



Dr. Donna Hargens, Superintendent

Program Evaluation 2012-2013

Kentucky Science Center After-School Enrichment Pilot Program

Executive Summary

**Beverly J. Winsch, Ph.D.
Program Evaluator**

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**Department of Data Management, Planning, & Program Evaluation
Dr. Robert J. Rodosky, Executive Director**

Kentucky Science Center After-School Enrichment Pilot Program

EXECUTIVE SUMMARY

Background

This *Executive Summary* addresses outcomes and recommendations related to year one of a science enrichment program conducted by the Kentucky Science Center (KSC) in collaboration with the Jefferson County Public Schools (JCPS). Please refer to the full *Evaluation Report* for a full description of the pilot program, evaluation methodology, and specific statistics for reported outcomes.

Program and Evaluation Design

Students (N=52) from Byck, Cochrane, Foster, McFerran, and Shelby Traditional fourth grade elementary schools participated in the pilot program. Students scoring in the range of high novice to low proficient in reading were targeted for the intervention. Six after-school sessions occurred weekly throughout March and mid-April with a culminating event at the KSC for all students enrolled in the schools and their families on April 25th. Each session lasted 90 minutes at each school from 4pm to 5:30 pm and was led by a KSC educator. Transportation was not provided. Sessions used an inquiry-based framework for instruction and demonstration. Math and language arts content, aligned with the Common Core standards, were integrated into the program. The KSC provided a 40% discount for the pilot program. The total, discounted price was \$7,200. The full price would have been \$13,600 with \$1600 for the Family Science Night (i.e., 266.67 per student).

Session attendance, performance on a science content pre/post assessment, and student responses on a satisfaction survey provided formative evaluation data. Using a matched control group design, performance on the 2013 K-PREP assessment in science provided the main outcome data.

Major Findings and Conclusions

Student attendance varied by location and decreased at all locations over the course of the sessions. Anecdotal reports from KSC leaders indicated that some students were “double booked” for afternoon activities and were pulled out of the session to attend something else.

Students were very satisfied with the pilot program. They were very keen on the inquiry-based approach and especially liked hands-on activities. Some students did not like the writing and math components but the majority of students said they would recommend the program to a friend. Some comments indicated issues with student conduct during the sessions. Three of the five locations had either a teacher remain unofficially in the classroom or a principal who “popped” into the classroom regularly. It was reported by KSC personnel that the presence of the extra adults helped with the management of student behavior.

The KSC students did significantly better on the 2013 K-PREP assessment in reading and science than their control group. The KSC group showed a significant advantage in reading and science scale scores, reading growth, and science performance category scores. The effect sizes indicated that the afterschool program provided meaningful impact on the outcome measures.

The main conclusion of this evaluation is that the KSC program should be replicated and expanded to another group of challenged elementary schools. Since students who participated in the KSC program tended to outperform their school, one option might be to expand the program to more students within the original five schools. Expanding the number of students at each location would strengthen the likelihood of significantly improving science achievement and gap scores at the school level. Specific recommendations to sustain program impact and make improvements are offered below.

Recommendations

1. Continue priority selection of students based on K-PREP reading scores (high novice through low proficient).
2. Ensure that students selected for participation are available and committed to completing the entire program. Perhaps provide an incentive for program completion such as a coupon to dress-down or an extra recess.
3. Cultivate parent engagement by hosting a “Parent-Open House” to kick-off the program and provide valuable program information. Send home a parent information sheet after each session that summarizes that session’s learning objectives and gives tips on ways that parents can engage their children in discussing or further exploring that content.
4. Have school principal contact the parents of students who miss more than one session and provide timely assistance when behavior issues are raised as a concern.
5. Offer the after-school sessions earlier in the spring so that learning needs can be shared with the teacher of record and hopefully addressed before the K-PREP assessment.
6. Consider ways to incentivize a 4th grade teacher to provide “back-up” support during each KSC session.
7. Do not increase the 10:1 KSC student/teacher ratio until at least one more year of data has been collected and student behavior issues have been solved.
8. Collaborate with the district’s science specialist in future endeavors to ensure that the program addresses common student misunderstandings and aligns with the Next Generation Science Standards.
9. Continue providing core content aligned language arts and math instruction as major program components.
10. Consider adding an informal “check for learning” at the end of each session. Learning needs from the former session would be addressed before the next content is begun.
11. Take steps to increase participation at “Family Nights”. Suggestions include providing transportation, raffling a KSC membership to attendees, providing a light dinner, and/or offering a “Science Fair” format where families are invited to see their child actively demonstrating an important science concept.