Evaluate
EVALUATION RESOURCE CENTER for advanced technological education

EVALUATION CONTEXT

Assessment of Student Projects

Preconference workshop at the 2011 ATE PI conference

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In recent years, there has been increasing attention paid to career-technical education. More specifically, issues pertaining to student recruitment, engagement, active learning, and assessing the value of technical education. A key feature and strength of advanced technical education is the focus placed on assessing the value-added of curriculum to the individual learner and the application of student learning in the real world. One means of evaluating teaching and learning in technical areas is with student projects. The following highlights considerations for using project-based learning assessments of student work in evaluation of technical education programs.

- **Student projects are a practical means of gauging outcomes-based learning and development.** Facilitating substantial individual long-term activities or group work can afford students the opportunity to learn team-building, how to take responsibility for individual and collective efforts, challenge students in the application of concepts with others as full partners invested in the planning, execution, and insight experienced from the project.
- **Incorporate assessment and evaluation activities of student projects ranging from macro-level data** (e.g., student experiences and how they make connections between relevant subject matter with project design for integrated learning) to micro-level (i.e., select activities within individual technological courses). Delineate the content, process, and product that will produce desired outcomes relative to student performance and generate tasks for authentic learning from the project.
- **Outline learning objectives for students' project work.** For example, would the goals of your evaluation be best suited by including student projects that are action-oriented (e.g., students creating, directing, and producing an episode for ATEtv on career pathways in electrical engineering)? Alternatively, could a subject-matter oriented project such as understanding how waterways operate for maritime students be ideal? Do not rule out interdisciplinary learning targets that also capture student interest (such as designing a capstone project that bridges manufacturing technology with marketing and design education that would provide opportunities for student-driven design, manufacturing, and marketing of a product).
- **Make allowances for combining individual and group projects for long-term assessments to monitor and illustrate how students meet learning targets** (How many artifacts will be included in your evaluation of team projects?). Employ scoring rubrics, specify characteristics of project tasks that are linked to learning outcomes, and embark on formative and summative evaluation of student achievement. Also, set benchmarks that weave project-based student learning across the curriculum.
- **By engaging in project work, students can see the possibilities for careers in high-skill, high-demand, and high-tech fields come to life.** Evaluations that embed this authentic assessment offer an opportunity for technical education students to experience challenging content and learn by doing which will translate to real life.

FOR MORE INFORMATION

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