

Effects of Two Implementations of Cross-Age Repeated Reading Treatments

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Abstract

Learning sight words enables learners to decode unfamiliar words by sight, thus learners can read words in text more efficiently. Penner-Wilger (2008) asserted that when achieving oral reading fluency (ORF) learners would have no problem identifying letters, syllables, and high frequency words. Preliminary finding showed integration of ABRACADABRA (ABRA) online activities into EFL classroom beneficial to young learners' sight word reading. Since Vacca, Vacca, Gove, Burkey, Lenhart and McKeon proposed cross-age repeated reading as an effective strategy, this study compared effects of two implementations of ABRA activities on improving learners' decoding ability and ORF. Twenty students were randomly assigned to receive instructor-led or learner-led cross-age repeated reading treatments. Forty three sight words and one reading article were practiced over a 6-week period by pairing a fourth grader and a fifth grader. With respective reliability coefficients of .869, .978, and .870 for decoding test, ORF test, and questionnaire, descriptive statistics showed instructor-led group had higher gain scores than learner-led group in both decoding and ORF performance. With an average positive attitude of 84% for instructor-led group and 77% for learner-led group, results revealed significant differences in: (1) instructor-led group was highly positive toward using ABRA story to facilitate their ORF; (2) tutees in instructor-led group highly agreed tutors' explicit recording of their decoding errors was useful in improving tutors' ORF; (3) instructor-led group considered ABRA story useful in enhancing their reading comprehension.

Keywords: cross-age repeated reading, sight word decoding, oral reading fluency

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Introduction

Reading ability is the most significant basis of many other academic skills (Flanagan, West, & Walston, 2004; Lyon, 1998, 2003). In addition, evidence shows that the early acquisition of reading skills could avoid the future failure and difficulties of reading (Snow, Burns, & Griffin, 1998). In other words, students who fail to obtain sufficient reading skills during early primary school years would likely experience learning difficulty. Therefore, it is important to help young language learners acquire adequate reading skills. In order to prepare them to achieve successful reading, several linguistic processes such as letter identification, word recognition, and decoding are required. The present study thus focuses on these dimensions to improve students' acquisition of sight words and their oral reading fluency (ORF).

Based on prior studies, learning sight words enables learners to decode unfamiliar words by sight, thus learners can read words in text more efficiently (Ehri, 2005). Penner-Wilger (2008) further asserted that when achieving ORF learners would have no problem identifying letters, syllables, and high frequency words. Building on these studies, preliminary finding showed the integration of ABRACADABRA (ABRA) online activities into EFL classroom beneficial to young learners' sight word reading (Savage, Abrami, Hipps & Deault, 2008). On the other hand, Vacca, Vacca, Gove, Burkey, Lenhart and McKeon (2006) proposed that cross-age repeated reading is an effective strategy to promote language acquisition. To investigate the efficiency of different implementations of the cross-age repeated reading strategy, this study therefore compares the effects of instructor-led and learner-led cross-age repeated reading instruction on improving EFL young learners' acquisition of sight words and their ORF.

Literature Review

Features of Instructor-Led Instruction and Learner-Led Instruction

Mithaug, Mithaug, Agran, Martin, and Wehmeyer (2003) indicated that direct instruction from teachers may particularly help with the explanation of new skills and processes. Horton (2011) defined instructor-led instruction as a teaching style in which the instructor completely controls the content and pace while the learners are seen as passive. Furthermore, in the instructor-led settings, the instructors could be regarded as the helpers, who have gained more knowledge and experience in terms of the teaching and learning materials. For the instructors, namely, the ones who facilitate learning, they help with the delivery of the materials to the learners, and who are in charge of answering questions and solving the problems raised, adjusting the course to meet the needs of the learners, providing authority the learners need for motivation (Horton, 2011).

