

**AC 2008-2756: PROGRAM MENTORING A GRANT PROPOSAL PROJECT  
DEVELOPMENT PROCESS FOR IMPROVEMENT IN TWO-YEAR COLLEGE  
TECHNICIAN EDUCATION: LESSONS LEARNED AND OUTCOMES FROM A  
PILOT PROJECT**

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# Mentoring a Grant Proposal Project Development Process for Program Improvement in Two-Year College Technician Education: Lessons Learned and Outcomes from a Pilot Project

## Abstract

Science, Technology, Engineering, and Mathematics (STEM) have become increasingly central to U.S. economic competitiveness and growth. Long-term strategies to maintain and increase living standards and promote opportunity will require unprecedented coordinated efforts among public, private, and not-for-profit entities to promote innovation and to prepare an adequate supply of qualified STEM workers that are capable of translating knowledge and skills into new processes, products, and services.

The National Science Foundation's (NSF) **Advanced Technological Education (ATE)** program has been improving the productivity of American industries by increasing the nation's technical workforce and developing best practices in technician education since its inception in 1992. The Department of Labor Employment and Training Administration's (ETA) **Workforce Innovation in Regional Economic Development (WIRED)** Initiative focuses on the role of talent development in driving regional economic competitiveness, increased job growth, and new opportunities for American workers.

Both NSF and ETA have recognize the critical role that the ATE program and WIRED Initiative play in developing the country's most valuable asset – talent and have forged a strategic partnership to strengthen and expand the STEM workforce pipeline to drive regional economic development. One activity of this partnership has been a pilot project that connects ATE's expertise and experience in preparing world class technicians to STEM activities in select WIRED regions. This pilot is leveraging the best work of each agency in workforce development to not only help accelerate regional transformation but also ultimately provide better outcomes for workers and businesses alike.

Two-year college personnel drawn from Arkansas, Boston, Denver, Kansas City (MO and KS), and Maine participated in the pilot project to work with experienced NSF/ATE grant developers and principal investigators. All but one participating group has been the recipient of Department of Labor Employment and Training Administration's Workforce Innovation in Regional Economic Development (WIRED) Initiative funding that emphasizes the community college role in workforce development, and only one had previously received funding from the NSF/ATE program. Through this pilot project funded by NSF, community colleges collaborated with experienced ATE Center and project directors to identify and develop plans that will enhance each college or region's ability to provide science and engineering technician education, leveraging the work currently in progress through WIRED activities and funding or other NSF/ATE funding. Mentors have guided community college participants in addressing all aspects of project development, from identifying the intellectual merit and broader impacts of the project to developing evaluation, measurable outcomes, and dissemination plans. ATE Mentors helped ensure that participants had the necessary information about the ATE program to effectively use and explore previously and currently-funded ATE Center and project resources in ways that will work best for their particular college and region. Steps in the mentoring process

and outcomes will be shared along with recommendations for those who want to develop effective projects to improve technical programs and NSF/ATE grant proposals to fund improvement and innovation.