

# Research: The BUILD Strategy PD CD Program

## Overview

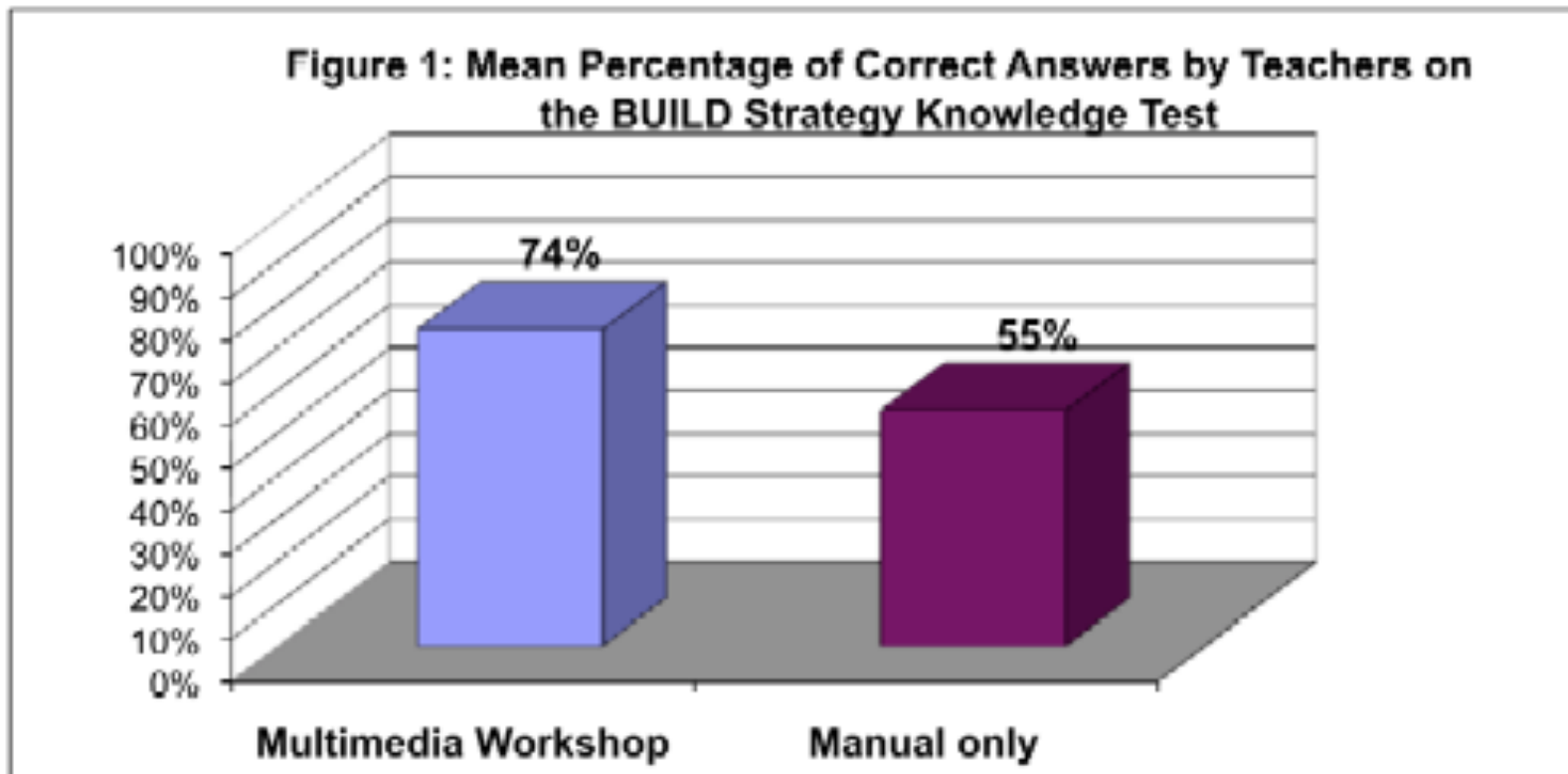
The BUILD Strategy is used by cooperative groups to resolve a two-sided issue. The research was conducted in 18 fifth-grade general education classes. Six teachers participated in this CD program to learn how to provide instruction in the strategy. They worked through the CD program individually. They also read the BUILD Strategy instructor's manual. They taught the strategy to a total of 125 students. They will be referred to as the "multimedia-workshop group." Six additional teachers simply read the instructor's manual for the BUILD Strategy and taught the strategy to their 113 students. They will be referred to as the "manual-only group." Six more teachers and their 109 students served as the comparison group. The comparison teachers did not teach the BUILD Strategy to their students. The teachers were randomly assigned to the groups.

## Results

Measures were gathered on the fidelity of the multimedia-workshop teachers' and manual-only teachers' implementation of the instruction, their quality of instruction, and the quality of the instructional environment. The General Linear Mixed Model (GLMM) analysis for the Quality of Instruction measure revealed a significant difference between the two groups [ $F(1, 10) = 5.59, p = .04$ ] with higher scores for the CD group. A t-test for the Environment measure revealed a significant difference between the groups as well ( $t(4) = 3.904, p = .011$ ). No difference was found between the implementation results for the two groups of experimental teachers. Both groups implemented the program.

# Research: The BUILD Strategy PD CD Program

Figure 1 displays the mean percentage scores that the multimedia workshop and manual-only teachers earned on a test of their knowledge of the instructional methods and the strategy. A t-test for independent groups revealed a significant difference in favor of the multimedia workshop group,  $t(10) = 2.895$ ,  $p = .016$ .