On the other hand, previous study also revealed that the greater the control of students over their learning, the more effective towards learning they develop (Biggs & Tang, 2011). According to Horton (2011), learner-led instruction is a teaching style in which the learners set the pace of the activities and decide the sequence of them. In learner-led instruction, the learners actively determine the time to take the course, which activities to perform, and when to end the activity. In the instructor-led instruction, the instructors are responsible for designing the activities, solving

problems, and motivating the students in the process. Learner-led teaching style pays more attention to the students' responsibility of their own learning and they are not required to follow the instructor's schedule. Instead, when and how much they will learn depend on their willingness. Furthermore, it is proposed that learner-led instruction prepares the learners to be independent by having more responsibility in the process of learning, and the students are taken as the center of the whole learning experience. Last but not least, learner-led instruction also emphasizes the differences between learners in terms of their learning pace, learning styles and etc.

Features of Blended Learning

Neumeier (2005) describes blended learning as a combination of face-to-face and computer-assisted learning in a single teaching and learning environment. Leakey and Ranchoux (2006) also showed that the learners' attitudes towards blended learning are positive and they consider this way motivating and prefer this way to the traditional classroom-based learning. Horton (2011) proposed that blended learning could make the whole learning process changed from instructor-led to learner-led. The instructor-led e-learning is the way in which the instructor controls the pace of learning, while the learner-led e-learning is the one in which the learners themselves decide pace and the outcomes of the activities. Therefore, experimental studies should be conducted to compare the effectiveness between the instructor-led e-learning and the learner-led e-learning, and further explore learners' attitudes toward these two types of e-learning. On the other hand, by mixing the Internet or digital media with traditional classroom instructions, blended learning have been regarded as the different things personalized for different people (Driscoll, 2003). In blended learning, academically the learning involves something old as well as the newest ones (Driscoll, 2003).

Significance of Sight Words

Sight words are defined as the words that could be recognized with little effort or could be read quickly without detailed decoding (Rasinski & Padak, 2008). It is shown that when learners read texts, printed words are the ideas that come to their mind. After their eyes picked up the words, they would try to decode the words, which will further activate meanings processing (Rayner & Pollatsek, 1989). Words are the fundamental units that readers firstly pick up by the printed words to construct meaning. Therefore, the major way to develop reading skills is to facilitate the accurate and automatic recognition of written words (Ehri, 2005). Hughes and Hall (1989) also defined sight words as a visible and obvious response controlled by a printed stimulus. Thus, it is shown that when learners read texts, printed words are the ideas that come to their mind. After their eyes picked up the words, they would try to decode the words, which will further activate meanings processing (Rayner & Pollatsek, 1989). It has been shown that the development of sight word reading competences will enhance the children's early reading foundation skills (Carnine, Silbert & Tarver, 2004).

Significance of Oral Reading Fluency

Oral reading fluency is defined as the translation of written text into an output orally with rate and accuracy (Speece & Ritchey, 2005). Oral Reading fluency has been

regarded as a crucial elements in the success of learners' future reading when they are still in primary grades (National Reading Panel, 2000). Researchers pointed out that the achievement of oral reading fluency in primary grades would help produce good comprehension (Schwanenflugel, Meisinger, Wisenbaker, Kuhn, Strauss, & Morris, 2006). In addition, Schwanenflugel et al. (2006) proposed that oral reading fluency could be a predictor for the success of reading comprehension, and it is more efficient than any other comprehensive tests of reading.

The Relationship Between Sight Words and Oral Reading Fluency

Readers' ability to decode words with speed and accuracy builds the foundation in fundamental vocabulary, which further leads to the fluency of the reading (Carreker, 1999). Adams (1990) asserted that to achieve fluency reading with understanding, readers are required to recognize about 95 percent of the sight words. Therefore, sight word instruction positively makes difference to fluent reading (Carreker, 1999). On the other hand, Adams (1990) pointed out that usually the less fluent readers would pay more attention to the individual words, and therefore the ability to identify words well is an important reading skill, which helps students with the transition from word recognition in isolation to the fluent reading of the context. One of the elements of oral reading fluency, automaticity, illustrates that the fast and accurate ability of identifying words with less or even no efforts could actually serve as the predictor of the learners' future success of comprehension of reading (Carreker, 1999). Therefore, oral reading fluency, namely, is based on the word identification with automaticity and it could facilitate the reaction of the learners towards the reading texts to form more advanced comprehension of reading (Carreker, 1999).

