-to-one instruction has received renewed attention and consideration in many schools for early prevention of reading failure and remediation of reading problems. One-to-one instruction can be implemented in a number of ways. One such way is known as "paired reading." Paired reading is an instructional method that involves the pairing of a skilled reader with a less-skilled reader. The skilled reader demonstrates appropriate reading rate, inflection, and pausing for the less-skilled reader. In paired reading, the skilled reader in each pair reads the connected text first. Then the less-skilled reader reads the same text. Thus, the less-skilled reader has a role model of fluent reading, as well as repeated exposure to text (Mathes, Fuchs, Fuchs, Henley, & Sanders, 1994). In this instructional method the pairing configuration may consist of parent/child, teacher/student, or student/student.

Numerous studies have demonstrated the effectiveness of paired reading for improving students' reading performance. Rasinski and Fredericks (1991) reported on a paired reading project launched by the Akron, Ohio Public School System. Results of the project suggest that paired reading helped improve reading performance, in addition to improving reading motivation and parent/child bonding. Leach and Siddall (1990) compared paired reading with direct instruction; a pause, prompt, and praise method; and hearing methods of reading instruction. These researchers found that paired reading and direct instruction techniques resulted in significantly greater rates of progress in fluency rates than

the other methods.

Paired reading requires the reading partners to read aloud. Reading aloud to elementary school students can have many beneficial effects: a) it improves their language skills and motivates them to read on their own; b) it makes students familiar with books and their language; and c) it keeps students' attention to the context and lends itself to vocabulary learning (Saban, 1994).

In light of these successful interventions, it is reasonable to ask about the effect of this intervention strategy on ESL students who are struggling with reading fluency. If paired reading also works effectively for ESL students who struggle daily with reading, the strategy will surely have even greater instructional value. The purpose of this study was to investigate the effects of paired reading on reading fluency and accuracy of four ESL students who were less-skilled readers. Specifically, the study aimed to find out whether the paired reading intervention would increase ESL students' reading fluency and improve their reading accuracy at the same time.

Method

Participants

Four ESL students (two boys and two girls) in the first, second, and third grades from an urban school district in West Texas participated in this study. They were all of Chinese origin and had been residing in the United States for only a short period, varying from a few weeks to a few months. All were enrolled in the regular education programs of their school, but each one of them was pulled out every day for about 40 minutes to study in an ESL class.

The four participants were selected based on the following criteria: (a) English not as primary language, (b) limited English proficiency in the area of reading as determined by participants' performance on the Burns and Roe Reading Inventory, and (c) reading level one year or more below grade placement. To determine the students' reading fluency, the Burns-Roe Reading Inventory was administered to each of them. They were asked to read a list of words and some short passages. Prior to the study, the parents of all participants had expressed concern about their children's reading problems and language learning difficulties. They were willing to let their children participate in this study. The students' names used here are fictitious. Their characteristics are described below.

Wenwen

At the time of the paired reading intervention, Wenwen was a 9-year-old third grader. She had been living in the United States for less than a month when the study began. She had difficulty with word recognition, comprehension, and fluency in reading English. Wenwen was a bright girl and was a little shy. Her inadequate English hindered her from interacting with her schoolmates on a daily basis. At home, she and her parents communicated mostly in Chinese. Wenwen loved animals and liked to keep little dogs and cats as pets.

Katie

An 8-year-old girl at the onset of the study, Katie was in the second semester of second grade, and she had been living in the United States for 3 months. Katie had an outgoing personality and

adapted to the new environment fast. Her performance on the Burns and Roe indicated that she was below grade level in both word recognition and reading fluency. At school, she had difficulty completing assignment and taking tests. Katie's parents were very concerned about her learning and indicated they would seek additional help for her. Like the other three participants in the study, her primary language at home was Chinese. Katie enjoyed outdoor activities and was often playing games with her friends.