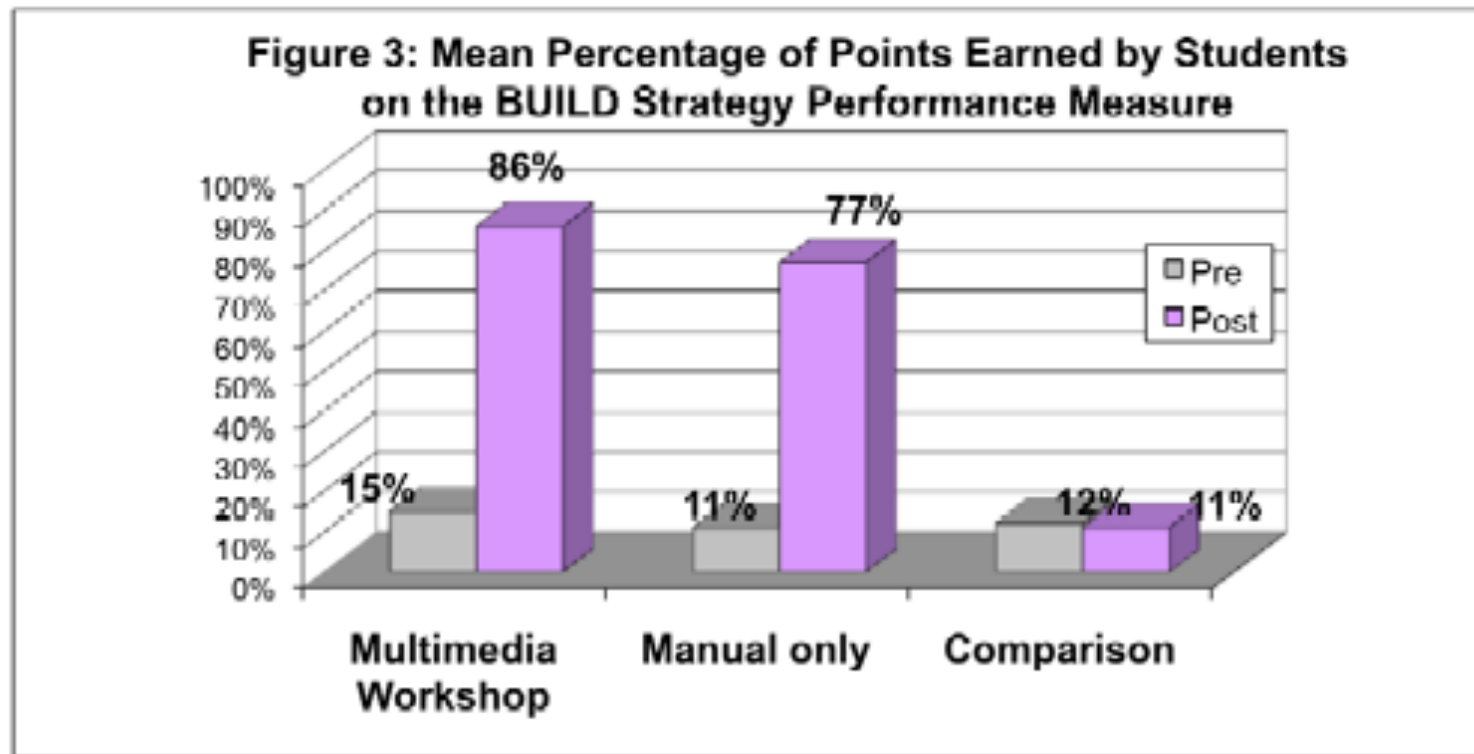


# Research: The BUILD Strategy PD CD Program

Figure 2 displays the mean percentage scores earned by students of the three groups of teachers on a written test of their knowledge of the BUILD Strategy. The data were analyzed comparing the three groups of students' raw posttest scores while controlling for the pretest scores. The results showed that the adjusted mean scores on the posttests were significantly different,  $F(2,14) = 1267.331$ ,  $p < .001$ ,  $\eta^2 = .995$ . Follow-up comparison tests revealed significant differences between the posttest scores of the comparison and the multimedia workshop groups,  $p = .000$ , and between the comparison and the manual only groups,  $p = .000$ . The posttest scores of the multimedia workshop group and the manual only group were not statistically different from each other.

## Research: The BUILD Strategy PD CD Program

Figure 3 displays the mean percentage of points earned by the students as they used the BUILD Strategy in cooperative groups in their classrooms to resolve issues. GLMM results indicated that the multimedia workshop and manual only groups earned significantly higher scores than the comparison group,  $F(2, 15.1) = 32.88, p < .0001$ . Significant differences were found between the posttest scores of the comparison and the multimedia workshop groups,  $p = .000$ , and between the comparison and the manual only groups,  $p = .000$ . The posttest scores of the multimedia workshop group and the manual only group were not statistically different from each other.



# Research: The BUILD Strategy PD CD Program

## Conclusions

These results show that the Professional Development CD Program is effective in instructing teachers in how to teach the BUILD Strategy to students. The quality of instruction and the instructional environments created by teachers who used the program received significantly higher scores than those created by teachers who only read the instructor's manual. In addition, the teachers who used the CD program demonstrated significantly more knowledge about the program than the manual-only teachers. Although there were no significant differences between the two groups of experimental students, the students of the teachers who used the CD program performed better than the students of the manual-only students on both measures. Both groups of experimental students performed significantly and substantially better than the comparison students on both measures. Thus, not only is the CD program effective with teachers, the instructional program associated with the BUILD Strategy is effective in producing student change.

## Reference

Vernon, D. S. (2004). Effects of a professional development software program for the *BUILD Strategy Program: Progress Report for SBIR Phase II Grant #R44HD36139*. Washington D.C.: National Institute of Child Health and Human Development.