

# Using Repeated Reading to Improve Reading Speed and Comprehension in Students with Visual Impairments

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**Structured abstract:** *Introduction:* This study evaluated whether children with visual impairments who receive repeated reading instruction exhibit an increase in their oral reading rate and comprehension and a decrease in oral reading error rates. *Methods:* A single-subject, changing-criterion design replicated across three participants was used to demonstrate the association between a repeated reading intervention and the oral reading rate, comprehension, and error rate. *Results:* Visual analysis of the data indicates that there was a functional relation between repeated reading and oral reading rate for two participants, and a functional relation between repeated reading and comprehension for all participants. There was not a functional relation between repeated oral reading and error rate. *Discussion:* Based on the results of this study, repeated reading appears to be an effective practice for some students with visual impairments. *Implications for practitioners:* Teachers and parents can engage children in repeated reading activities in an effort to develop automaticity in reading and to improve oral reading rates.

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The importance of reading is reflected by the value placed on evidence-based reading instruction. The National Institute of

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Child Health and Human Development (NICHD, 2000) identified five skills necessary for reaching reading proficiency: phonemic awareness, phonics, oral reading fluency, vocabulary, and comprehension. Although deficits in any of these areas can lead to failure, poor readers are continually at risk for reading fluency problems. Oral reading fluency refers to a person's ability to read aloud with speed, accuracy, and expression. The National Reading Panel found that direct instruction in oral reading fluency, through either repeated reading or guided repeated oral reading, improves overall reading achievement (NICHD, 2000).



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Based on their findings, the NICHD recommended that teachers add repeated reading activities to their classroom instruction strategies.

Repeated reading is a procedure that consists of rereading a short passage aloud for a specified amount of time or until a certain reading speed is reached (Samuels, 1979). The theory guiding this practice is that students develop automaticity and that their reading rate increases as they reread passages. The practice of repeated readings is validated as evidence based within the general population of students (NICHD, 2000) and for students at risk for reading disabilities (Therrien, 2004). Students with visual impairments read at a slower rate than their sighted peers, and this disparity only increases as students advance in school (Corn et al., 2002; Wall Emerson, Sitar, Erin, Wormsley, & Herlich, 2009). Instructional strategies have been developed to increase oral reading fluency in sighted students, but an evidence base of this kind has yet to be established for their peers with visual impairments (Ferrell, 2006; Layton & Koenig, 1998). Students with visual impairments could potentially benefit from oral reading fluency instruction.

Ferrell (2006) reviewed the literature in the area of literacy for students with visual impairments published between 1963 and 2003. None of the studies that Ferrell identified as meeting inclusion for review have been replicated, and studies have not been evaluated to see if they meet rigorous criteria for high-quality research. Therefore, currently there are no evidence-based practices that meet standards set by either the Institute for Educational Science or the Division for Research of the Council for

Exceptional Children regarding literacy instruction for students with visual impairments. Instead, Ferrell identified “promising practices” (p. 43). One such practice was repeated reading to improve fluency, based on Layton and Koenig’s 1998 single-subject study that examined the use of repeated readings to increase oral reading fluency in four students with visual impairments. A search of the extant literature found one other study (Pattillo, Heller, & Smith, 2004) that used repeated reading as an intervention for students with visual impairments. Pattillo et al. (2004) modified the repeated reading intervention used by Layton and Koenig to include optical character recognition software. Between readings, participants would hear the OCR software read the passage while they read along silently. Then they would begin their second reading of the passage. Both Layton and Koenig (1998) and Patillo et al. (2004) reported that all participants increased their reading rates using repeated readings. Consequently, two independent research groups have reported that nine students with visual impairments have increased their reading speed after participating in repeated reading interventions.

For a practice to be validated as evidence based using single-subject designs, effects need to be replicated in at least five studies from at least three different researchers and geographic locations that include at least 20 participants (Horner et al., 2005). Despite the lack of sufficient replications of the intervention research with students with visual impairments, repeated reading has been described as being an effective instructional strategy for these students (Koenig & Holbrook,

**Table 1**  
**Description of the participants.**

| Participant   | Age (years) | Gender | Grade | Setting             | Visual condition          | Near visual acuity              | Optical devices |
|---------------|-------------|--------|-------|---------------------|---------------------------|---------------------------------|-----------------|
| Participant 1 | 8           | Male   | 3rd   | Local public school | OU: hyperopia; nystagmus  | OU: 4.0 M                       | Glasses         |
| Participant 2 | 12          | Female | 6th   | Specialized school  | OU: glaucoma; OS: aphakia | OD: 3.2 M; OS: 8.0 M; OU: 3.2 M | Glasses         |
| Participant 3 | 12          | Male   | 6th   | Specialized school  | OU: ROP                   | OU: 8.0 M                       | None            |

OD = oculus dexter (right eye); OS = oculus sinister (left eye); OU = oculus uterque (both eyes); ROP = retinopathy of prematurity.