Ryan

Ryan was 9 years old and was in the third grade when the reading intervention began. Having been in this country for less than a month, he demonstrated weaknesses in listening comprehension, speaking, and reading in English. According to his parents, Ryan had broad interest. He loved painting, astronomy, and basketball in particular. However, his English proficiency was very limited and his parents expressed great concern about his language difficulties. At school, the language barrier not only prevented him from effectively learning school-related subjects, but also restricted him from interacting with his peers.

Joey

A 7-year-old boy in the first grade, Joey was happy and outgoing. When Joey first participated in the study, he had been living in this country for just three months. Understandably, his reading level was well below grade level. He was experiencing difficulty in word recognition and passage comprehension. His reading was characterized by lack of both fluency and accuracy. Joey

was enthusiastic and eager to participate in the study. His hobbies included painting, playing basketball, and playing computer games.

The Intervener

One of the authors served as the intervener (skilled reader) for the four participants. The skilled reader was a doctoral student with past experience of teaching reading to students whose mother tongue was not English. He spoke both English and Chinese fluently and was familiar with the cultural background of the participants.

Setting and Materials

The paired reading sessions were all conducted at the students' homes with permission from their parents. The environment was quiet and free from outside distractions. This instructional setting was chosen because the home environment was considered more comfortable and relaxing to the students. In this setting, it was anticipated that students would feel less pressure and restriction, and therefore, would more likely read at ease. For the purpose of one-to-one instruction, the skilled reader and student in each reading session were seated side by side at a table so that they could read from the same book. Children's storybooks served as the text materials for the study. The books were selected in accordance with the students' reading levels. During the reading sessions, the skilled reader was also provided with copies of the stories to record students' reading errors.

Measures

Oral reading fluency rate and reading accuracy were the areas of interest

in this research. Oral reading fluency was defined as reading connected text out loud with enough speed and accuracy such that the words were grouped in thought units in a smooth and flowing manner. Fluency was recorded as the rate of words per minute and calculated as the number of words read, divided by the number of seconds, multiplied by 60. Reading accuracy was recorded as a percentage and was calculated as the number of words read correctly without omission, substitution, insertion, or miscue, divided by the number of words in the passage, multiplied by 100. Self-corrections and repetitions made by the student were not counted as errors.

All sessions were tape-recorded. During each session, the intervener calculated and recorded the participant's reading fluency rate and accuracy data. In addition, a trained graduate student functioned as an independent observer. The independent observer calculated reading fluency rates and recorded accuracy data for 30% of the sessions. Using a stopwatch the independent observer listened to the audio tapes, timed the readings, marked errors on a copy of the text, and recorded fluency rates and accuracy data. The results of the intervener and the independent observer were then compared to determine interobserver reliability. It was calculated by dividing the lower rate by the higher rate and multiplying by 100. Results showed overall interobserver agreement was high for all 4 students. The interobserver agreement on Wenwen's fluency rate was 97.80%, while the agreement on her accuracy rate was 99.63%. The interobserver agreement for Katie's reading fluency and accuracy were 96.86% and

99.35%, respectively. For Ryan's reading, the percentages of agreement on fluency and accuracy were 97.36% and 99.29%. In Joey's case, interobserver agreement was 93.08% for reading fluency and 98.93% for accuracy percentages.

Experimental Conditions and Design

This study used a modified single-subject A-B design to examine the effect of the paired reading method of instruction. This design provides a framework within which behavior can be objectively measured under controlled conditions (Tawney & Gast, 1984).

