Every Day Counts Calendar Math

Every Day Counts Calendar Math has been our supplemental math program to accompany the Louisiana Comprehensive Curriculum. Below are my findings regarding the validity of this program.

**Publisher:** Houghton Mifflin Harcourt

**Target Grade Levels:** K-6

**Program Goals**

The goal of this program is to provide ways for students to gain the prerequisite skills they need to enroll in the higher-level math courses they will need to be successful in school and in life. It’s components include daily whole class discussion and dialogic discourse, the usage of real life data and visual models, continuous exposure to critical mathematical concepts, making connections across mathematical strands, offering students multiple points of entry, cooperative learning, developing number sense and computational fluency, the usage of informal learning and games, differentiating instruction, and ongoing assessment.

**Purpose of Research**

Great Source Education Group contracted with RMC Research Corporation to conduct an independent study at the in the New Haven Public School District in New Haven, Connecticut. This research was pursued in order to determine whether this program produce significant differences in math achievement of low-performing students in fifth grade classrooms and what factors in implementation are associated with improved achievement in math?

**Research Results**

The data from this study was gathered from the results of a standardized measure of student achievement which measured math gains. The assessment was modeled after the Connecticut Mastery Test (CMT) for math with thirty five multiple choice questions and five open ended questions chosen from grade five math CMT released items. In addition to this data, the researchers collected data in the form of teacher logs and observations as well as a focus group survey. The results from the control group and the Every Day Counts Teaching group differ only by 5 tenths of a point. The main treatment effect for the total score (multiple choice and short answer scores combined) was not statistically significant, however. The adjusted posttest mean for students in the EDC group was 24.53 compared to 23.63 for the control group. The significant main effects indicate that after controlling for pretest
differences, students in the *Every Day Counts* condition significantly outperformed students in the control condition on the two subtests at the end of the school year.

Teacher logs and observations were combined to yield two types of variables: intensity and scope. (Intensity is a measure of how often a teacher/observer reported using specific strategies or techniques in the classroom. Scope, the second variable, is a measure of how many strategies or techniques were reported at least once by a teacher/observer). Students of teachers who were rated higher by the observers did significantly better on the multiple-choice questions. There was a significant interaction effect between hands-on activities intensity and treatment. It seems that students of control teachers who used hands-on activities more frequently tended to score higher on multiple-choice questions. Another interesting finding is that in both *Every Day Counts* and control conditions, students seem to do worse when their teachers used games more often, and they used more variety of manipulatives.

When the teachers that were a part of the focus group met, they determined that students became more comfortable with math concepts through multiple exposures. Students were able to use math vocabulary through repetition during the morning meeting. The multiple skills came together for the students as the year progressed. Bilingual students particularly could “talk math.” The teachers commented that the student participation format allowed for students to become responsible for their own learning. The program helped students “write” math and explain their answers.

In addition to this study, there were 6 case studies conducted in various states (including 2 in Texas and 1 in Louisiana).

<table>
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<tr>
<th>Pros</th>
<th>Cons</th>
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<tr>
<td>• Provides scripted assistance for teachers for each month</td>
<td>• Time consuming if teachers don’t update boards correctly.</td>
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<td>• Fosters improvement of Math Vocabulary and understanding through discussion</td>
<td>• Easy for students to fall through the cracks (if teacher does not develop a system for monitoring)</td>
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<td>• Study conducted on students with various socioeconomic backgrounds</td>
<td>• Research is outdated (Recent research should be done to test program validity)</td>
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<td>• Delivers content incrementally to promote continuous learning and understanding</td>
<td>• Difficult for teachers to implement without proper training</td>
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<td>• Vivid visuals</td>
<td>• Assessments don’t mirror state assessments (cannot rely on this program alone to prepare)</td>
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<tr>
<td>• Research shows that this program promotes better test scores on Critical Thinking questions</td>
<td>• Presents connections across several math strands and concepts</td>
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My Recommendation

I believe this is a great supplemental program for teachers to assist in creating a classroom climate that fosters rich mathematical discussions. We know that our students learn best through interaction and meaningful discussions with their peers. This program enlists tools to promote this mathematical dialogue. The problem is that teachers must have the proper training to implement this program, because a teacher’s familiarity with the components of this program plays a large role on its effectiveness. How can the teacher facilitate and guide the necessary discussions if they are unaware of the various elements they should be including? The Counting tape and depositor are monumental
elements when it comes to the development of number sense especially since this is an area of weakness for lower performing students. Understanding number sense is also a prerequisite or gateway for all other standards. Along with our Comprehensive Curriculum, Every Day Counts Calendar Math will be a great tool in preparing our students to comprehend and problem solve. My main issue with this program, however, is that there should be more recent research done to substantiate continued use of this program. There were several case studies done shortly after the initial research was conducted, but there is no data from after the year 2002 documented.

Research Cited


http://eric.ed.gov/ERICDocs/data/ericdocs2/content_storage_01/0000000b/80/26/86/7b.pdf


Teachers of Mathematics.


