

ASSESSING THE IMPACT AND EFFECTIVENESS OF PROFESSIONAL DEVELOPMENT IN THE ADVANCED TECHNOLOGICAL EDUCATION (ATE) PROGRAM

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We cannot expect [instructors] to teach what they do not know,
nor to use yesterday's training to prepare today's students for
tomorrow's future."

(Sparks & Hirsh, 1999)

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Abstract

The purpose of this paper is to describe and assess Advanced Technological Education (ATE) professional development experiences and to aid community colleges throughout the nation in their efforts to meet the new challenges posed by rapidly developing high-technology sectors. As they adapt teaching and curriculum to the needs of a new generation of technology professionals, colleges will have to invest in effective ongoing professional development for their faculties. This paper presents the thinking of researchers and training experts, as described in research mostly on training on the use of educational technology in the classroom, and the experiences of ATE *projects*⁴ across the country. Knowledge and insights gained from the ATE evaluation will be described and placed in the context of the current state-of-the-art thinking on best practices.

For the institutions housing ATE *projects*, several issues emerge from a review of current literature on training on the use of educational technology in the classroom.

- Community colleges all need to tool up quickly to meet the demands of the high- tech sector.
- Current planning and program development procedures are not designed to be responsive to rapidly changing technological fields. Most colleges have a five-year program/course development cycle.
- Staff development programs have not been designed for rapid faculty skills development, and it is generally a lower priority for funding than other areas.
- Faculties who are trained and certified are in short supply, and the recruitment pool is limited due to the high industry demand for skilled employees.

These issues have provided challenges to the institutions housing ATE *projects*. It is likely that the experiences of the *projects* in overcoming the many barriers for colleges to providing quality faculty training on the use of educational technology in the classroom may be invaluable to other settings, and the lessons learned will be the focal point of this paper.

In order to assess the 13 ATE sites visited by the Western Michigan University (WMU) evaluation project, an evaluation regime has been created through review of current professional development literature on the use of educational technology in the classroom that identifies 7 basic elements constituting effective training programs. They are: (1) ongoing learning and training, (2) institutional support, (3) hands-on and classroom-based experiences, (4) individualized training, (5) follow-up training, (6) mentoring, and (7) a train-the-trainers approach to continuing education. Evaluation findings, primarily based on site visits, reveal that the more of the 7 elements an ATE site employs, the more likely it is that desired outcomes would be achieved. The data indicate that the ATE sites are succeeding in developing training that provides improved teaching, enhanced technology skills, and greater

⁴ *Projects* indicate ATE centers and projects, two funding categories used by NSF.

opportunities for long-term professional development for community college instructors and secondary teachers in the use of educational technology in the classroom. An important finding of the review of site visit findings is that the professional development ATE *project* staff members have received would not have been available without NSF-ATE funds. They have stressed that the training they received because of NSF-ATE funding has been instrumental to their improvement efforts.