

Research: The Recall Enhancement Routine

Study 1

Overview

The Recall Enhancement Routine is used by a teacher to help students remember important information. Forty-one students in the 7th and 8th grades participated. They were stratified by grade level and condition (students with learning disabilities [LD] and without LD [NLD]) and randomly assigned to an experimental or control group. The experimental design is shown in Figure 1. Two types of facts were presented to all the students. The first type ("nonreviewed facts") were facts that were presented in a lecture-discussion format and never reviewed with the students. The second type (reviewed facts*) were reviewed at the end of the lesson. The Recall Enhancement Routine was used to review the facts with students in the experimental group; the presentation of the facts was simply repeated with students in the control group. A 40-item multiple-choice test was used to measure student recall of the reviewed and nonreviewed facts on the next day.

Figure 1: Design for the Recall Enhancement Routine Study

	Experimental Group		Control Group	
	LD	NLD	LD	NLD
	(N=9)	(N=11)	(N=9)	(N=12)
Nonreviewed Facts	Presented in lecture	Presented in lecture	Presented in lecture	Presented in lecture
Reviewed Facts	Enhanced with routine	Enhanced with routine	Facts repeated	Facts repeated

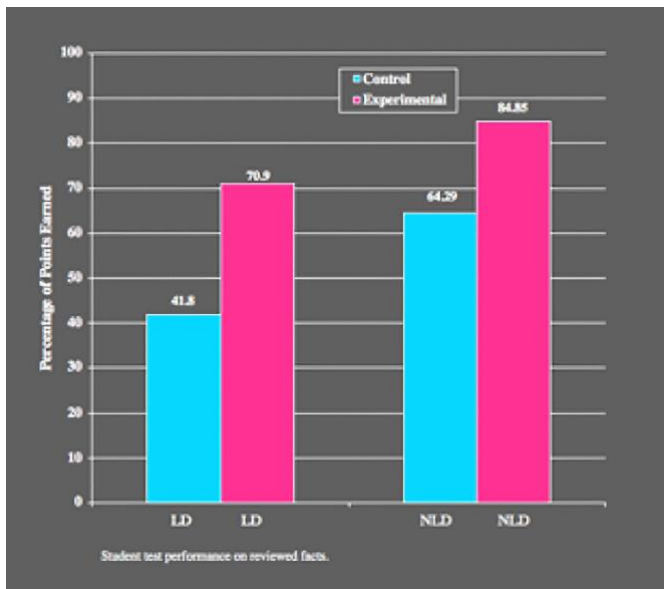
Results

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The experimental students and control students performed similarly on the non-reviewed facts. There were no significant differences between the students with LD in the experimental and control groups and there were no differences between the ND students in the experimental and control groups with regard to their scores on the non-reviewed facts. These results demonstrate that the experimental and control groups were comparable and performed similarly under the same instructional conditions.

In contrast, when the instructional conditions varied for the two groups, differences in performance were found, See Figure 2 for the groups mean scores on the test items related to reviewed facts. Significant differences were found between the experimental and control ND students' test scores and between the experimental and control LD students' test scores ($p = .000$) in favor of the experimental students in each case.

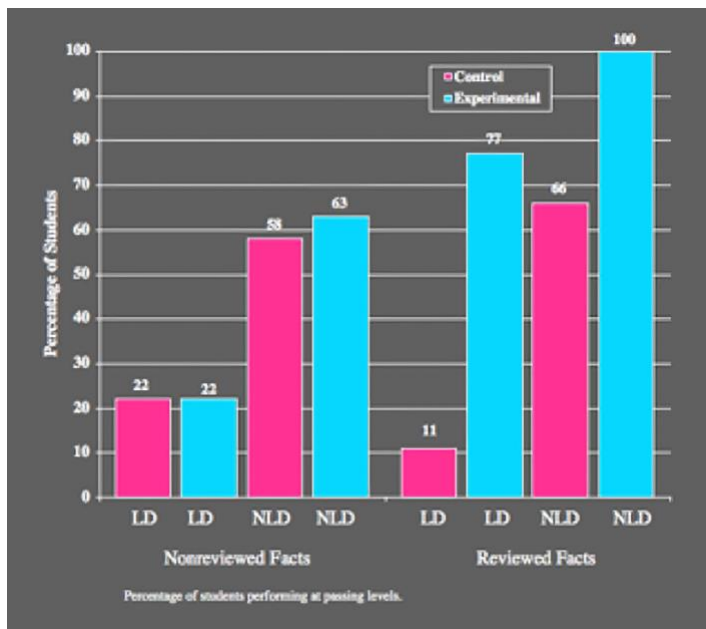
Figure 2: Percentage of Points Earned



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Figure 3 shows the percentage of students performing at passing levels on the test in each group. The left side of the figure shows the students' performance on non-reviewed facts, the right side shows the students' performance on reviewed facts. The percentage of students passing was relatively the same within the LD groups and the ND groups for the non-reviewed facts. However, the percentage of students passing was substantially different for LD groups and the NLD groups on the reviewed facts. Substantially more students who participated in the routine earned passing scores than the percentage of students who earned a passing score if the facts were merely repeated for them or if the facts were not reviewed at all. Mean percentage scores earned on tests by students with LD, low-achieving (LA) students, normally achieving (NA) students, and high-achieving (HA) students.

Figure 3: Percentage of students earning passing grades in each condition



Conclusions

The use of the Recall Enhancement Routine yielded higher test scores than the repetitious review of facts for ND and LD students. In addition, use of the routine markedly affected the percentage of LD and NLD students who earned passing scores (60% or higher) on the test.

Reference

Bulgren, J. A., Schumaker, J. B., & Deshler, D. D. (1994). The effects of a recall enhancement routine on the test performance of secondary students with and without learning disabilities. *Learning Disabilities Research and Practice*, 9(1), 2-11.

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Study 2

Overview

One purpose of this study was to determine the effects of a 2-hour workshop on nine secondary science and social studies teachers use of the Recall Enhancement Routine. A multiple-baseline across-teachers design was used for this purpose. Scores on a behavioral checklist which was used by observers in the classrooms served as the repeated measures.

The other purpose of this study was to determine the effects of two teachers' use of the routine on 7th graders' ability to specify an appropriate memory device to be used on a given fact and explain how they would use the device. A posttest-only design was used for this second purpose, with students in two trained teachers* classes serving as the experimental group and students in two untrained teachers' classes serving as the comparison group. A total of 385 students participated. A written test containing six open-ended items was used to determine whether students could name and use memory devices.

Results

During baseline, the mean percentage of points earned by the teachers on the checklist was 6.73%. After they had received instruction, their mean checklist score was 96.4%. That means that they were implementing the routine with a high level of fidelity in their classrooms after only 2 hours of instruction.

On the test, both comparison and experimental students specified a memory device for a mean of 80% of the items. Experimental students created the most appropriate memory devices for a mean of 42% of the items; comparison students created the most appropriate memory devices for a mean of 25% of the items.

Conclusions

Teachers were able to learn how to implement the routine at a high level of fidelity within a short period of time. Students learned how to create memory devices simply by watching their teachers present models of memory devices three to five times. Thus, this routine is a way that secondary teachers can embed strategic instruction within their subject-area courses.

Reference

Bulgren, J. A., Deshler, D. D., & Schumaker, J. B. (1997). Use of a recall enhancement routine and strategies in Inclusive secondary classes. *Learning Disabilities Research & Practice*, 12(4), 198-208.