Baseline

To determine the participants' reading fluency and accuracy prior to the intervention, sessions were conducted to collect baseline data for each student. For Wenwen, data collection continued until a relatively stable fluency level was observed. During baseline, the intervener observed and recorded her reading fluency rate and recorded the accuracy percentage. The other three students (Katie, Ryan, and Joey) were unable to read independently. As was determined by administering the Burns-Roe Reading Inventory, these three students read the preprimer or primer passages at the frustration level. Their fluency rates were from less than 15 words per minute to about 40 words per minute, while their error rates were over 40%. Because of their tremendous difficulty in reading, and to avoid further frustration, intervention sessions started immediately following the administration of the reading inventory. The results of the inventory

administrations were used as the baseline fluency level of the three students. In order to monitor their independent reading fluency levels, probes were conducted regularly, in which the students were asked to read passages by themselves (without the paired reading interventions).

Intervention

The intervention sessions began with the skilled reader reading first. The student was instructed to follow along during reading. At the end of each passage, the roles were reversed, and the student read the same passage. If the student miscued or omitted words, the skilled reader did not interrupt but made notes of any errors. However, if the student hesitated, the skilled reader waited for 3 seconds and if the student did not respond, the skilled reader pronounced the word for the student and recorded it as an error. During the first few sessions, the passages being read each time were shorter so that the students did not struggle along. Gradually, each passage became longer (up to 30 or more words). Each student read for approximately 20 minutes per session. As in the baseline phase, probes were also conducted to examine students' independent performance without paired reading.

Maintenance

A maintenance phase was used to examine whether or not the effects of paired reading would be maintained once the intervention was not continued on a daily basis. In this phase, the students still had paired reading; however, the sessions were conducted only approximately once every 10 days.

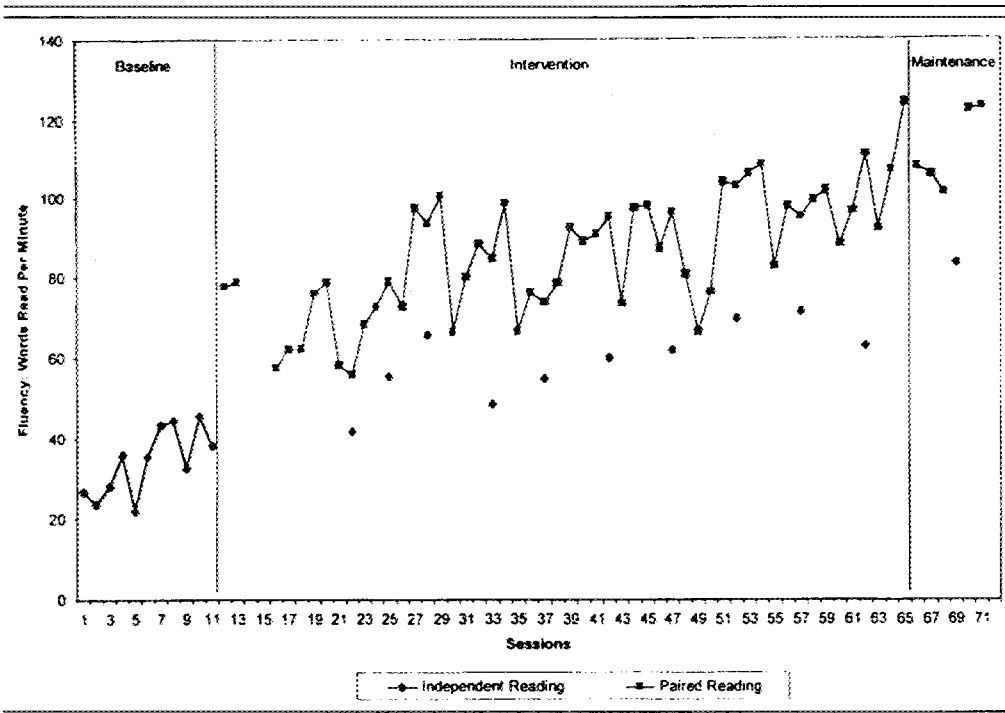
Results

Reading Fluency

Figures 1 to 4 present the reading fluency of Wenwen, Katie, Ryan, and Joey, respectively. During the baseline phase, Wenwen was reading at an average rate of 34 words per minute. After the intervention of paired reading started, her reading showed immediate improvement in fluency. During the first two sessions of intervention, she was reading at 78 and 79 words per minute. During the following sessions, her rate showed variations. However,