2000; Wormsley & D'Andrea, 1997). The purpose of this study was to replicate Layton and Koenig's (1998) examination of repeated reading to improve oral reading speed and reading comprehension in children with visual impairments. Specifically, our goal was to determine if children with visual impairments who receive repeated reading instruction exhibit an increase in oral reading rate and comprehension and a decrease in oral reading error rates.

## Method

### PARTICIPANTS

Three participants selected for this study were: diagnosed with a visual impairment, enrolled in grades 3–6, reading regular or large print, functioning within the average range of intelligence as reported by their parents, identified by teachers as poor readers, and willing to participate in the study. Descriptions of the three participants can be found in Table 1.

### SETTING

Participants were either seen at a specialized school for students with visual impairments during the summer or in their homes. In all cases, the participant and the investigator sat next to each other at a

table in a quiet room. Participants 1 and 2 wore glasses regularly, but Participant 3 did not use any optical devices for reading tasks. Sessions occurred Monday through Friday for at least four consecutive weeks.

### EXPERIMENTAL DESIGN

A single-subject, changing-criterion design (Gast & Ledford, 2010; Hartmann & Hall, 1976), replicated across three participants, was used to demonstrate the association between oral reading rate measured in standard words per minute (WPM) and a repeated reading intervention. Single-subject designs are particularly suited to special education research because of the emphasis placed on individuals. The Institute of Education Sciences (IES) and Council of Exceptional Children (CEC) recognize that single-subject designs can be used to identify evidence-based practices if they meet certain standards (Horner et al., 2005; Kratochwill et al. 2010). A changing-criterion design is appropriate for interventions in which stepwise increases in occurrence are the goal and for behaviors that change slowly over time (Hartmann & Hall, 1976). Oral reading rate was

used to determine stability before a phase change.

## **MATERIALS**

Dolch Classic Books (Dolch & Dolch, 1961) were used for baseline and intervention. This series was selected for its high interest and easy-to-read stories developed to promote success and growth in readers and because it was used by Layton and Koenig. All passages were printed in Arial 16-point font. It was determined during prebaseline sessions that all participants were able to read passages printed in a 16-point font at an appropriate working distance. In addition to the reading passages, a digital voice recorder was used to record audio from all sessions with all participants, and a stopwatch was used to collect data on standard words read correctly.

## **RESPONSE DEFINITIONS AND MEASUREMENT PROCEDURES**

Data on three dependent variables were measured and collected during each session: oral reading rate, error rate, and comprehension.

### ***Oral reading rate***

*Oral reading rate* was defined as the number of standard words read per minute (WPM) during a selected passage. A standard word has six character spaces (Carver, 1990). The number of standard words in a passage was calculated by counting each letter and space and dividing the total by six. An independent second observer also calculated the number of standard words in a passage. Disagreements were discussed and resolved. The investigator calculated the oral reading rate by dividing the number of standard

words in the passage by the number of seconds required by the participant to read the passage and multiplying the total by 60 (Layton & Koenig, 1998).

### ***Error rate***

*Error rate* was defined as the number of words incorrectly identified per minute that disrupted the meaning of the passage during a selected passage. A *correct word* was defined as any word pronounced accurately by the participant. Smoothness of speech was not a criterion for correctness. Acceptable miscues included repetitions and contractions (such as reading “do not” as “don’t”). Unacceptable miscues included omissions, substitutions, insertions, and reversals. Words that were corrected independently by the participant were recorded as self-corrections. During data collection, the investigator scored all miscues as acceptable, unacceptable, or self-corrected, but only unacceptable miscues that were not self-corrected and that affected the meaning of the passage were counted as incorrect (Christie, 1979). The investigator calculated error rate by dividing the number of incorrect words by the number of seconds required by the participant to read the passage and multiplying the total by 60 (Layton & Koenig, 1998).

### ***Comprehension***

*Comprehension* was defined as the percentage of content words provided by a participant through oral retelling after the last reading. Oral retelling is an informal measure of reading comprehension that correlates with the standardized measure of reading comprehension (Fuchs, Fuchs, & Maxwell, 1988; Reed & Vaughn, 2012). *Content words* were defined as

proper nouns, common nouns, adjectives, adverbs, and verbs (Layton & Koenig, 1998). Prior to intervention, the investigator identified content words in the passages. An independent second observer also identified content words in the passage, and the lists were compared. Disagreements were discussed and resolved. The student's retelling was analyzed by tallying the number of exact matches or synonymous words used with the list of content word in the passage. The investigator calculated the percentage of content words retold by dividing the number of content words in the retelling by the number of content words in the passage (Layton & Koenig, 1998).

### **PROCEDURE**

For all sessions except prebaseline, data were collected on participants' oral reading rate, error rate, and comprehension. The investigator recorded all sessions using a digital voice recorder, and sessions were timed using a stopwatch. Each session began with a greeting from the investigator, and each session ended with the investigator thanking the student for participating. Participant 1 and Participant 2 wore prescription glasses to read. No other accommodations were used.

