

Archived Information

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Activity sponsored which supports **GOAL 2** of the Mathematics and Science Initiative: **Improving Teacher Quality - Mathematics and Science**

SUMMARY/PURPOSE

Hispanic K-12 students are at special risk for academic failure in the U.S., with the student population in Puerto Rico placing at the bottom of this unacceptable range. Puerto Rico Department of Education statistics confirm as root causes (1) teachers' lack of the necessary subject knowledge in mathematics and science and (2) inability to integrate concepts from different disciplines in the application and understanding of science and mathematics, as well as a more hands-on experience in science classes.

The Rosenbaum Foundation is partnering with Inter American University of Puerto Rico (IAUPR) in projects to raise K-12 teacher knowledge and pedagogy in mathematics and science. With over 41,000 students, IAUPR is the largest Spanish speaking university in the Hemisphere, with a highly rated program in teacher preparation.

Materials developed with Rosenbaum Foundation support:

Outstanding mathematics materials by Professor of Mathematics Herbert I. Gross, founding president of AMATYC and presently co-director of the Vermont Math Initiative. They are exemplary in content and uniquely crafted to be accessible to fast, slow and even math-allergic learners.

Science materials developed by Dr. Graciela Ramirez-Toro, Director of IAUPR's Center for Environmental Studies (CECIA), were crafted to go in tandem with the math. They also include ingenious yet simple experimental demonstrations for the K-12 classroom.

ACCOMPLISHMENTS/RESULTS:

For in-service teachers who presently lack a science or math background – that is, the majority of public school teachers in Puerto Rico – the project both strengthens their basic knowledge and stretches the classroom applicability of their skills.

For in-service teachers with an existing strong background in math and/or science, this project gives them improved skills, updating their knowledge and applying it to the increasingly demanding integration of multiple sciences with mathematics.

For pre-service teachers, the material and instruction are of even greater importance – 'getting it right the first time.'

PLANS for the NEXT 12 MONTHS:

Professor Herbert Gross, a nationally recognized expert in this area, will join these classes via interactive distance learning. His lectures, in English, will be followed by question and answer sessions. Although English is a second language for most Puerto Rican teachers and students, full understanding and class flow will be maintained by Dr. Ramirez-Toro and other IAUPR faculty. Thus the class, and the requirement that all written work (homework and tests) is to be in English, will also serve to improve teachers' English language skills and comprehension.