the general trend was on the rise. The mean of her fluency rate during baseline was 86 words per minute. Wenwen was able to make more progress during the maintenance phase by reading stories at an average rate of 112 words per minute. This was considered a significant improvement over her baseline performance. To evaluate her independent reading, probes were conducted during both intervention and maintenance. The result showed her reading performance with paired reading was better than her independent reading performance.

Figure 1
Wenwen's Reading Fluency Performance

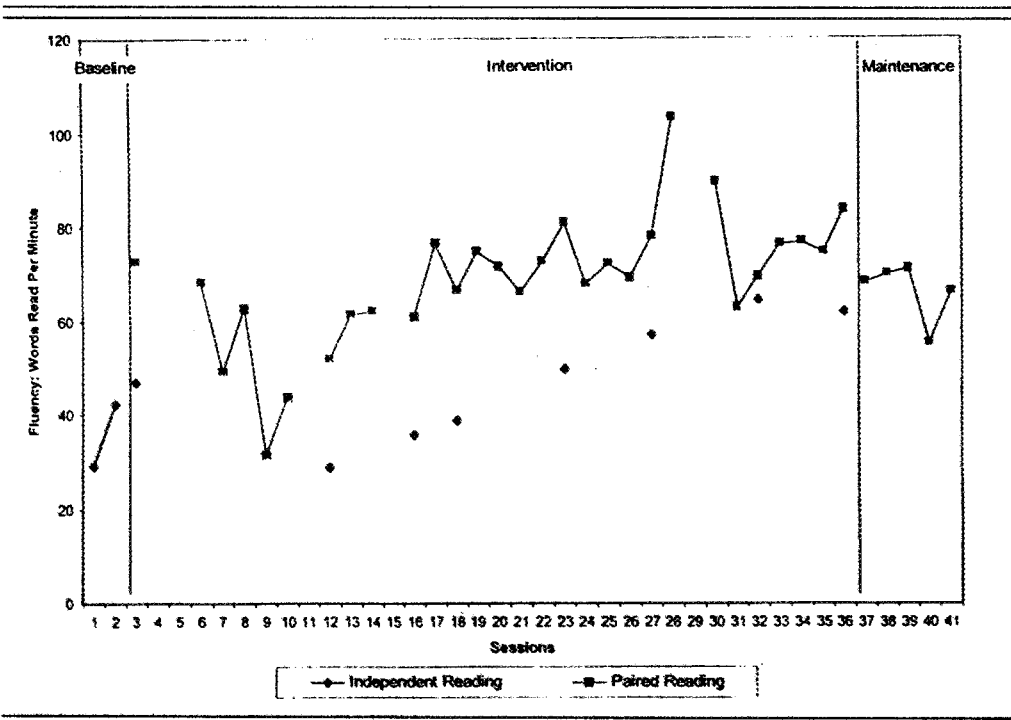


Katie, Ryan, and Joey were students who experienced tremendous amount of difficulty in reading independently. They had very limited vocabulary and knew few phonological rules for reading words out loud. Because of this, no baseline sessions were conducted for these three students. Instead, their performances on the Burns-Roe Reading Inventory were used as baseline data.

As shown in Figure 2, Katie's fluency rate in reading two passages of the Burns-Roe Reading Inventory was low, averaging 35.5 words per minute. This rate was taken as her baseline performance. When she started paired reading with the intervener, there was an apparent increase in her fluency. She was able to read at 73 words per minute

at the very first session of intervention. During this session, she was also asked to read a story by herself. Her rate of independent reading was approximately 47 words per minute, much lower than that of paired reading. During the following intervention sessions, her reading showed variations in terms of fluency rate. However, a therapeutic trend was observed from the graph. Overall, her average paired reading fluency rate during the intervention phase was 69 words per minute. On the other hand, her probed independent reading fluency average during the same phase was 48 words per minute. After the intervention sessions stopped, Katie was still reading at an average rate of 66 words per minute.

