

Author: Mike Soszynski, ADM Associates, Inc.

Presentation Title: Teach Your Children Well: Why Do Some Classes Learn More Than Others From a Utility-Funded Energy Program

Abstract: Adult behavior and attitudes are notoriously difficult to change. "Get 'em while they're young" has long been a mantra of marketing and political indoctrination, but it's equally applicable to socially desirable behaviors, such as those relating to energy efficiency. Program administrators recognize this: school-based energy efficiency programs have appeared around the country. These programs usually combine energy efficiency kit distribution, to achieve immediate energy savings, with classroom instruction on energy and energy efficiency, to bolster the kits' effectiveness and to ensure longer-term savings. Some evaluations have shown improved energy-related knowledge following classroom instruction, but not all evaluations have shown this. Anything that improves the effectiveness of the classroom instruction might increase programs' impact on both short- and long-term energy savings. We assessed how classroom instruction affected test scores of 8,148 fifth-grade students with 320 teachers in 111 school districts. The mean percentage of correct responses on a test of energy concepts significantly increased, from 57% before instruction to 74% after instruction. However, we also saw a high degree of variability in mean test score changes across teachers and school districts. Across teachers, mean pre-post difference scores ranged from -28% to +63%; across school districts, they ranged from -5% to +63%. For 30% of teachers, contributing 26% of the student tests, the mean improvement was 5% or less. No improvement, or an actual decline, occurred for 13% of teachers, contributing 9% of the student tests. Thus, many students did not benefit much from the instruction. Our paper will examine potential sources of the variability in performance across teachers and school districts, including school district demographics (e.g., household income, race), teaching load, and school district size. We will draw out the implications for improving instruction among under-performing teachers and school districts to provide the greatest program impacts.