Repeated Reading as an Effective Reading Strategy

Previous studies indicated that repeated reading (RR) is helpful for the enhancement of reading fluency, and repeated reading is also defined as the way to get learners to repeat the same passage repetitively with smooth and accuracy until they meet a specified fluency criterion (National Institute of Child Health and Human Development, 2000). On the other hand, Samuel (1979) proposed the benefits that repeated reading bring to the improvement of oral reading fluency, resembling what previous studies recognized that the reading rates would be faster if the unskilled students receive the repeated reading instruction in a regular classroom instruction. Thus, the use of this reading strategy is to get the students to develop their fluency of reading, and further lead to the comprehension of reading. Based on prior study, repeated reading can be practiced in both whole-class and small-group instruction (National Institute of Child Health and Human Development, 2000). Undoubtedly, the strategy of repeated reading could be practiced while students are in pairs. They could be reading to each other, and this kind of grouping could be either same-age or cross-age.

Significance of Cross-Age Paired Reading

Vacca, Vacca, Gove, McKeon, Burkey, and Lenhert (2006) suggested that one method to conduct fluency practice is to use a paired reading strategy with peer tutoring. Moreover, Bergeron (1998) suggested that when it comes to the paired reading strategy, the pairing could be either same-age or cross-age. Vacca et al. (2006)

further suggested that the most advocated structured pair work would be the one in which a more able child (tutor) helps a less able child (tutee) while they are doing a cooperative learning. One way to provide assisted reading is to get the less fluent reader to read with a more fluent partner, and that partner could be a classmate (Rasinski, et al., 2005). Vacca et al. (2006) showed that cross-age reading accesses the young learners with legitimate reason for oral reading performance and literary experiences.

The specific research questions are as follows.

1. Is instructor-led instruction effective in promoting EFL young learners' acquisition of sight words? Is learner-led instruction effective in promoting EFL young learners' acquisition of sight words? Between these two types of instruction, which one is more effective in promoting EFL young learners' acquisition of sight words?
2. Is instructor-led cross-age repeated reading effective in improving EFL young learners' ORF? Is learner-led cross-age repeated reading effective in improving EFL young learners' ORF? Between the two types of cross-age repeated reading training, which one is more effective in improving EFL young learners' ORF?
3. What are the learners' attitudes toward the instructor-led blended instruction and the learner-led blended instruction?

Methodology

Participants

The participants comprised of 20 students including 10 fourth graders and 10 fifth graders from a supplementary program in a public elementary school in central Taiwan. One fourth grader was paired with a fifth grader of better sight words and ORF performance. The ten student pairs were evenly divided into two groups to respectively receive the instructor-led cross-age repeated reading instruction or the learner-led cross-age repeated reading instruction.

Teaching materials

Forty three sight words, in accordance with the vocabulary in the high frequency wordlist compiled by Taiwan's Ministry of Education, were chosen from the ABRACADABRA (ABRA) website. Additionally, a reading passage "The Frogs and Well" was selected from the ABRA as the ORF practice paragraph and practiced during the 4-week experiment. The reading passage was comprised of 237 words. The first half of the passage containing 146 words served as the teaching material while the second half of the passage containing 91 words served as the ORF pretest and the posttest.

Treatments

The experiment lasted six weeks including four weeks of intervention and two weeks for pretest and posttest. The instructor-led group was assigned to a regular classroom equipped with a computer with internet access and a projector, whereas the learner-led group was assigned to a computer lab with one-on-one computer use. The

teaching time allocated for the sight words instruction is 60 minutes (40 minutes + 20 minutes), whereas that for the ORF instruction is 80 minutes (60 minutes + 20 minutes) per week, respectively.

