Research: The Taking Notes Together PD CD Program

Overview
The Taking Notes Together Program is used to teach students how to take notes from written products and lectures. To test the effects of a software program for instructing teachers in how to teach the Taking Notes Together Program, a study was conducted with 20 general education teachers who taught a total of 338 students in grades 4 and 5. The teachers were randomly selected into an experimental or a control group. Nine teachers worked through the CD program and the instructor’s manual (hereafter referred to as the “CD group”) to learn how to use the Taking Notes Together Program. They taught the Taking Notes Together program in their general education classes with a total of 167 students. Ten teachers (hereafter referred to as the “manual-only group”) read the instructor’s manual. These teachers taught the Taking Notes Together program with a total of 171 students.

The purpose of the study was to determine the comparative effects of CD/manual combination versus the manual alone in terms of teacher and student outcomes. A posttest-only control-group design was used to determine the effects of the two methods of teacher instruction on teacher knowledge, implementation of the program, and quality of instruction. A pretest-posttest control-group design was used to compare teacher scores on their lecture-distribution methods. A pretest-posttest control group design was also used to determine the effects of the teachers’ instruction on student performance. Three types of analysis were used: a t-test, an analysis of covariance (ANCOVA), and the general linear mixed model (GLMM). All outcome (dependent) variables used in these analyses were treated as continuous variables. All analyses were conducted using a level of significance (alpha) of .05.
Results
The teachers’ implementation of the Taking Notes Together Program was measured in the classroom after they had read the manual or worked through the CD and the manual. The mean percentage of instructional steps implemented by the CD group was 97%; the mean percentage of steps implemented by the manual-only group was 87%. The posttest (after-training) scores of the two groups were compared using the general linear mixed model. A significant difference was revealed, F(1, 18) = 10.71, p = .0042, indicating that the CD/manual combination was more effective than the manual alone.

The quality of the teachers’ instruction was measured by observers using a checklist that listed the components of quality instruction. The HLM approach revealed a significant difference between the two groups of teachers, F(1, 18) = 14.42, p = .0013. The mean percentage of quality components was higher for the CD group (M = 90%) than for the manual-only group (M = 73%).

The quality of the teachers’ lectures was measured by observers using a checklist that corresponded to the instructions in the program on how to give a structured lecture. An ANCOVA revealed a significant difference between the CD group and manual-only group, F(1, 17) = 7.22, p = .016, with the CD group earning higher scores (M = 84%) than the manual group (M = 57%) after instruction.

The two groups of teachers also took a written test of their knowledge of the Taking Notes Together Program. A t-test revealed a significant difference between the mean scores of the groups, t(18) = 3.17, p = .005, with the CD group earning a statistically higher mean score (M = 94%) than the manual-only group (M = 81%). The effect size (d = 2.2) is considered to be very large according to the guidelines given by Cohen.

The CD group teachers completed a satisfaction questionnaire about the CD program. Their mean ratings on items on a 7-point Likert-type scale (with “7” indicating completely satisfied to “1” indicating completely dissatisfied) ranged from 6.2 to 6.8, with an overall mean rating of 6.7. Teachers in both groups completed a satisfaction questionnaire about the Taking Notes Together Program. The manual-only group had an overall mean rating of 6.45, and the CD group had an overall mean rating of 6.42.
The students in the two groups of classes took a written test of their knowledge about taking notes. No differences were found between the groups at posttest. Both groups’ scores substantially improved from pretest to posttest, with the CD group students scoring higher (M = 72%) on the posttest than the manual-only group students (M = 65%). (See Figure 1 for mean scores.)

Figure 1. Mean pretest and posttest scores for the Student Knowledge Test
The students were asked to take notes from a short written passage before and after instruction. The general linear mixed model approach revealed a significant difference between the two groups of students’ posttest notetaking scores (after controlling for the pretest scores), $F(1, 18.1) = 5.09, p = .0366$, with the CD group students earning statistically higher scores ($M = 85\%$) than the manual-only group students ($M = 63\%$). (See Figure 2 for mean scores.)

The students also completed a satisfaction questionnaire to indicate their satisfaction with the notetaking instruction provided by their teachers. The mean rating for the manual-only group students was 5.84 and for the CD group students was 5.7.
Conclusions
Working through the CD professional development program combined with reading the manual produced better results in terms of teacher implementation of the program than did reading the manual alone. This study showed that better implementation of a program is related to better student performance because the teachers who implemented the program at a higher level of quality (the CD group) produced better note-taking performance in their students. Teachers in the CD group were satisfied with the CD software program, and teachers in both groups were satisfied with the Taking Notes Together Program. Likewise, students in both groups were satisfied with the Taking Notes Together Program.

Reference