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Increasing Oral Reading Fluency Rate of Middle School Students with Learning Disabilities Through Cooperative Learning

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Introduction

Reading fluency has been researched and reported on in many capacities for its implications on students' success in their current grade, effect on future education, potential employment and income indicators. Reading fluency is explained as a combination of reading with speed, accuracy, and proper expression. Correlational studies have identified phonemic awareness and letter knowledge as the two best school-entry predictors of how well children will learn to read during the first two years of instruction (Report of the National Reading Panel | NICHD - Eunice Kennedy Shriver National Institute of Child Health and Human Development, n.d.). If students are not efficient in these skills, they will face more difficulty with fluency in the future.

Reading fluency is a necessary skill for students entering middle school due to the transition to reading higher-level content-based textbooks for comprehension of class subject material. Children who do not read well are more likely to be retained a grade in school, drop out of high school, become teen parents, or enter the juvenile justice system (Carol et al., 2014). According to a statistical study by The National Children's Book and Literacy Alliance, 64 percent of eighth-graders are reading below grade level, whereas 36 percent are reading at or above grade level nationally. That translates to two-thirds of middle school students transitioning into high school reading below grade-level expectations.

Students with Learning Disabilities are heavily stressed to receive direct and explicit instruction that is teacher-planned and led. Some phonics programs require teachers to follow a set of specific instructions provided by the publisher; while this may standardize the instructional sequence, it also may reduce teacher interest and motivation (Report of the National Reading Panel | NICHD - Eunice Kennedy Shriver National Institute of Child Health and Human Development, n.d.).

Consequently, explicit instruction may target a needed skill, but this may remove student motivation and independence while also promoting learned helplessness. A middle school student is old enough to be aware that they have to work harder than many peers and must benefit from educational opportunities that allow them to feel in control of their learning. Providing students with the opportunity to choose what materials they read allows a student to feel in control of their growth and the opportunity to read materials aligned with personal interest. Results from the Institute of Sciences Research Center indicated that expository texts containing more interesting topics (e.g., literary texts about young people their age working through daily challenges and life issues) were of higher interest to readers in both fourth- and eighth-grade, compared to texts topics that were less interesting (Carol et al., 2014).

Students also greatly benefit from learning collaboratively. Collaborative learning is a promising method of increasing the intensity of instruction for students and improving their reading outcomes; across studies, peer-assisted learning support was generally effective in improving reading outcomes, including in high poverty schools. (Carol et al., 2014). Collaborative learning is a classroom-based tutoring system that partners students strategically and allows the pair to work on skills that address the needs of both students. Positive benefits for adolescents at the individual level include improved independence, improved self-esteem, improved self-efficacy, and a positive growth mindset. Students benefit socially by participating in conversations with grade-level peers for repeated speaking opportunities and listening to educational materials. When combined, the ability of choice and collaboration may increase a middle school student with a learning disability's rate of oral reading fluency compared to traditional direct and explicit reading instruction.

Research Questions

The researcher gathered data with the intention of answering the following questions:

1. Does Cooperative Learning improve oral reading fluency rate of correct words read per minute?
2. Does student choice of reading material improve interest and reading skills?

Methodology

Participants:

- 9 7th Grade Students with Learning Disabilities
- 5 Females and 4 Males

Procedure:

The intervention was conducted and over eight weeks. The researcher was a non-participant that observed student interaction and engagement. Students were provided with thirty minutes of each day's forty-five-minute class period to work cooperatively with a peer on reading a passage of their choice. Five activities were assigned with each passage that students completed in any order of their choosing and due biweekly on Friday, which includes- 1) Repeated readings, 2) Highlighting unknown vocabulary words, and using a resources like dictionaries, Chromebooks, and the internet to define and dictate on index cards; 3) Completing a graphic organizer to indicate story structure; 4) Generation of five questions that can be answered from reading passage, and 5) Written or typed summarization of passage. These activities provide a cumulative 150 minutes per week for repeated reading, listening, comprehension, and overall fluency skill practice.

Measures:

The same two AIMSweb+ seventh-grade reading fluency probes were used to assess all students' baseline reading rate data and post-test assessment. The scores of the two probes were averaged for results. Weekly oral reading fluency probes from AIMSweb+ on the seventh-grade level were also administered to monitor the change of fluency rate throughout the study and were timed for one minute while students read as many words independently. Each student probe was recorded with any student errors, self-corrections, substitutions, or omissions for recording and monitoring purposes.