During the sight words instruction, both groups received the same 40 minutes of treatment using flashcards and PPTs. However, in the other 20 minutes, in the instructor-led classroom the teacher accessed the ABRA website, projected it to a screen, and guided the students to learn the sight words using the ABRA activities. In contrast, in the learner-led classroom every student had an individual access to the ABRA website to learn sight words.

For the ORF training, in each cross-age repeated reading training session, the teacher first trained the tutors to practice reading the ABRA passage “The Frogs and Well”. Both groups received the same 60 minutes of cross-age repeated reading training. In a similar vein, in the other 20 minutes, in the instructor-led classroom the teacher guided the students to practice oral reading “The Frogs and Well” passage through choral reading technique, whereas in the learner-led classroom every student accessed the ABRA website to read aloud the same assigned passage under his/her own pace by using a headset.

Thus, the major difference between the two blended treatments lies in the 40 minutes (20 minutes for sight word decoding and 20 minutes for passage oral reading) of instructor-led class wide access vs. learner-led individual access to the ABRA online activities for practicing sight words and passage reading.

Instruments

The pretest included both sight words and an oral reading passage. Twenty sight words selected from the 43 taught sight words were used to measure the learners’ decoding achievement while the 91-word passage selected from the ABRA website was used to measure the learners’ oral reading fluency proficiency. The posttest was the same as the pretest. Additionally, a questionnaire, including four parts of twenty-one 4-point Likert-scale questions, was distributed to the participants after the treatment to investigate the learners’ attitudes toward these two implementations of blended instruction. The reliability coefficients of the decoding test, the ORF test and the questionnaire were .869, .978, and .870 respectively.

Data collection

According to the pretest and posttest scores, descriptive statistics were performed and paired-samples *t* tests were further conducted to see if there was any significant growth in the participants’ acquisition of sight words and improvement in their ORF after receiving the four-week treatment. To compare the effects between the two implementations of blended treatments, independent samples *t* tests were used to compare the two research groups’ performance.

Results and Discussion

In order to answer the research questions, independent samples *t*-tests were used to determine whether the two groups were homogeneous before the treatment. In Table 1,

the independent samples *t* test on the two groups' pretest performance in the sight words decoding revealed that there is no significant difference between the two groups ($t = .044$, $p = .966$). In Table 2, the independent samples *t* test on the two groups' pretest ORF performance likewise showed that there is no significant difference between the two groups ($t = .342$, $p = .736$). Hence, before the treatment the two groups are homogeneous in their sight word decoding and ORF performance.

Table 1. Descriptive Statistics and Independent Samples T Test Result on Sight Word Decoding Pretest Scores for the Two Groups.

| | N | Mean | SD | Minimal | Maximal | <i>t</i> | <i>p</i> |
|----------------------|----|------|------|---------|---------|----------|----------|
| Instructor-led group | 10 | 6.20 | 4.62 | 1 | 4 | .044 | .966 |
| Learner-led group | 10 | 6.30 | 6.30 | 1 | 18 | | |

Maximal score: 20, $p > .05$

Table 2. Descriptive Statistics and Independent Samples T Test Result on ORF Pretest Scores for the Two Groups.

| | N | Mean | SD | Minimal | Maximal | <i>t</i> | <i>p</i> |
|----------------------|----|-------|-------|---------|---------|----------|----------|
| Instructor-led group | 10 | 12.10 | 13.63 | 0 | 33 | .342 | .736 |
| Learner-led group | 10 | 14.30 | 15.07 | 0 | 43 | | |

Maximal score: 91, $p > .05$

To answer the first research question, in Table 3, paired-samples *t* test analysis on comparison of the sight word decoding pretest and posttest scores for the instructor-led group revealed significant difference ($t = 2.851$, $p = .019$). This indicates that the instructor-led group had made significant progress in sight word decoding.

