

COLLABORATION EFFORTS FOR THE ATE PROGRAM

ATE CENTERS' AND PROJECTS' APPROACHES, USE, AND EFFECTIVENESS OF COLLABORATION

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Executive Summary

Collaboration Efforts for the ATE Program

ATE Centers' and Projects' Approaches, Use, and Effectiveness of Collaboration

The use of collaborative arrangements by *projects* (i.e., projects and centers) funded by the National Science Foundation's (NSF) Advanced Technological Education (ATE) program is an expected method of achieving project goals of improving the U.S.'s technical workforce. In keeping with this expectation, this paper developed a definition of *collaboration* and created a set of elements that enhanced collaborative success in reaching ATE project goals.

Collaboration is a sustained formal partnership fostered by ATE projects and centers between K-12 schools, community colleges, four-year colleges and universities, businesses, government agencies, and professional societies in order to respond to the educational needs of the workforce by facilitating the achievement of the project's/center's objectives and which results in mutual benefit to all participants.

Using this definition and elements as a guide, the paper presents a review of *project* use and the effectiveness of collaborative arrangements. As a result of the review, the paper concludes:

Based on those data contained in the WMU evaluation project surveys and site visits, it is clear that ATE *projects* are using collaborations effectively. The overall positive impact of these collaborative arrangements on ATE's efforts to create advanced technological education is significant. Although some adjustments can improve the collaborative effort, clearly the objective of partnering educational deliverers and business/industry to produce a world-class workforce is a strong point of the ATE program. The following specific conclusions seem reasonable concerning ATE *projects'* use of collaboration:

- The use of collaborative arrangements by *projects*, especially community-college-based *projects*, is widespread and a fundamental characteristic of the organizational entities involved in leadership roles.
- The ATE *projects* initiated the collaborative arrangements.
- The collaborative efforts included appropriate members for the intended outcomes.
- The greatest numbers of *project* collaborations were formed around business/industry, K-12 (primarily secondary) schools, and community and/or four-year colleges.
- Most collaboration with business and industry seemed to focus on workplace standards development and work-based educational experiences.

- Business and industry were not normally involved in verifying the validity of newly developed curriculum products.
- All reported collaborations focused on the *projects*' goals, objectives, and desired outcomes. The degree that these were shared with partners varied; but in general, there was an adequate awareness of the ATE *projects*' focuses.
- The reported data did not indicate that a clearly defined “mutual benefit” to *project* collaborators had been routinely established. This was particularly true in collaborations with business and industry and with K-12 schools.
- The reported collaborations varied widely in duration and formalization. The range was from short, ad-hoc relationships of a few days to long-term, sustained relationships based on formal agreements.
- Since those data gathered were from currently active *projects*, there is no way to judge the persistence of the collaborations after grant funding.

Based on these conclusions, the paper contains a series of recommendation for the ATE program:

1. *Project* proposals should clearly identify the expected collaborations to include types of membership, duration, purposes, and expected outcomes.
2. ATE should continue to encourage statewide, regional, or national consortia as part of the collaboration model for large *project* awards.
3. ATE should continue to actively facilitate center-to-project collaboration and, where similar outcomes are identified, project-to-project collaboration.
4. For *projects* involving development of technical curriculum products, business and industry involvement in verification of product effectiveness should be required.
5. ATE should provide guidance on “best practices” for sustaining collaborations beyond *project* funding and systematically gather data concerning collaboration sustainability.

The paper also includes recommendations for ATE *projects* on the effective use of collaboration and a set of queries to guide evaluation of collaborative arrangements.

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