

Science Teacher Institute [PENN] (NSF)

Funding Agency:

National Science Foundation (NSF)

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Evaluation:

Five years

\$297,860

Ohio's Evaluation and Assessment Center for Mathematics and Science Education (E & A Center) serves as an external evaluator for the Science Teacher Institute project. The goals of the institute are to (a) provide a master's degree program that serves as a professional development experience, (b) produce science teachers who are more knowledgeable about science, and (c) provide more support by their administration. The E & A Center analyzes and reports on the data collected by the internal evaluator, the Principal Investigators (PI) at the University of Pennsylvania.

The evaluation collects both quantitative and qualitative data. Questionnaires are used annually to collect data on changes in teaching practices and/or student achievement. Changes in university courses, programs, or changes in participating school/district science curricula is collected at the beginning and end of the project. Interviews and observations will be used to collect qualitative data and give context for interpreting the statistical outcomes.

Previous findings indicate that the middle school science is enhanced by teacher participation in the PENN STI. Scores on the Reformed Teaching Observational Protocol (RTOP) indicate that middle school science teachers' procedural knowledge and use of innovative strategies increased after participation in the PENN STI. Several findings also suggest that specific groups of students (girls and white students) experience significantly more standards-based instruction after their middle or high school teacher participated in the PENN STI.

This project demonstrates the E & A Center's capacity to use mixed methods evaluations long distance. Also demonstrated in this evaluation is the E & A Center's ability to analyze K-12/IEH science teacher professional development partnerships using sophisticated quantitative and qualitative techniques.