Table 3. Descriptive Statistics and Paired-samples T Test Result on Sight Word Decoding Pretest and Posttest Scores for the Instructor-led Group.

| | N | Mean | SD | Minimal | Maximal | <i>t</i> | <i>p</i> |
|----------|----|-------|-------|---------|---------|----------|----------|
| Pretest | 10 | 6.20 | 4.622 | 1 | 4 | 2.851 | .019 |
| Posttest | 10 | 12.40 | 5.337 | 12 | 20 | | |

Maximal score: 20, $p < .05$

In Table 4, paired-samples *t* test analysis on the sight word decoding pretest and posttest scores the learner-led group showed no significant difference ($t = 1.854$, $p = .07$). This indicates that though the learner-led group had made some progress, it was not strong enough to show significant improvement in their sight word decoding.

Table 4. Descriptive Statistics and Paired-samples T Test Result on Sight Word Decoding Pretest and Posttest Scores for the Learner-led Group.

| | N | Mean | SD | Minimal | Maximal | <i>t</i> | <i>p</i> |
|----------|----|-------|-------|---------|---------|----------|----------|
| Pretest | 10 | 6.30 | 6.30 | 1 | 18 | 1.854 | .097 |
| Posttest | 10 | 11.00 | 11.00 | 3 | 18 | | |

Maximal score: 20, $p > .05$

Since both groups made improvements in their sight word decoding performance after receiving the respective treatment, comparison on sight word decoding posttest scores between the two groups was further made. As shown in Table 5, the independent samples *t* test on the two groups' posttest performance revealed no significant difference ($t = 0.614$, $p = .547$) indicating that there is no significant inter-group difference.

Table 5. Descriptive Statistics and Independent Samples T Test Result on Sight Word Decoding Posttest Scores for the Two Groups.

| | N | Mean | SD | Minimal | Maximal | <i>t</i> | <i>p</i> |
|----------------------|----|-------|-------|---------|---------|----------|----------|
| Instructor-led group | 10 | 12.40 | 5.337 | 12 | 20 | .614 | .547 |
| Learner-led group | 10 | 11.00 | 4.853 | 3 | 18 | | |

Maximal score: 20, $p > .05$

As there is no significant difference in sight words decoding posttest scores between the two groups, the two groups gain scores were shown in Table 6. The gain score of the instructor-led group was 6.20, whereas that for the learner-led group was 4.70; this indicated that the instructor-led group performed better than the learner-led group.

Table 6. Descriptive Statistics and Independent Samples T Test Result on Sight Word Decoding Gain Scores for the Two Groups.

| | N | Mean | SD | <i>t</i> | <i>p</i> |
|----------------------|----|------|-------|----------|----------|
| Instructor-led group | 10 | 6.20 | 2.150 | 1.301 | .210 |
| Learner-led group | 10 | 4.70 | 2.946 | | |

Maximal score: 20, $p > .05$

To answer the second question, the descriptive statistics and the paired-samples *t* test analyses were used to compare the intra-group performance. In Table 7, paired-samples *t* test analysis on the ORF pretest and posttest scores for the instructor-led group revealed that the instructor-led group made progress in ORF though statistically not remarkable ($t = 1.303$, $p = .225$). It's likely that the small sample size of the current study which makes it much more difficult to reach a significant level.

Table 7. Descriptive Statistics and Paired-samples T Test Result on ORF Pretest and Posttest Scores for the Instructor-led Cross-age Group.

| | N | Mean | SD | Minimal | Maximal | <i>t</i> | <i>p</i> |
|----------|----|-------|--------|---------|---------|----------|----------|
| Pretest | 10 | 12.10 | 13.634 | 0 | 33 | 1.303 | .225 |
| Posttest | 10 | 24.70 | 20.078 | 1 | 53 | | |

Maximal score: 91, $p > .05$

From Table 8, paired-samples *t* test analysis on the ORF pretest and posttest scores for the learner-led group revealed that the learner-led group made some progress although not significant ($t = 0.813, p = .437$).