### ***Prebaseline***

The purpose of the prebaseline session was to estimate participants' current reading level and to familiarize participants with the procedures of baseline and intervention conditions, especially use of the stopwatch and recording device. The Qualitative Reading Inventory (QRI; Leslie & Caldwell, 2011) was used to evaluate participants' independent reading level and current reading rate. First, par-

ticipants were asked to read a series of graded word lists. Then, participants read graded passages based on information gathered from the word lists. These readings were timed using a stopwatch and recorded using a digital voice recorder, and the investigator calculated WPM and words correct per minute (WCPM) per the directions of the QRI. Information about estimated grade level was used to select Dolch readers that were appropriate for individual students.

### ***Baseline***

Data were collected for each participant until a stable baseline for oral reading rate was established. The investigator told participants that mispronunciations, omissions, and errors would not be corrected during the readings. Participants read one passage from the Dolch books during each session, with no rereading of passages. The investigator used a stopwatch to time the participants from the beginning of the first word to the end of the last word. After the reading, participants were asked to retell the story. No feedback on oral reading rate or error rate was provided, but encouragement was given at the end of the session by the investigator saying, "You did a great job."

### ***Intervention***

Prior to the beginning of the first intervention session, the investigator shared the median baseline rate with participants and discussed the criterion rate selected for the first intervention phase. The criterion for the first phase of intervention was set 50 percent above the median reading rate from baseline, as per Layton and Koenig (1998). If the criterion was not met for three consecutive sessions, it was

reduced to 25 percent above the median reading rate from baseline. Within each intervention phase, passages were read until the criterion rate was reached or the participant had read for 30 minutes.

During intervention phases, participants were reminded of the criterion rate for the current intervention phase and were told that the investigator would not correct mispronunciations, omissions, or errors. Participants read a passage from the Dolch books that was appropriate for their estimated reading level as measured by the QRI. The investigator used a stopwatch to time the participants from the beginning of the first word to the end of the last word. After each reading, the investigator shared the reading rate with participants. Participants reread the passage until the criterion rate was reached. Positive verbal reinforcement was given to participants if an increase in reading rate was achieved. Following the final reading of each session, participants were asked to retell the story. If criterion was reached after the first reading, then no repeated readings occurred during the session, though data on oral reading rate, error rate, and comprehension were still collected.

### ***Maintenance***

Following completion of the last intervention phase, maintenance data were collected for four weeks. Maintenance sessions occurred once per week and followed the same procedures as in the intervention phases. Two follow-up sessions occurred at least 3 months after the last intervention phase. The criterion from the final intervention phase was used as the criterion for the maintenance and follow-up sessions.

### **INTEROBSERVER AGREEMENT**

Second observers were trained to collect interobserver agreement data from audio recordings on all three dependent variables (oral reading rate, error rate, and comprehension). Interobserver agreement data were collected on 34% of sessions for Participant 1, 33% of sessions for Participant 2, and 20% of sessions for Participant 3. Interobserver agreement results for each participant in each experimental condition, respectively, were 96.8%, 92.5%, and 90% for Participant 1; 93.8%, 93.6%, and 91.2% for Participant 2; and 98.2%, 92.2%, and 92.3% for Participant 3.

### **PROCEDURAL FIDELITY**

Data on procedural fidelity were collected through event recording (Ayres & Gast, 2010). Each component of the repeated reading intervention should occur once per reading. The second observer recorded occurrence or nonoccurrence of each step of the procedure. The average percent fidelity for each step was calculated as the number of observed occurrences divided by the number of expected occurrences multiplied by 100. Procedural fidelity data were collected for 38% of all sessions for Participant 1, 33% of all sessions for Participant 2, and 20% of all sessions for Participant 3. Procedural fidelity results for each participant in each experimental condition, respectively, were 92.5%, 97.1%, and 92.3% for Participant 1; 100%, 98.5%, and 100% for Participant 2; and 100%, 98.7%, and 100% for Participant 3.

### **SOCIAL VALIDITY**

A student questionnaire was adapted from the Reader Self-Perception Scale (RSPS, Henk & Melnick, 1995) to address whether

this intervention had an effect on participants' attitudes toward reading. The investigator read the statements to participants, and they verbally answered yes or no. The investigator recorded participants' answers. The questionnaire was administered twice: once during prebaseline and once at the completion of the intervention.

## Results

Visual analysis of the data indicated that there was a functional relation between repeated reading and oral reading rate for Participants 1 and 2 (see Figure 1). There was also a functional relation between repeated reading and comprehension for all participants (see Figure 2), but not a functional relation between repeated oral reading and error rate (see Figure 3).

