EXECUTIVE SUMMARY

ATE Centers Lead Technological Education Innovations

This publication highlights the work of the 36 Advanced Technological Education (ATE) centers supported by the National Science Foundation. The centers undertake broad national or geographic-specific initiatives in the high technology fields that drive the economy and are of strategic importance to the nation.

All of the ATE centers serve as leaders in their fields. Each center pursues a distinct vision of technological education that it carries out in cooperation with two-year and four-year colleges and universities, secondary schools, business, industry, and government. In addition to the centers, the ATE program supports projects that target particular technological education issues.

ATE Develops Skilled Technicians

Individually and collectively, the centers and projects of the ATE program

- Save employers time and money by delivering well-qualified technicians to the workforce.
- Improve the science, technology, engineering, and mathematics (STEM) curricula at secondary and postsecondary institutions.
- Invigorate teaching in many disciplines.
- Recruit students for STEM careers.
- Create career pathways that help students progress efficiently from college to careers in advanced technology fields.

During the 2008 fiscal year, 263 ATE grants shared $51.32 million. ATE grants provide funding for educators to test and implement their ideas for improving the technical skills and the general STEM preparation of technicians and educators. The entire ATE program aims to produce more science and engineering technicians.

ATE Collaborations Build Career Pathways

To achieve these goals, ATE centers and projects devote significant time and resources to collaborating with industry and other educators, creating educational materials, providing professional development, and improving technological education programs. ATE initiatives developed 1,499 new articulation agreements just in 2007.[1] These articulation agreements, and the thousands of others previously developed by ATE initiatives, enable students in high schools, community colleges, and universities to transfer expeditiously from one level of education to another as they gain knowledge, skills, and work experiences throughout their lives.

National, Regional & Resource Centers

There are three types of ATE centers. National centers of excellence focus on comprehensive reform of technological education in fields that are key to the nation's economic competitiveness. Regional centers engage multiple community colleges and focus their efforts on academic initiatives that address the technician workforce needs of employers in specific regions. Resource centers are highly visible, national sources of educational materials, ideas, contacts, and mentoring for other educators.

ATE initiatives are broadening opportunities and enabling U.S. citizens to participate more fully in the knowledge economy.

- 83,400 people took at least one ATE course during 2007 (ibid., 4).
- In the ATE programs that tracked race and ethnicity during 2007, 37% of students were women, 16% were Hispanic, 15% were African American, 8% were Asian, and 6% were multiracial. Historically, the participation of these populations in STEM fields has been significantly less (ibid., 5).

[1] Arlen R. Gullickson and L. Wingate, Advanced Technological Education Program 2008 Survey Fact Sheet (Kalamazoo, MI: The Evaluation Center, Western Michigan University, 2008), 2, *http://www.wmich.edu/evalctr/ate/2008 ATE Survey Fact Sheet FINAL.pdf* (accessed September 10, 2008).