Table 8. Descriptive Statistics and Paired-samples T Test Result on ORF Pretest and Posttest Scores for the Learner-led Cross-age Group.

| | N | Mean | SD | Minimal | Maximal | <i>t</i> | <i>p</i> |
|----------|----|-------|--------|---------|---------|----------|----------|
| Pretest | 10 | 14.30 | 15.071 | 0 | 43 | .813 | .437 |
| Posttest | 10 | 20.10 | 13.510 | 4 | 40 | | |

Maximal score: 91, $p > .05$

To compare the two groups' ORF posttest performance, Table 9 revealed that the *p* value was .551 indicating insignificant difference has been found between the two groups. Nevertheless, as shown in Table 10 the gain score of the instructor-led group was 12.60, while that for the learner-led group was 5.80; this indicated that the instructor-led group had higher gain scores than the learner-led group.

Table 9. Descriptive Statistics and Independent Samples T Test Result on ORF Posttest Scores for the Two Groups.

| | N | Mean | SD | <i>t</i> | <i>p</i> |
|----------------------|----|-------|--------|----------|----------|
| Instructor-led group | 10 | 24.70 | 20.078 | .607 | .551 |
| Learner-led group | 10 | 20.10 | 13.051 | | |

Maximal score: 91, $p > .05$

Table 10. Descriptive Statistics and Independent Samples T Test Result on ORF Gain Score for the Two Groups.

| | N | Mean | SD | <i>t</i> | <i>p</i> |
|----------------------|----|-------|-------|----------|----------|
| Instructor-led group | 10 | 12.60 | 9.548 | 1.781 | .092 |
| Learner-led group | 10 | 5.80 | 7.391 | | |

Maximal score: 91, $p > .05$

In summary, no significant intergroup differences were found in either the sight word decoding posttest or the ORF posttest; however, the descriptive statistics shown in Table 6 and Table 10 suggested that the instructor-led group constantly had higher

gain scores than the learner-led group in both the sight word decoding and the ORF performance. Thus, questionnaire was used to explore the participants' respective attitudes toward the two kinds of intervention.

The treatment questionnaire consists of four parts including 21 questions. The participants were asked to rate their perception by choosing 1 (strongly disagree), 2 (disagree), 3 (agree), and 4 (strongly agree). Part I of the questionnaire (Items 1~ 3) was used to find out the learners' respective attitudes toward using flashcards to assist their sight word learning. In Table 11, descriptive statistics and independent samples *t* test analyses revealed that the participants in both groups agreed with the use of flashcards to assist their sight word learning ($t = 1.080, p = .347$).

Table 11. The Participants' Attitudes toward Using Flashcards to Assist their Sight Words Learning.

| Group | Instructor-led group | | Learner-led group | | <i>t</i> | <i>p</i> |
|---------|----------------------|------|-------------------|-------|----------|----------|
| Item | Mean | SD | Mean | SD | | |
| 1 | 3.40 | .966 | 3.20 | .919 | .474 | .614 |
| 2 | 3.40 | .699 | 3.00 | 1.054 | 1.000 | .331 |
| 3 | 3.60 | .699 | 3.00 | .816 | 1.765 | .095 |
| Average | 3.47 | .788 | 3.07 | .930 | 1.080 | .347 |

Maximal score: 4, $p > .05$

Part II to Part IV of the questionnaire were used to answer the third research question. For Part II of the questionnaire (Items 4~6), Table 12 showed the average mean for the instructor-led group was 3.47 and the learner-led group was 2.93. Though the average mean score of the instructor-led group was higher than that of the learner-led group, the statistical analysis did not yield significant difference between the two groups ($t = 1.679, p = .153$). This indicates that both groups considered the ABRA story useful in facilitating their ORF. Focusing on Item 4, with respective mean scores of 3.70 and 3.10 for the instructor-led group and the learner-led group, the instructor-led group was found to have significantly more positive attitude toward using the ABRA story to facilitate their ORF ($t = 2.151, p = .045$).

