

GOODMAN RESEARCH GROUP, INC.
Program Evaluation • Consultation • Market Research

eesmarts
Process Evaluation
Follow-up
Executive Summary

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SUBMITTED TO

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EXECUTIVE SUMMARY

The eesmarts program is a joint energy education program that is funded by the Connecticut Energy Efficiency Fund and administered by The Connecticut Light and Power Company (CL&P) and The United Illuminating Company (UI). The purpose of the program is to develop an energy-efficient ethic among all school age students in Connecticut, encouraging them to incorporate energy-efficient practices and behaviors into their lives at home and at school.

In August 2008, the Energy Conservation Management Board contracted with Goodman Research Group, Inc. (GRG) to assess the effectiveness of implemented program changes that resulted from the 2005 eesmarts process evaluation, specifically from the 12 key recommendations of that evaluation (which are summarized in Table 1 of the report).

The following evaluation questions guided GRG's work:

- To what extent were the 12 key recommendations implemented (e.g., partially, fully)?
- How were decisions about program change implementation made?
- What were the barriers to and facilitators of program change implementation?
- How effective were implemented program changes?
- How well do the implemented program changes align with the three primary objectives of the 2008 program (teacher training, restricted program material distribution, alignment with Connecticut State Science Frameworks and inquiry-based methods)?
- Has the implementation of the key recommendations been effective in improving the program's ability to educate current and future users about the advantages of increased efficiency?
- Given the implementation of program changes, what are the implications for the future of the program?

METHODS

To assess the effectiveness of the 12 key recommendations, GRG performed the following four evaluation activities:

- Activity #1: In-depth interviews with program decision-makers
- Activity #2: Interviews with Gatekeepers (science curriculum coordinators and other school administrators who make decisions about whether and how to adopt eesmarts for their school or school district)
- Activity #3: Web-based survey with teachers (both those who have received materials & trainings and those around the state who as yet have not)
- Activity #4: Review of existing program materials, including distribution materials, program/curriculum materials, case management database, evaluation forms, Connecticut State Science Frameworks

In addition to qualitative data analysis, GRG used SPSS Statistical Package 15.0¹ for descriptive analysis and ANOVA of quantitative data that informs this report.

KEY FINDINGS

Based on the results and analysis of GRG's evaluation activities, GRG reports the following key findings:

- The eesmarts program's shift to professional development has successfully increased participating teacher's self-perception of competence in energy practices and ability to teach on energy practices. These successes can be more readily seen if the program is more strategic about which teacher outcomes are important to track.
- eesmarts teachers were significantly more likely to feel prepared to teach on science and energy. Teachers express enjoyment of and satisfaction with the program and believe that it does impact themselves and their students.
- The program has limited the distribution of materials to teachers who have attended workshops. Though program administrators and decision-makers feel that this change was efficient and effective, some science curriculum coordinators and other gatekeepers had mixed responses.
- Alignment with Connecticut's State Science Framework and Connecticut Mastery Tests has made the program more credible as a science-based curriculum and more attractive to curriculum leaders and teachers. This positive aspect of the program is underemphasized in program materials. Nevertheless, some weaknesses in the curriculum need attention.
- eesmarts program decision-makers have been very satisfied with their decision to hire PIMMS as the curriculum vendor and PIMMS' expertise on teaching science curriculum. Additionally, some of the teachers and gatekeepers reported that PIMMS was an important part of their decision to be involved with the eesmarts program.
- Program decision-makers have not set an end-date for the program, believing that the program needs to continue in order to see how effective changes to the program have been in educating Connecticut teachers about energy practices.

¹ SPSS Inc. (2006). SPSS Base 10.0 for Windows User's Guide. SPSS Inc., Chicago IL

KEY RECOMMENDATIONS

GRG makes the following recommendations to the eesmarts program for continued program improvement in three major areas: program focus and infrastructure, professional development and curriculum materials.

Program Focus and Infrastructure

- Continue with the program, reach out, and expand to other school districts throughout the state.

The program has been a success in training educators and should continue to be available to Connecticut educators free of charge. Expansion of the program to new school districts can expand the program's influence and ability to carry out its mission to inspire our communities to adopt positive energy efficiency attitudes and behaviors in the use of all forms of energy.

- Continue to retain the services of PIMMS and further investigate other opportunities to partner with them.

eesmarts' hiring of PIMMS as the new implementation vendor has strengthened program credibility and helped the program gain exposure through PIMMS' existing networks within the Connecticut education system. PIMMS and SLC both offer eesmarts participants an added benefit and makes eesmarts more attractive as a multifaceted "package" that offers many educational opportunities for teachers to interface with learning energy practices.

- Make the program more attractive by advertising its alignment with state frameworks and standards.

Curriculum leaders in Connecticut are especially concerned with meeting the recently instated state frameworks standards. As a beacon of this program, eesmarts should underscore how the program aligns with state standards to curriculum leaders and teachers in order to increase buy-in.

- Think strategically about which long-term outcomes are most important and begin to track those now as part of the developing 10-year plan, using a logic model.

Now that the program's focus has turned to teacher training, eesmarts administrators should think critically about which measurable outcomes would be relevant for highlighting the program's success. Since the program plans to run indefinitely and there is a 10-year plan in development, program leaders should consider attempting to measure long-term outcomes that are in line with the mission of the program.

Professional Development

- Make professional development workshops easier for all eligible teachers to attend.

In line with offering “customized” workshops, eesmarts should strive to offer “customized” configurations using creative solutions to barriers to teacher attendance.

- Concentrate efforts on better recoding of the quality of teacher training and the impact of training on teacher classroom activity.

Now that the eesmarts program’s focus is on teacher training; tracking teachers and teacher outcomes is imperative to assessing the success of the program. Collecting data on students has been difficult and unsuccessful, and considering the program’s new focus on teachers may be of less value to the program. Thus, the program’s efforts should be put toward collecting information on teacher outcomes.

Curriculum Materials

- Advertise and highlight the program curriculum materials’ alignment with the State Science Framework in the teacher guides and curriculum materials.

In accordance with emphasizing the program’s alignment with state frameworks, the program should be even more explicit about how eesmarts lessons and *activities* within lessons reflect state standards and preparation for embedded tasks. Doing so can help increase teacher buy-in and the likelihood that teachers will incorporate the program into their curriculum.

- Continue to provide support for embedding the program materials in the State Frameworks curriculum and address curriculum weaknesses.

Because of its uniqueness, this program has the opportunity to make itself an indispensable element to the school districts it serves. Adding lessons and curriculum materials that would allow the program to capitalize on these opportunities will require that the program receive increased funding. In order to do this, the program will need to address weaknesses in the curriculum materials by continuing to make revisions as needed to continue to align with state frameworks and any emergent revisions to the framework.

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