Results

Table 1

Words Read Correctly Per Minute Pre- and Post-Test Data

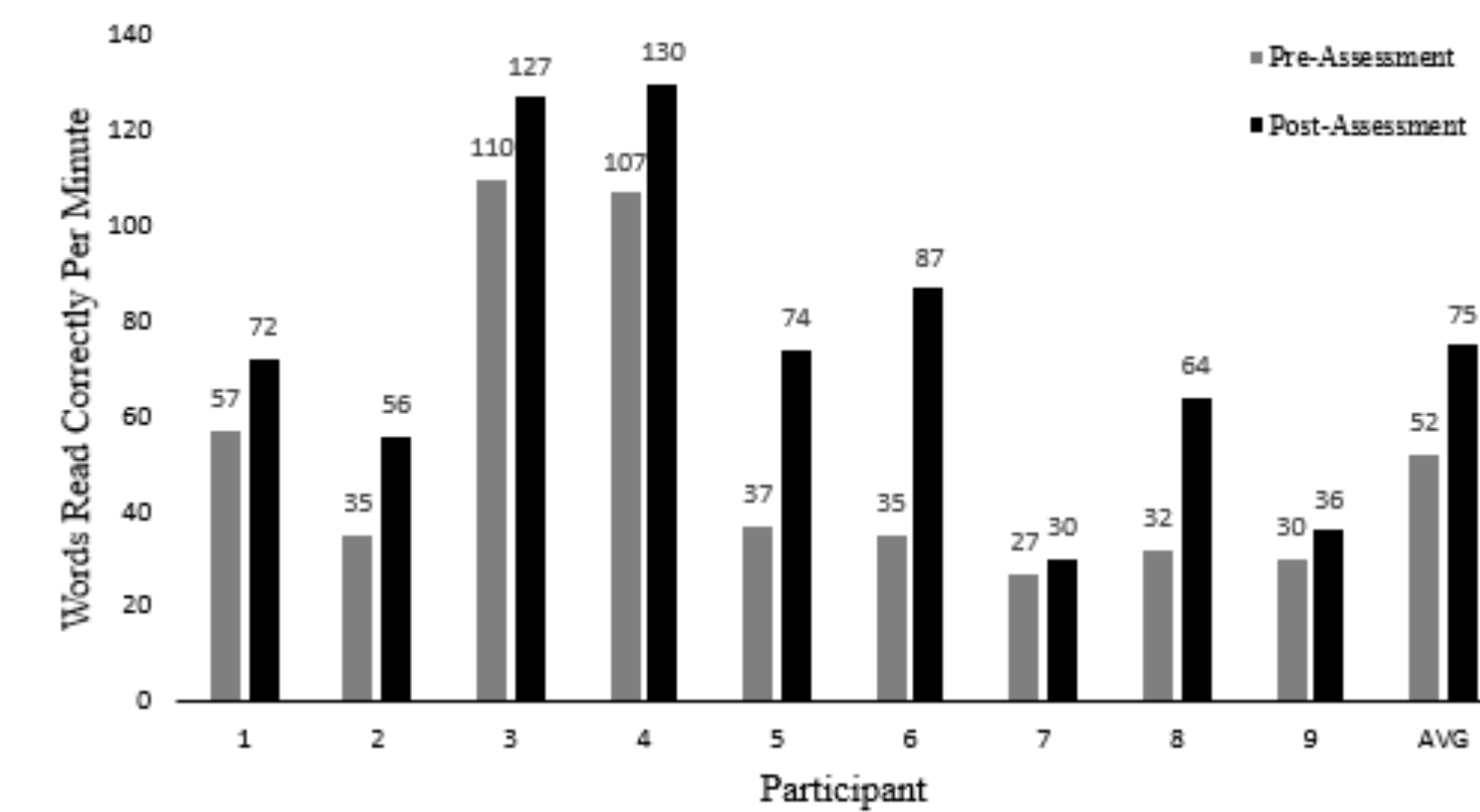
Participant	Pretest	Posttest	Change	Percent Increase/Decrease
1	57	72	+15	+26%
2	35	56	+21	+60%
3	110	127	+17	+15%
4	107	130	+23	+22%
5	37	74	+37	+100%
6	35	87	+52	+148%
7	27	30	+3	+11%
8	30	64	+32	+100%
9	32	36	+6	+20%
Average	52	75	+23	+56%

Note. This table demonstrates the data from pre and post-test with change in words read correctly per minute compared to pre-test which was calculated as rate of change in percent.

Results

Figure 1

Pre-Test and Post-Test Results Comparison



Note. This figure demonstrates participant data comparison from pre-test to post-test results.

Data Analysis

Table 4

t-Test: Paired Two Sample for Means

	Pretest	Posttest
Mean	52.22222222	75.11111111
Variance	1090.694444	1238.861111
Observations	9	9
Pearson Correlation	0.899285744	
Hypothesized Mean Difference	0	
df	8	
t Stat	-4.442968576	
P(T<=t) one-tail	0.0010797	
t Critical one-tail	1.859548038	
P(T<=t) two-tail	0.002159399	
t Critical two-tail	2.306004135	

Note. This figure demonstrates the comparison of pre- and post-test means to test if null hypothesis can be accepted or rejected. Null hypothesis is rejected is P(T<=t) two-tail <0.05.

Discussion

This study sought to determine if students with Learning Disabilities will improve their oral reading fluency rate of words per minute by working collaboratively with peers through student chosen reading passages. A set of new reading passages were provided biweekly, with each leveled at grade three, four, five, six, and seven. Students would choose a peer to work with at two-week intervals, and the partners would choose which passage they wanted to work with.

Of the nine student participants in this study, all achieved an increase in oral reading fluency rate in words read correctly per minute. Baseline results were collected before implementing the cooperative learning intervention, with the pretest mean results at 52.22 words per minute. The median score was 35 wpm, and the range of pre-test scores was 83 wpm. The lowest student score was 27 wpm, while the highest pre-test score was 110 wpm.

After eight weeks of the cooperative learning intervention, a post-test was administered with the identical two seventh grade level Fall benchmark reading probes. Similarly, with the pre-test, the two scores were averaged for results.

Discussion (continued)

The post-test had every student increase oral reading fluency rate with a mean result of 75.11 words read correctly per minute, and the median score was 72 wpm. The range on the post-test increased to 100 wpm, with the lowest score at 30 wpm and the highest score at 130 wpm. The mean improvement of the post-test from the pretest is 22.89 more words read per minute. Percent of increase was averaged from the nine participants with a mean of 55 percent improvement of reading rate for the group.

Conclusion

Reading fluency is a critical contributing factor to student success in school and future careers. All students benefit from being provided high-quality reading instruction that utilizes various techniques to encourage interest and motivation for all learners.

This study highlighted essential contributors to improving oral reading fluency amongst students by participating collaboratively and given the choice of partner and reading passage improved interest and engagement, which led to improved comprehension of passage and motivation to participate in class activities, therefore increasing oral reading fluency rate in words read correctly per minute for students with Learning Disabilities.

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