Table 12. The Participants' Attitudes toward Using the ABRA Story to Facilitate their ORF.

| Group | Instructor-led group | | Learner-led group | | <i>t</i> | <i>p</i> |
|---------|----------------------|------|-------------------|-------|----------|----------|
| Item | Mean | SD | Mean | SD | | |
| 4 | 3.70 | .483 | 3.10 | .738 | 2.151 | *.045 |
| 5 | 3.20 | .632 | 2.90 | .738 | .976 | .342 |
| 6 | 3.50 | .527 | 2.80 | 1.033 | 1.909 | .072 |
| Average | 3.47 | .547 | 2.93 | .836 | 1.679 | .153 |

Maximal score: 4, $p > .05$

For Part III of the questionnaire (Items 7~12), Table 13 showed that the average mean scores were 3.25 and 2.68 for the instructor-led group and the learner-led group respectively. This revealed that the participants in both groups agreed with the use of

the cross-age repeated reading tutoring instruction. Moreover, centering on Item 8, the independent samples *t* test analysis indicated that the tutees in the instructor-led group had significantly more positive attitude than the learner-led group in the tutors' explicit recording of their decoding errors ($t = 2.238, p = .046$). This indicates that the tutees in the instructor-led group highly appreciated the interaction between the tutors and the tutees.

Table 13. The Participants' Attitudes toward the Cross-age Repeated Reading Tutoring Instruction.

| Group Item | Instructor-led group | | Learner-led group | | <i>t</i> | <i>p</i> |
|---------------|----------------------|------|-------------------|-------|----------|----------|
| | Mean | SD | Mean | SD | | |
| 7 | 3.40 | .966 | 2.50 | 1.179 | 1.868 | 0.76 |
| 8 | 3.50 | .707 | 2.70 | .949 | 2.238 | *.046 |
| 9 | 3.00 | .816 | 2.60 | .699 | 1.177 | .255 |
| 10 | 3.30 | .949 | 2.60 | 1.075 | 1.544 | .140 |
| 11 | 2.90 | .994 | 2.40 | 1.075 | 1.080 | .295 |
| 12 | 3.40 | .699 | 3.30 | .483 | .374 | .714 |
| Average | 3.25 | .855 | 2.68 | .910 | 1.380 | .432 |

Maximal: 4, $p > .05$

For Part IV of the questionnaire (Items 13~21), Table 14 showed that the average mean scores were 3.40 and 3.07 for the instructor-led and the learner-led groups respectively. Result of the statistical analysis indicated that both groups were highly positive toward using the ABRA website to assist their acquisition of sight words and improve their ORF ($t = 1.145, p = .323$). Furthermore, focusing on Item 15, the mean score of the instructor-led group was 3.70, whereas that for the learner-led group was 3.20. The independent samples *t* test analysis revealed that the participants in the instructor-led group had significantly more positive attitude toward using the ABRA website to assist their acquisition of sight words and ORF through the instructor's guidance ($t = 2.466, p = .024$).

Table14. The Participants’ Attitudes toward Using the ABRA Website to Assist their Acquisition of Sight Words and Improve their ORF.

