



EVIDENCE BASED INTERVENTION NETWORK EBI BRIEF

Incremental Rehearsal¹

Overview

Incremental Rehearsal (IR) is an academic intervention that is used to address issues of poor retention (Joseph, 2006) and increase fluency. IR can be used with a wide variety of academic areas such as learning new vocabulary words, simple math facts, names of letters, and survival words/signs. IR begins with the introduction of a series of stimulus that are desired to be taught (i.e., math facts or vocabulary words). After introducing these stimuli, known and unknown stimuli are identified. Typically 9 unknown and 10 known are selected and then written on note cards for instruction. An unknown stimuli is mixed in with the known stimuli and presented until it becomes known.

Empirical Support

Joseph (2006) performed a study in which he used Incremental Rehearsal (IR) with 10-second grade students who received additional reading (Title I services). All students took a screening measure with 100 high-frequency words, which were presented twice. For each individual student, known and unknown words were placed on a list. Another pre-test was administered to ensure that the 10 words labeled as “unknown” actually were not known. After the second pre-test the nine “known” words and 10 “unknown” words were written on flash cards. IR was implemented for approximately 15 to 20 minutes for three days. After one day of IR, students were able to retain 70% of the words they learned that day using IR. After the second and third days the students retained 90% of the words they learned using IR (Joseph, 2006). Retention occurs when children remember and can recall a learned skill. Skills that are mastered are those that are completed automatically with little effort (Joseph, 2006). Although IR is more time consuming than other procedures, the results show that the extra time invested, proves to be beneficial for retention. IR also gives the student more interaction with new words and, more opportunities to practice these new words (Burns, 2004).

Incremental Rehearsal utilizes a technique that increases retention of words, helps gain mastery, and builds fluency (MacQuarrie, Tucker, Burns, & Hartman, 2002). MacQuarrie, Tucker, Burns, & Hartman (2002) performed a study with 25 third-grade and 26 seventh-grade randomly selected students. The students were divided into three groups: traditional flashcard instruction, drill sandwich¹, and incremental rehearsal. All students were taught 27 unknown words, (9 words in each session). Retention was checked randomly through out the process on day 1, 2, 3, 7, and 30. Retention in the groups using traditional flashcard instruction and drill

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sandwiches maintained a steady but low rate of responding. The group using incremental rehearsal performed at a higher rate, retaining 5.5 words at day 30 compared to 1.5 words for the drill sandwich group and 2.5 for the traditional flashcard group. Overall, this study shows that IR improves retention better than the other forms of teaching.

Burns, Dean, & Foley (2004) performed a study with 11 third grade students and 9 fourth grade students. Students were divided into a control group and an experimental group who received IR. All students had been identified as having a learning disability. Before the beginning of the study, a passage was independently read by three authors. After reading the passage, the authors identified words that were key to understanding the passage. Ten words were identified for the third graders and 11 for the fourth graders. The words were then shown to students on 3x5 flash cards to identify known and unknown words for each student. Unknown words were taught to students in the same order that they appeared in the story. The mean fluency for the control group was 36.3 words per minute and the comprehension rate was 3.4. The mean fluency for the group being taught with IR was 44.3 words per minute and the comprehension rate was 5.8. Strategically pre-teaching unknown key words increased reading fluency and comprehension among children within the study (Burns, Dean, & Foley, 2004).

Summary

Incremental Rehearsal (IR) is used to address poor retention and increase fluency. IR is used with a wide variety of academics skills such as learning new vocabulary words, simple math facts, names of letters, and survival words/signs. Johnson (2006) showed success in using IR with second graders who received extra reading services. Johnson found that although IR is more time consuming than other procedures, the extra time invested proves to be beneficial for retention. MacQuarrie, Tucker, Burns, & Hartman (2002) performed a study with third-grade and seventh-grade students that compared IR to two other teaching methods, drill sandwich and traditional flashcards. The results of this study show that IR is more effective compared to these other methods. Burns, Dean, & Foley (2004) performed a study with third grade and fourth grade students in which they were divided into a control group and an experimental group who received IR instruction. The group that received IR instruction had a much higher fluency level and comprehension rate than the group control group that did not receive IR instruction. These studies show that teaching unknown words using IR increases reading fluency and comprehension among children.



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References

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