### ORAL READING RATE

The results of the study for oral reading rate are presented in Figure 1. Initial and final readings are presented in this figure. Ranges and average WPM for initial and final readings are presented in Table 2. Criterion rates were lowered during a phase if the participant did not reach criterion for three consecutive sessions (including participant absence).

During intervention Phase 1, Participant 1 did not reach criterion for Sessions 5 and 6 and was then absent, so the criterion was lowered. Once lowered, he reached criterion in the following five sessions. He did not meet criterion in two sessions during intervention Phase 2, but met the criterion for the following four sessions, demonstrating stability. Participant 1 did not reach the criterion set in intervention Phase 3 for three consecutive sessions, so it was lowered and then he reached criterion for the following four

sessions. He continued to reach criterion for five of the six maintenance sessions.

Participant 2 reached criterion for all four sessions in intervention Phase 1. She did not meet the criterion set for intervention Phase 2 in three consecutive sessions. Once lowered, she reached criterion in five of the seven sessions. Reading rates for the three sessions before ending intervention were stable. Participant 2 reached criterion in all six maintenance sessions.

The criterion was lowered twice for Participant 3 during intervention Phase 1. He met criterion in four of the final seven sessions during this phase. Stability was not established. He reached criterion in three of the five maintenance sessions.

### COMPREHENSION

The results of the study for comprehension are presented in Figure 2. During baseline, Participant 1 retold an average of 24% of content words (range 11–29%). He retold an average of 47% of content words during intervention (range 33%–73%) and an average of 43% of content words during maintenance (range 15%–69%). Participant 2 retold an average of 55% of content words during baseline (range 46%–57%). She retold an average of 71% of content words during intervention (range 60–85%) and an average of 74% of content words during maintenance (range 68%–84%). During baseline, Participant 3 retold an average of 27% of content words (range 24–34%). He retold an average of 35% of content words during intervention (range 18%–43%) and an average of 33% of content words during maintenance (range 20%–40%).