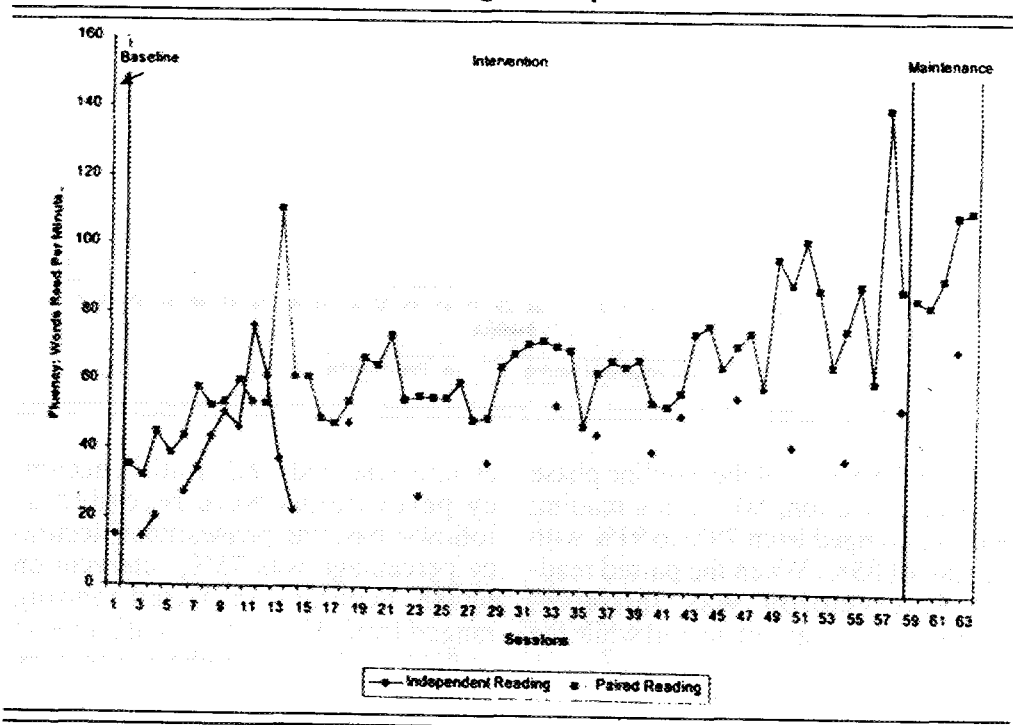
Figure 2
Katie's Reading Fluency Performance



Ryan's reading of a Burns-Roe Reading Inventory passage indicated that he had great difficulty with reading fluency because he had very limited vocabulary. He was reading at a rate of less than 15 words per minute. During the intervention sessions, Ryan demonstrated a gradual but steady increase in his reading fluency rate. On average, he read the stories at the rate of nearly 65 words per minute. His average rate of independent reading during this phase was about 42 words per minute. During maintenance, Ryan was able to read stories even more fluently, with a mean of 96 words per minute.

Joey's fluency rate is shown in Figure 4. Prior to intervention, his reading fluency was determined to be 35 words per minute by using the Burns-Roe Reading Inventory. When he was introduced to paired reading, his fluency rate showed increase. During the first 7 intervention sessions, he was also asked to read story passages independently. Compared with this independent reading, his performance in paired reading during these sessions was better in terms of fluency rate. During later sessions, his independent reading fluency was probed only occasionally. His average paired reading fluency rate during intervention was 54.59 words per

