STEM Equity pipeline

"Expanding Options for Women and Girls in Science, Technology, Engineering and Math"

The STEM Equity Pipeline Project is a collaborative effort between State Teams and an Extension Services Group of leading researchers and practitioners in gender equity and STEM education to:

BUILD the capacity of the formal education community to implement research-based approaches proven to increase the participation and completion of females, including those with disabilities, in STEM education;

INSTITUTIONALIZE the implemented strategies by connecting the outcomes to existing accountability systems; and

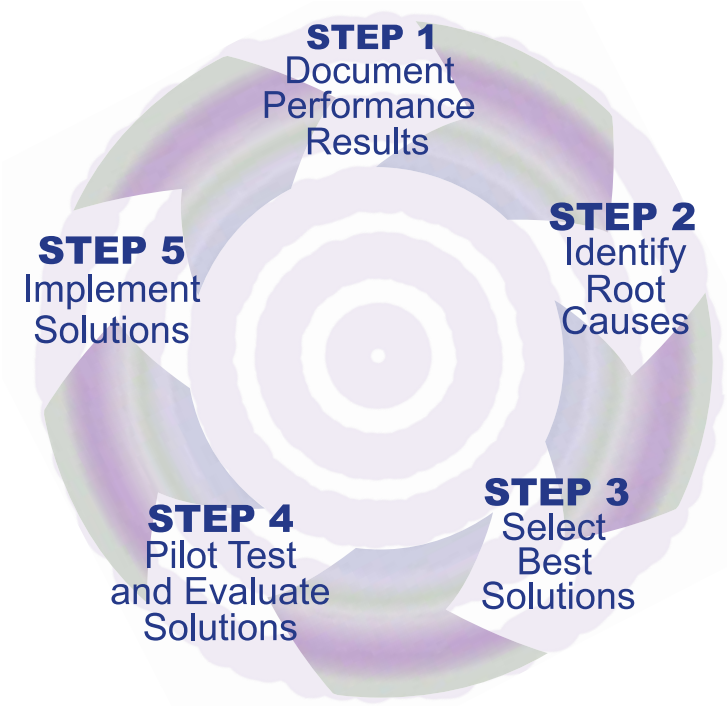
BROADEN the commitment to gender equity in STEM education.

Step 1: Document Performance Results.
The first step in the process is to describe state and school/college performance on the core indicators by comparing performance levels between schools/colleges, student populations, and programs over time. This step uses summary statistics and basic graphs and charts to document performance and identify improvement priorities.

Step 2: Identify Root Causes.
The second step is to analyze performance data and use additional information and methods to determine the most important and most direct causes of performance gaps that can be addressed by improvement strategies and specific solutions. This step encourages states to use multiple methods to identify and evaluate potential causes and select a few critical root causes as the focus of improvement efforts.

Step 3: Select Best Solutions.
The third step is to identify and evaluate potential solutions to performance problems, including both improvement strategies and program models, by reviewing and evaluating the underlying logic of these solutions and the empirical evidence of their effectiveness in achieving performance results.

Step 4: Pilot Test and Evaluate Solutions.
The fourth step is to conduct pilot testing and evaluation of solutions. This step presents practical yet rigorous methods and tools for evaluating solutions before full implementation at the state or institutional levels.



Step 5: Implement Solutions. The fifth step is to implement fully tested solutions based on plans that evaluate the success of the solution in reaching the expected performance results. This step also addresses how to use evaluation results to plan the next steps in state and local improvement efforts.

Funded by a grant from the National Science Foundation, GSE/EXT: STEM Equity Pipeline Project, Grant No. HRD-0734056

www.stemequitypipeline.org

STEM-Related Career Clusters

Today's global economy has presented great challenges for the U.S. In order to compete effectively in the current global economy the U.S. must bring together industry leaders and educators to increase the population's skills in STEM (Science, Technology, Engineering and Math). The need for qualified individuals in scientific and engineering-related fields has far outgrown the needs of the general workforce.

Science, Technology, Engineering, and Mathematics (STEM)

Engineering and Technology
Science and Mathematics

Architecture & Construction

Design/Pre-Construction
Construction
Maintenance/Operations

Agriculture, Food, and Natural Resources

Food Products and Processing Systems
Plant Systems
Animal Systems
Power, Structural & Technical Systems
Natural Resources Systems
Environmental Service Systems
Agribusiness Systems

Health Science

Therapeutic Services
Diagnostic Services
Health Informatics
Support Services
Biotechnology Research and Development

Information Technology

Network Systems
Information Support and Services
Interactive Media
Programming and Software Development

Manufacturing

Production
Manufacturing Production Process Development
Maintenance, Installation and Repair
Quality Assurance
Logistics and Inventory Control
Health, Safety and Environmental Assurance

Transportation, Distribution, and Logistics

Transportation Operations
Logistics Planning and Management Services
Warehousing and Distribution Center Operations
Facility and Mobile Equipment Maintenance
Transportation Systems/Infrastructure Planning, Management and Regulations
Health, Safety and Environmental Management
Sales and Service

Funded by a grant from the National Science Foundation, GSE/EXT: STEM Equity Pipeline Project, Grant No. HRD-0734056

www.stemequitypipeline.org