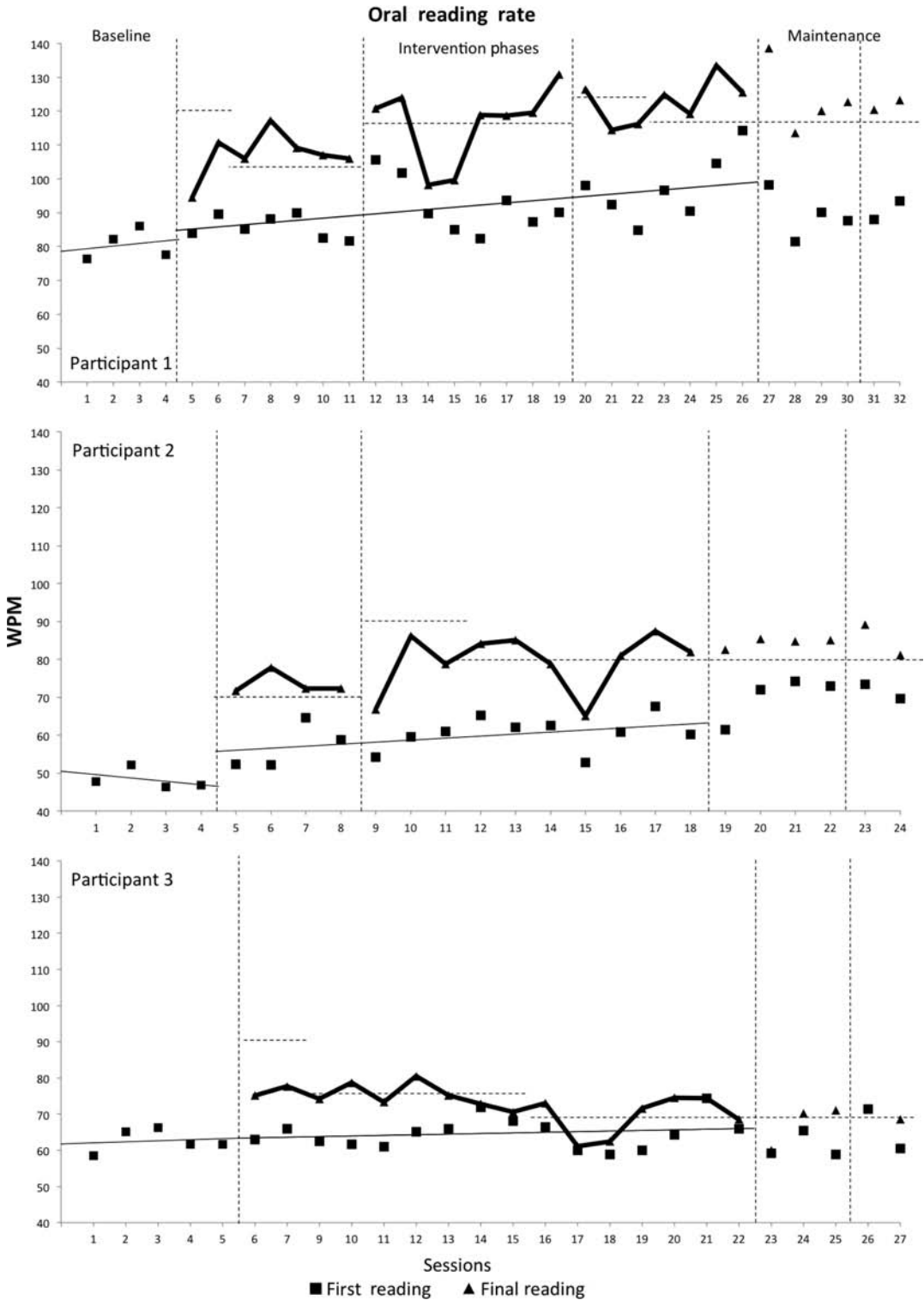


Figure 1. Number of standard words read per minute (WPM) during first and final readings.



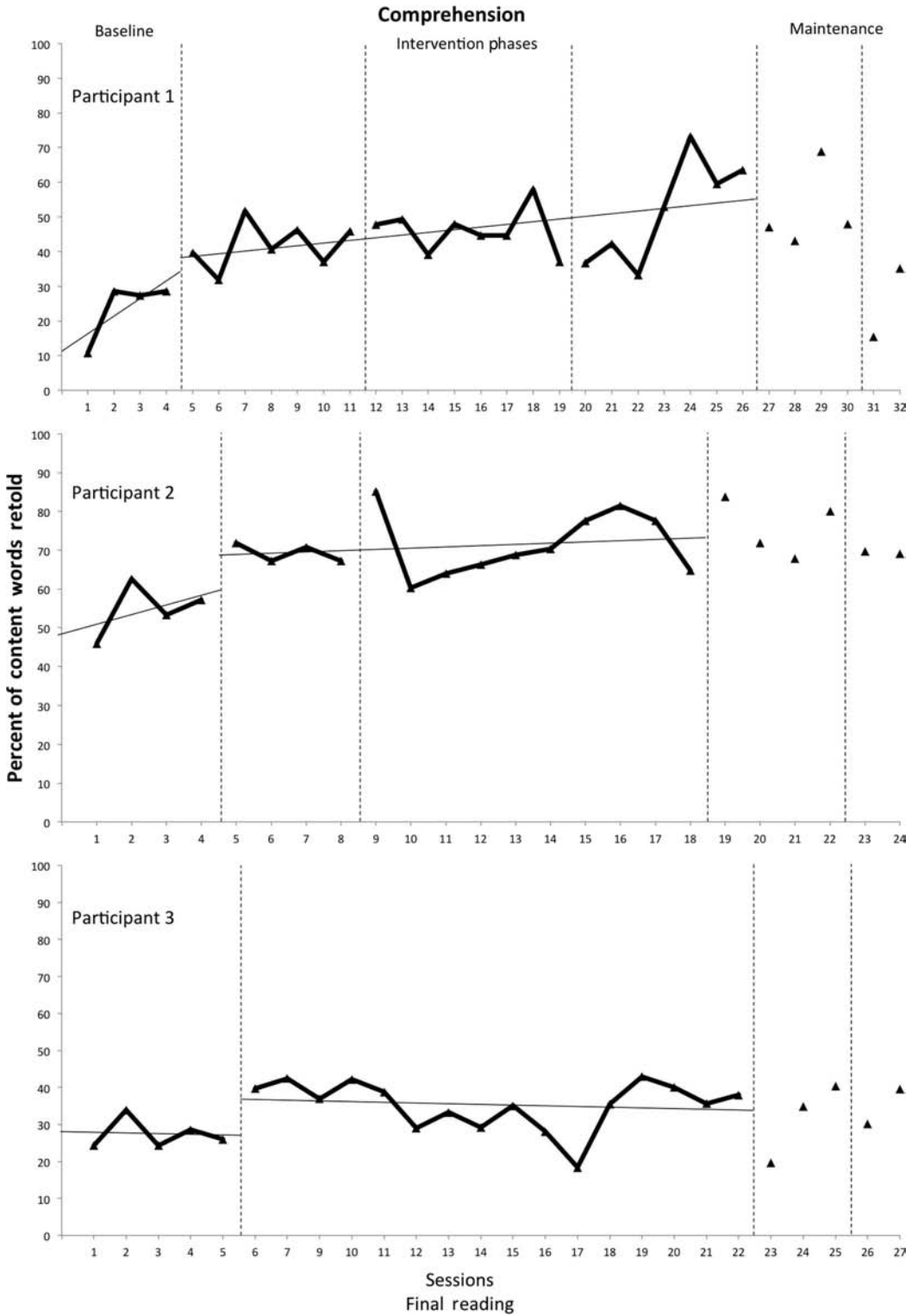


Figure 2. Percent of content words retold after final readings.