Figure 3
Ryan's Reading Fluency Performance

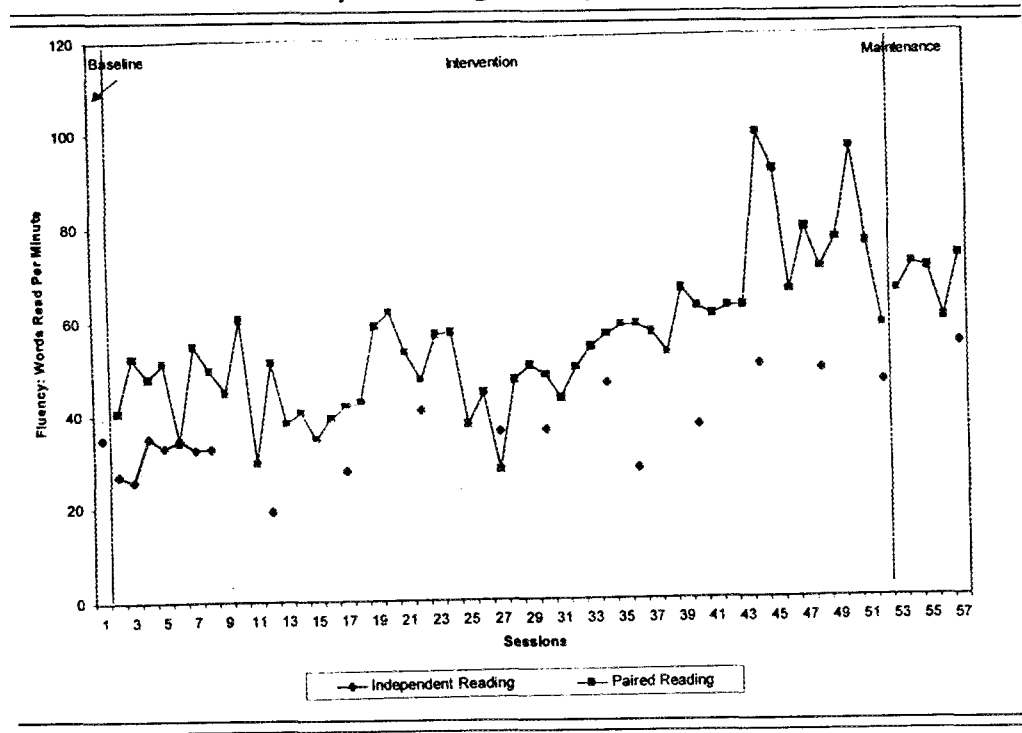


minute, higher than that of baseline. During maintenance, his fluency rate was even higher, averaging 67.33 words per minute.

Reading Accuracy

Another aspect of reading under investigation in this study was students' reading accuracy. It was assessed by calculating the percentage of words read correctly by the students. The result is presented in Table 1.

Figure 4
Joey's Reading Fluency Performance



Over the course of the baseline phase of data collection, Wenwen's reading accuracy ranged from 79% to 91% with a mean of 85%. When the paired reading intervention was initiated, Wenwen's accuracy increased while the number of her reading errors decreased. On average, her accuracy rate increased to 96% during the intervention phase. In the maintenance phase, her accuracy

rate averaged 99%. Katie's accuracy percentages were recorded as follows: baseline phase, mean accuracy percentage was 75%; intervention phase, accuracy in paired reading ranged from 72% to 96% with a mean of 88%; maintenance phase: accuracy ranged from 84% to 90% with a mean of 87%. Both Ryan and Joey had great difficulty in reading accurately during

the baseline phase. Error rate in their readings was recorded over 40%. After the introduction of paired reading, however, they both improved in reading accuracy. In the intervention phase, Ryan's accuracy ranged from 56% to 100% with a mean of 89%. His accuracy in the maintenance phase was even higher, with a mean of 96%. Joey's accuracy in the intervention phase ranged from 74% to 99% with a mean of 91%. In the maintenance phase, his accuracy ranged from 94% to 98% with a mean of 96%.