| Group | Instructor-led group | | Learner-led group | | <i>t</i> | <i>p</i> |
|---------|----------------------|------|-------------------|------|----------|----------|
| | Mean | SD | Mean | SD | | |
| 13 | 3.20 | .919 | 3.50 | .527 | .896 | .382 |
| 14 | 3.60 | .516 | 3.30 | .483 | 1.342 | .196 |
| 15 | 3.70 | .483 | 3.20 | .422 | 2.466 | *.024 |
| 16 | 3.10 | .738 | 3.50 | .527 | 1.395 | .180 |
| 17 | 3.30 | .675 | 3.60 | .516 | 1.116 | .279 |
| 18 | 3.40 | .699 | 3.50 | .527 | .361 | .722 |
| 19 | 3.30 | .483 | 3.10 | .568 | .849 | .407 |
| 20 | 3.60 | .516 | 3.80 | .422 | .949 | .355 |
| 21 | 3.40 | .516 | 3.10 | .876 | .933 | .363 |
| Average | 3.40 | .606 | 3.07 | .540 | 1.145 | .323 |

Maximal score: 4, $p > .05$

Table 15. The Two Groups’ Average Mean Scores on Four Parts of the Questionnaire.

| | Instructor-led group | Learner-led group |
|-----------------------|----------------------|-------------------|
| Part I (Items 1~3) | 3.47 (86.7%) | 3.07 (76.7%) |
| Part II (Items 4~6) | 3.47 (86.7%) | 2.93 (73.3%) |
| Part III (Items 7~12) | 3.25 (81.2%) | 2.68 (67.1%) |
| Part IV (Items 13~21) | 3.40 (85.0%) | 3.07 (85.0%) |

From Table 15, results on Part I through Part III of the questionnaire revealed that the instructor-led group held more positive perceptions toward the use of flashcards to assist their acquisition of sight words, toward using the ABRA story to facilitate their ORF, and toward receiving the cross-age repeated reading instruction than the learner-led group. The average mean scores were overall located above 2.8 (70%) except for Part III. This revealed that the learner-led group was not strongly positively regarding the use of cross-age repeated reading instruction as the average point is 2.69 (67.1%), and this might be the main cause for the different sight words and ORF performance between the two groups.

Nevertheless, the two group participants’ attitudes toward using the ABRA online resource to learn sight words and to improve their ORF were equally positive (85%). Therefore, comparative results found in the present study provided some support and extended the finding for previous studies in that employing either the instructor-led instruction or the learner-led instruction had positive effects on EFL young learners’ acquisition of sight words. Additionally, the present study revealed that the two implementations of cross-age repeated reading blended instruction effectively enhanced EFL young learners’ oral reading fluency.

Conclusion

In this preliminary experimental study, the researchers have compared the effects of two types of implementation of cross-age repeated reading instruction on improving EFL young learners' acquisition of sight words and oral reading fluency. The findings from the study are worth summarizing. First, students in both the instructor-led group and the learner-led group showed improvement in sight words decoding and ORF. Second, the instructor-led group was found to have greater improvement in decoding and oral reading fluency than their counter group. It's likely due to the small size of the sampling and the short duration of the experiment as the learners need more guidance from the teacher at the beginning. Thus, a larger sample size and a longitudinal study is suggested. Though statistical significance had not been confirmed, descriptive statistics had shown that both types of blended instruction were effective in enhancing the students' sight word decoding and improving their ORF. Thus, instructors are suggested to apply either the instructor-led instruction or the learner-led instruction when teaching EFL young learners to acquire sight words and to improve their oral reading fluency.

Alternatively, the instructor-led instruction can be used at first, as learners become more familiar with the learning procedures, the learners-led instruction can be adopted sequentially. Care must be taken in interpreting and generalizing the findings of the current study, due to limitations inherent to the study design. The population of the present study was limited to elementary school students and the participants were recruited from only one elementary school in central Taiwan. Thus, it might not be appropriate to generalize the results to students with different proficiency levels or students from different geographical areas of Taiwan. Future studies are suggested to include more participants from different geographical regions in Taiwan. Moreover, when running the independent samples *t* test, each subgroup is recommended to have at least 25 students. Thus, future studies may include two or more classes of students to conduct the experiment. Lastly, future study may also use interview to not only get deeper information on students' attitudes toward the different types of blended instruction but also to triangulate the data.

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