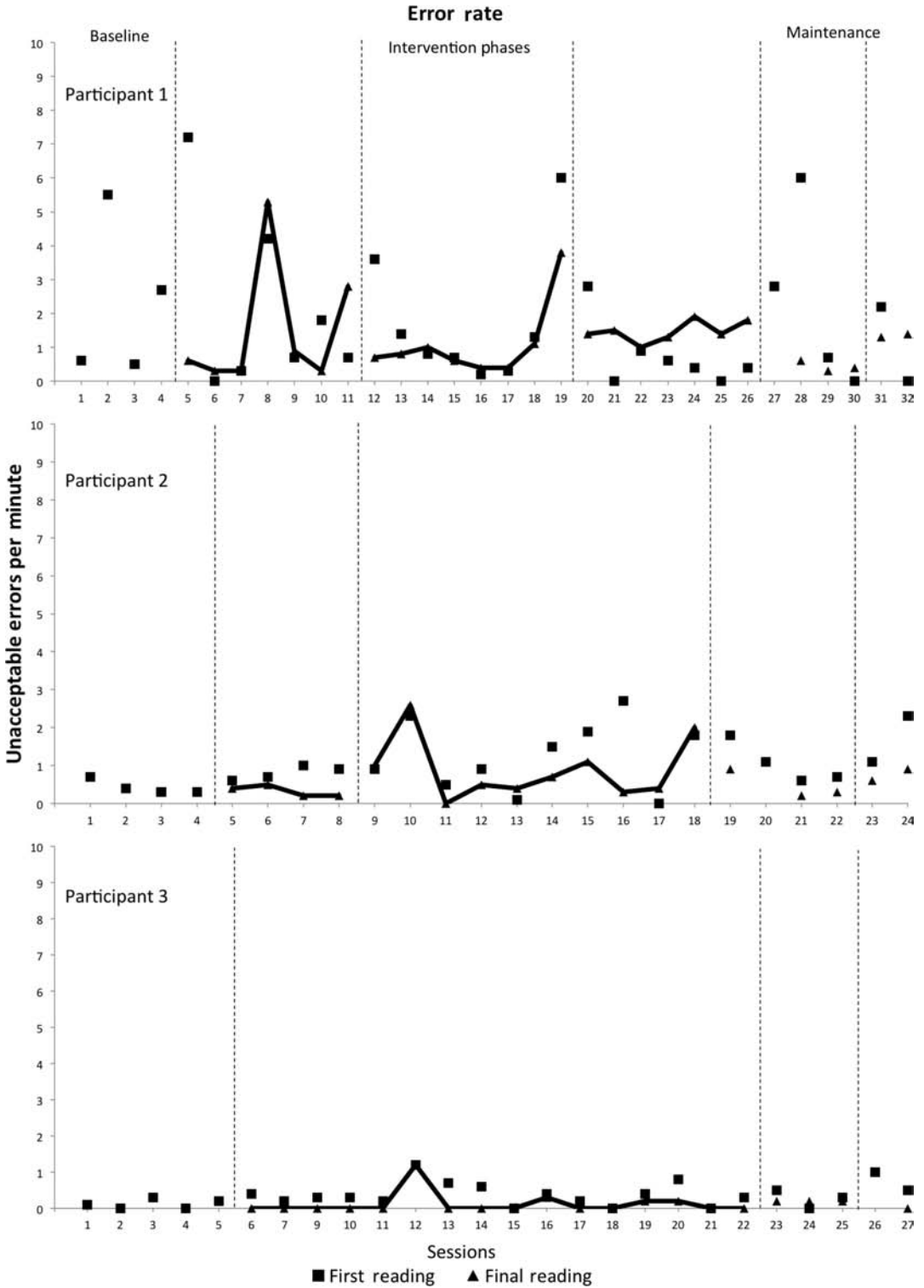


Figure 3. Number of unacceptable miscues affecting meaning made per minute during first and final readings.

**Table 2**  
**Oral reading rates for participants in experimental conditions.**

| Participant   | Phase                | Initial reading average (range) | Final reading average (range) | Trials to reach criterion average (range) |
|---------------|----------------------|---------------------------------|-------------------------------|---|
| Participant 1 | Baseline             | 81 WPM (76–86)                  |                               |   |
|               | Intervention phase 1 | 86 WPM (82–90)                  | 107 WPM (95–117)              | 4 (2–6)                                   |
|               | Intervention phase 2 | 92 WPM (82–106)                 | 116 WPM (98–131)              | 6 (2–9)                                   |
|               | Intervention phase 3 | 97 WPM (85–114)                 | 123 WPM (114–133)             | 4 (2–7)                                   |
|               | Maintenance          | 90 WPM (81–98)                  | 123 WPM (114–139)             | 4 (3–7)                                   |
| Participant 2 | Baseline             | 48 WPM (46–52)                  |                               |   |
|               | Intervention Phase 1 | 57 WPM (52–65)                  | 74 WPM (72–78)                | 3 (2–5)                                   |
|               | Intervention Phase 2 | 61 WPM (54–68)                  | 80 WPM (65–87)                | 4 (2–7)                                   |
|               | Maintenance          | 71 WPM (61–74)                  | 85 WPM (81–89)                | 3 (2–4)                                   |
| Participant 3 | Baseline             | 63 WPM (58–66)                  |                               |   |
|               | Intervention Phase 1 | 65 WPM (58–74)                  | 73 WPM (61–81)                | 3 (1–5)                                   |
|               | Maintenance          | 63 WPM (69–71)                  | 67 WPM (60–71)                | 2 (1–3)                                   |

