

## ATE Evaluation Survey 2004 at a Glance

This 'At a Glance' report provides summary information on key indicators of the ATE program. Variables reported here were chosen as the best overall indicators of the program from all variables addressed in a large web-based survey completed annually by ATE projects, centers, and articulation partnerships (collectively called *projects*). Typically, these variables are indicators of impact and quality assurance.

New *projects*, that have been active for at least 1 year, and continuation *projects* complete this survey. Of the approximately 250 *projects* in the program 158 met sampling requirements and 154 responded to the survey. Respondents included 21 centers, 125 projects, and 8 articulation partnerships.

The ATE program seeks to improve the nation's technician workforce through support primarily to community colleges. To reach program goals these institutions are expected to collaborate with one another and with businesses and industries that will use these technicians. Consistent with program expectations, virtually all *projects* (99%) reported substantial collaborative efforts.

The program supports work in four broad categories: (1) materials development, (2) professional development, (3) program improvement, and (4) articulation agreements. *Projects* prioritize their work in one or more of these categories. As Table 1 shows, there is a majority of all *projects* engaged in each work category.

Table 1. Reported work categories

	<i>N</i>	% of respondents
1. Materials Development	103	67
2. Professional Development	126	82
3. Program Improvement	102	66
4. Articulation Agreements	84	55

Through these *projects* and their activities, the ATE program has positively impacted the technician workforce in the U.S. and the knowledge and skills of faculty and staff who provide technician education. A detailed report and online data displays will be available at the 'evaluation products' link at the [ate.wmich.edu](http://ate.wmich.edu) Website in August 2004.

Organizational practices and collaboration efforts set the stage for productivity in the four work categories. Three indicators—(1) needs assessments, (2) use of advisory committees, and (3) project evaluations—show how *projects* obtain information to guide their work. Nearly three-fourths (73%) report having conducted a needs assessment either in the past year (28%) or in a previous year (45%). The clear majority of *projects* (78%) report using one or more types of advisory committee, including local (41%), regional (19%), national (38%), or other types (7%) of committees. Nearly 90% of *projects* reported using an external evaluator (70%), internal evaluator (7%), or both (11%).

*Projects* in total report 5,138 collaborations with an array of entities—business/industry, host institutions, other educational institutions, public agencies, other ATE *projects*, and/or other organizations. *Projects* received monetary support from 604 of these collaborators (12%) and in-kind support from 3,069 (60%). Table 2 describes these collaborations in greater detail.

Table 2. *Projects'* Collaborative Efforts

Indicator	Result
Monetary Support	<ul style="list-style-type: none"> <li>• \$11.5 Million (<math>N=75</math>, <math>M = \\$152,703</math>, <math>SD = \\$472,124</math>)</li> </ul>
In-kind Support	<ul style="list-style-type: none"> <li>• \$13.5 Million (<math>N=110</math>, <math>M = \\$121,440</math>, <math>SD = \\$480,591</math>)</li> </ul>
Primary purpose served by collaborations	<ol style="list-style-type: none"> <li>1. <i>Projects'</i> report most collaborators provide support to reach <u>general project objectives</u>.</li> <li>2. Collaborations among educational institutions uniquely tended to focus on <u>articulation agreements</u>.</li> </ol>
Most effective collaborators	<ul style="list-style-type: none"> <li>• 32% of respondents indicated Educational Institutions</li> <li>• 31% of respondents indicated Business and Industry</li> </ul>

### Materials Development

Materials development relates to the creation and/or modification of materials (courses, modules, etc.) for use in instruction of students or for professional development purposes. To be included in this category, projects indicated they plan for the materials to be disseminated nationally; 103 *projects* (67%) indicated their work meets this criterion. In reporting results, *projects* were asked not to consider development work that solely served course or program needs of the individual project.

Table 3. Materials Development Indicators

Indicator	Result
Productivity	2,547 materials are in draft stage, being field tested, or completed—488 are courses, 1,305 are modules, and 754 are other types of materials.
Materials use	1,367 materials are in use locally, 3,659 are being used outside the developer's institution, and 279 have been published commercially.
Institutions (beyond the local college) using materials	73 <i>projects</i> (71%) engaged in materials development reported 2,629 outside institutions were using at least one of their materials.
Needs analysis	80 percent of projects report that they gather input from business and industry, apply student and industry standards, and/or verify alignment with workforce needs <u>most of the time</u> when developing materials.
Pilot testing	79 percent pilot test materials or conduct internal field tests <u>most of the time</u> ; 47 percent conduct external field tests.