Discussion

In this study, the intervention of paired reading helped the 4 students improve both reading fluency and reading accuracy. Compared with their own performances at the beginning of the study, the students were able to read more fluently and more accurately during the maintenance phase of the experiment. This result provides further evidence that one-to-one instruction is effective in helping students develop efficient reading skills (Wasik & Slavin, 1993; Juel, 1996). The effectiveness of one-to-one instruc-

Table 1
Mean accuracy percentages by student and phase of study

Name	Baseline Phase	Intervention Phase		Maintenance Phase
		Probe	Paired Reading	
Wenwen	85%	92%	96%	99%
Katie	75%	79%	88%	87%
Ryan	52%*	80%	89%	96%
Joey	57%*	76%	91%	97%

* Note: Ryan and Joey had only one reading during the baseline phase.

tion is not limited to students who speak English as a native language. Those who speak English as a second language can also benefit from such instructional strategy.

For ESL students who have limited English proficiency, paired reading has a number of advantages over traditional classroom reading instruction. First, paired reading reduces students' pressure and anxiety, which they often

experience in reading classes at school. Because many ESL students have poor command of English, they tend to be shy or reluctant to speak out. This reduces their chance to practice the new language. Paired reading is a form of individualized tutoring. In this learning context, students feel less pressure than in class instruction. Thus they may be more likely to focus on the reading activity. Consequently, they are likely

to make progress and experience success.

Second, paired reading gives ESL students more opportunity to practice reading in a new language. ESL students with limited English proficiency need constant modeling and feedback, without which they will end up with inaccurate pronunciations and intonations. The students in this study all came from families in which English was rarely spoken among family members. The students had little opportunity to read books with experienced readers at home. At school, their opportunity to read orally to a teacher or other skilled readers was limited. This lack of opportunity may hinder their progress in developing efficient reading skills. When the researchers of this study contacted the parents about the paired reading project, all of them were excited and willing to let their children participate in the study. The frequent practice undoubtedly helped them become more fluent in reading. The constant modeling and feedback were believed to have helped them improve reading accuracy.

Third, paired reading was flexible and easy to make adaptations. The students in this study began with very low reading skills. To accommodate to their special needs, the storybooks were selected according to their different reading levels. As they progressed, more difficult books were used. Such adaptations were to ensure that the books were neither too difficult nor too easy for the students. In addition, the intervener varied the reading speed according to the difficulty level of the reading material and the reading level of the students. Thus, the students always felt the challenge, which was

needed to stimulate their greater effort. At the same time, the challenge was not so overwhelming that it frustrated the students. The frequent adaptations assured students' steady progress throughout the study.

Although the results were positive for the four participating students, there are a number of limitations to this study. First, the small sample size limits the generalizability of the results. Further replication of this research across more subjects is warranted in order to gain a clearer picture of the effectiveness of the intervention for students of differing ability levels, cognitive characteristics, temperaments, and age levels.

Second, the study lasted for more than eight months (except for Katie, whose participation was shortened to five months because her parents were relocated to another city). During this period of time, the students were attending a public school where they had opportunities to interact with teachers and peers. There was reason to believe their overall language skills had improved as a result of school learning and daily exposure to English at this natural environment. This maturity factor thus could also have contributed to the students' increase in reading fluency and accuracy. For this reason, this study used probes to explore the students' natural improvement. Results indicated their independent reading did increase over the course of the study. Therefore, the result of the study should only be interpreted in the light of this understanding.

Conclusion

In conclusion, the intervention of paired reading can be effectively used

to improve ESL students' reading performance in English. With its unique characteristics, this one-to-one intervention helps ESL students by providing constant modeling and feedback as well as plenty opportunity to practice. The students who participated in this study all demonstrated steady increases in reading fluency and reading accuracy. This finding is particularly significant to those educators who are seeking ways to help ESL students with reading in English.

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