WPM = words per minute.

### ERROR RATE

The results of the study for error rate are presented in Figure 3. Initial and final readings are presented in this figure. Error rates for Participant 1 were unstable across phases for first and final readings. Participant 2 displayed a more stable pattern of error rates. While visual analysis did not show a functional relation, the error rates generally decreased during the final reading. Participant 3 showed no change in error rate from baseline to intervention, or from intervention to maintenance.

### SOCIAL VALIDITY

The adapted version of the RSPS consisted of 11 questions addressing participants' attitudes toward reading. Answers of "yes" and "sometimes" were considered positive responses. Participant 1 began the study with a positive attitude towards reading, answering 9 of the 11 questions positively. By the end of the intervention, he answered all 11 questions positively. Participant 2 began the study

with a neutral attitude towards reading, answering 5 of the 11 questions positively. By the end of the study, she answered all 11 questions positively. Participant 3 responded positively to all 11 questions at prebaseline and post-intervention.

### Discussion

Based on the results of this study, repeated reading appears to be an effective practice for some students with visual impairments. Specifically, visual analysis of final reading data show an increase in level from baseline to intervention for Participant 1 and a change in level and trend for Participant 2, demonstrating a functional relation for these two participants. This increase in oral reading rate was maintained. The growth in reading rate was most apparent for Participant 2: Figure 1 shows a steady increase in the rate of initial readings as she completed repeated readings to criterion. A goal of repeated reading is for automaticity to generalize to novel passages. For this reason, examining the data from first

readings gives an indication of whether this generalization occurred. Visual comparison of the mean trend lines for first readings show that Participant 2 displayed a change in trend from decelerating to accelerating, indicating her improved automaticity with novel passages (see Figure 1).

Similarly, for all participants, a functional relation for reading comprehension is documented in Figure 2. Visual analysis demonstrates a change in level from baseline to intervention for all participants. Reading comprehension had been a concern of Participant 1's mother, and this demonstration of improved comprehension was well received.

Error rate did not seem to impact oral reading rate or comprehension for any of the participants, possibly because participants made so few errors. Participants 1 and 2 appeared to make slightly more errors during initial readings for most sessions. Interestingly, Participant 3 made even fewer errors than the other two participants.

The slight increase in reading rate for initial readings for Participants 1 and 2 is evidence of increased automaticity as a result of the repeated reading intervention. As can be seen in Figure 2, a steady improvement was also observed in comprehension for Participants 1 and 2, and this growth was also maintained.

Although we cannot explain why the intervention did not work for Participant 3, we can speculate. Participant 3 also had a diagnosis of attention deficit hyperactivity disorder (ADHD) and was given medication for this condition upon arrival at school. Perhaps the intervention described in this article is not as effective for students with attention disorders. The

intervention did not appear to negatively impact Participant 3—it just did not help. Perhaps he was not willing to risk making more errors by reading faster. Even though his reading rate and comprehension did not improve, he consistently made fewer errors than the other two participants.

### **LIMITATIONS**

For Participants 1 and 2, the baseline and intervention phases took place during the summer, but the maintenance data were collected after the school year began. Attendance at school may have accounted for some of the maintenance of skills, and these cannot be attributed solely to our intervention. Due to time constraints, a third intervention phase was not implemented with Participant 2. For Participant 3, we were only able to assess maintenance three times instead of four due to the winter holidays.

Because this study was designed to be a replication of Layton and Koenig's 1998 study, the same procedures were used for oral reading rate and error rates. Consequently, the two measures are not directly related to each other. Ideally, words correct per minute would have been calculated, permitting the measurement of both reading speed and errors in one metric.

### **Implications for practice**

Our results provide additional support for repeated reading as a promising practice for students with visual impairments. Providing opportunities to practice reading can improve students' overall reading fluency and comprehension, as demonstrated by the increases in oral reading rate and comprehension seen in

Participants 1 and 2. Repeated reading appears to be appropriate for students in inclusive or specialized school settings or within homes.