Indicator	Result
Assessing impact	One-third of projects assess student success in comparison with industry standards; approximately one-fourth of <i>projects</i> compares student performance with non-participating students and/or assesses student performance in the workplace.
National dissemination goal	40 percent of projects report that they are <u>successful</u> in meeting the goal of national dissemination of materials.

### Professional Development

Professional development includes personal and group-based activities aimed at improving the knowledge and skills of faculty who are directly engaged in the instruction of technician education programs. Four-fifths (82%) of the projects reported delivering professional development activities. Table 4 describes the numbers of offerings, steps taken to assure quality, and the objectives achieved.

Table 4. Professional Development Indicators

Indicator	Results
Number of opportunities	2,717
Number of participants	9,319 Secondary school level 9,619 Associate level <u>3,692</u> Baccalaureate level 22,630 Total
Quality assurance	<ul style="list-style-type: none"> <li>• 90 percent collect end of program feedback.</li> <li>• 68 percent follow-up to assess implementation.</li> <li>• 44 percent follow-up to determine impact on student achievement</li> </ul>
Success in professional development goal attainment	<ul style="list-style-type: none"> <li>• 81 percent report success enhancing disciplinary skills</li> <li>• 90 percent report enhancing educator teaching skills</li> <li>• 76 percent report enhancing use of educational technology to improve instruction</li> <li>• 97 percent report enhancing STEM faculty understanding of current technologies and practices</li> </ul>

### Program Improvement

Program improvement includes creation or modification of course sequences and instructional programs to serve technician education. These educational programs exist in secondary, associate, and baccalaureate degree levels. They also include work directly cast to serve industry needs (e.g., for skill improvement among employees). Nearly two-thirds (66%) of the funded *projects* engage in program improvement efforts. Male students (30,643) outnumbered female students (14,099) by a 2 to 1 ratio. White students (28,370) outnumbered all other ethnic/racial groups combined (11,839) by greater than a 3 to 1 ratio. Eighty-nine students requested accommodations under ADA. Table 5 provides breakdowns by educational program for four

indicators showing the numbers of programs, institutions, courses and students who participated in the previous year.

Table 5: Student Impact

	Education Level				Total
	Secondary	Associate	Baccal- aureate	On-The- Job	
1. Number of Programs	142	320	30	56	548
2. Number of Institutions	450	454	51	88	1,043
3. Number of Courses	176	1,320	89	18	1,603
4. Number of Students	10,163	32,541	1,140	3,057	46,901

Overall, 84 percent of *projects* reported that their programs represent models of instruction; 48 percent reported that their programs are being disseminated broadly.

### Articulation Agreements

Articulation agreements are arrangements between educational institutions that allow students completing a mutually agreed upon program or sequence of courses at one school to matriculate at a higher-level institution. More than half (55%) of the *projects* reported development and implementation of such agreements as a focus of their work.

These articulation agreements serve three major types of articulation—(1) from a high school technician training program to a two-year college, (2) from a technician program at a 2-year college to a 4-year college, and (3) from a teacher prep program at a 2-year college to a 4-year teacher preparation program. Table 6 shows the substantial numbers of agreements made and the number of students who have articulated under these agreements. It should be noted that these results are inclusive of all centers, projects and articulation partnerships.

Table 6: Articulation Agreements

Purpose served	Articulation Agreements	Students Articulating
High School to 2-year college technician program	813	1,136
2-year to 4-year college for technician/engineering program	230	634
2-year to 4-year college for teacher preparation program	34	351
Total	1,077	2,121

Projects reported information regarding the general nature of the agreements—a majority (55%) reported that some or all of the general education credits for specific courses transfer; 60 percent reported that some or all of the technical education credits for specific courses transfer; 52 percent reported that program completion allows students to matriculate at selected institutions; 48 percent indicated that program completion allows students to matriculate at selected institutions with standing in a specific degree program.