Repeated reading is a relatively simple and inexpensive intervention that can be easily implemented by most teachers. Teachers and parents can engage children in activities in which they try to increase reading speed per minute using either assigned readings or highly motivating supplemental readings or both. Information provided by Layton and Koenig (1998) and Pattillo et al. (2004) support this practice. Teacher- and family-friendly information about repeated reading can also be found at the Reading Rockets website at <[www.readingrockets.org/strategies/timed\\_repeated\\_readings](http://www.readingrockets.org/strategies/timed_repeated_readings)>. Reading Rockets is supported by the U.S. Department of Education, Office of Special Education Programs, and a host of literacy-related partners. Repeated reading can be used with readers of either print or braille, as shown by Patillo et al. (2004).

## References

- Ayres, K., & Gast, D. L. (2010). Dependent measures and measurement procedures. In D. L. Gast (Ed.), *Single subject research methodology in behavioral sciences* (pp. 129–165). New York: Routledge.
- Carver, R. P. (1990). *Reading rate: A review of research and theory*. San Diego, CA: Academic Press.
- Christie, J. F. (1979). The qualitative analysis system: Updating the IRI. *Reading World, 18*, 396–399.
- Corn, A., Wall, R., Jose, R., Bell, J., Wilcox, K., & Perez, A. (2002). An initial study of reading and comprehension rates for students who received optical devices. *Journal of Visual Impairment & Blindness, 96*, 322–333.
- Dolch, E. W., & Dolch, M. P. (1961). *Dolch classic first reading books*. Allen, TX: DLM Teaching Resources.
- Ferrell, K. A. (2006). Evidence-based practices for students with visual disabilities. *Communication Disorders Quarterly, 28*, 42–48.
- Fuchs, L. S., Fuchs, D., & Maxwell, L. (1988). The validity of informal reading comprehension measures. *Remedial and Special Education, 9*, 20–28.
- Gast, D. L. & Ledford, J. (2010). Variations of multiple baseline designs and combination designs. In D. L. Gast (Ed.), *Single subject research methodology in behavioral sciences* (pp. 382–416). New York: Routledge.
- Hartmann, D. P., & Hall, R. V. (1976). The changing criterion design. *Journal of Applied Behavior Analysis, 9*, 527–532.
- Henk, W. A., & Melnick, S. A. (1995). The Reader Self-Perception Scale (RSPS): A new tool for measuring how children feel about themselves as readers. *The Reading Teacher, 48*, 470–482.
- Horner, R. H., Carr, E. G., Halle, J., McGee, G., Odom, S., & Wolery, M. (2005). The use of single-subject research to identify evidence-based practice in special education. *Exceptional Children, 71*, 165–179.
- Koenig, A. J., & Holbrook, M. C. (2000). Literacy skills. In A. Koenig & M. Holbrook (Eds.), *Foundations of education: Instructional strategies for teaching children and youths with visual impairments* (pp. 264–329). New York: AFB Press.
- Kratochwill, T. R., Hitchcock, J., Horner, R. H., Levin, J. R., Odom, S. L., Rindskopf, D. M., & Shadish, W. R. (2010). Single-case designs technical documentation. Retrieved from What Works Clearinghouse website: [http://ies.ed.gov/ncee/wwc/pdf/wwc\\_scd.pdf](http://ies.ed.gov/ncee/wwc/pdf/wwc_scd.pdf)
- Layton, C. A., & Koenig, A. J. (1998). Increasing reading fluency in elementary students with low vision through repeated readings. *Journal of Visual Impairment & Blindness, 92*, 276–292.

Leslie, L., & Caldwell, J. S. (2011). *Qualitative Reading Inventory—5*. Boston: Pearson Education.

National Institute of Child Health and Human Development (NICHD). (2000). Report of the National Reading Panel. *Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction: Reports of the subgroups* (NIH Publication No. 00-4754). Washington, DC: U.S. Government Printing Office. Retrieved from <http://www.nichd.nih.gov/publications/nrp/upload/report.pdf>

Pattillo, S. T., Heller, K. W., & Smith, M. (2004). The impact of a modified repeated-reading strategy paired with optical character recognition on the reading rates of students with visual impairments. *Journal of Visual Impairment & Blindness*, 98, 28–46.

Reed, D. K., & Vaughn, S. (2012). Retell as an indicator of reading comprehension. *Scientific Studies of Reading* 16, 187–217.

Samuels, S. J. (1979). The method of repeated readings. *The Reading Teacher*, 32, 403–408.

Therrien, W. J. (2004). Fluency and comprehension gains as a result of repeated reading: A meta-analysis. *Remedial and Special Education* 25, 252–261.

Wall Emerson, R., Sitar, D., Erin, J. N., Wormsley, D. P., & Herlich, S. L. (2009). The effect of consistent structured reading instruction on high and low literacy achievement in young children who are blind. *Journal of Visual Impairment & Blindness*, 103, 595–609.

Wormsley, D. P., & D'Andrea, F. M. (1997). *Instructional strategies for braille literacy*. New York: AFB Press.

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