

Online Technical Education in ATE-Funded Programs: Building Evidence-Based Practice Recommendations

Project Goal

Synthesize what has been learned about designing and providing online technical education in 38 funded ATE projects in order to provide guidance on best practices for online technical education.

Rationale

The ATE program has funded several projects that involve significant online educational elements to enhance or deliver technical education courses, yet there has been no central coordination and sharing of ideas from these projects. It is not clear what aspects of the broader literature about online learning is applicable to technical education. **The vast majority of existing literature about online education in community colleges focuses on entry-level general education courses, yet the current emphasis on degree completion highlights technical education.** The ATE program has funded 38 projects over the last 5 years that involve creating fully online technical courses, hybrid courses, or online elements that would enhance face-to-face instruction. The impact of introducing online courses and course elements goes beyond teaching and learning to affect the whole college (Garza Mitchell, 2008, 2009, 2014). More information is needed about how online education is being used to provide or enhance technical education and its impact on faculty, students, and the college as a whole (Henderson, Fynewever, Petcovic, & Bierema, 2012).

Project Activities

We propose an in-depth qualitative investigation of ATE-funded projects that have developed online courses or course elements for technical education. Research methods include interviewing faculty and other key personnel involved in creation and implementation of the online courses and course elements, and analysis of key documents (e.g., evaluation reports, student surveys, other evaluative reports) in order to answer the following questions: 1) How have online learning components been integrated into technical education in funded ATE projects? 2) How are students impacted by the shift to online delivery? 3) How does moving courses and course elements online impact faculty members? 4) What information would be helpful to others wishing to implement online learning in technical education? 5) What questions remain unanswered and would be beneficial for further exploration? **Our syntheses of the gathered information will generate evidence-based knowledge about what works and what does not work in online technical education.**

Intellectual Merit:

- The project team is comprised of faculty from two community colleges and one research university. The three PIs have extensive experience working in technical education, and the project team is experienced in this type of research and knowledgeable about the topic.
- There is a gap in the literature regarding online courses aimed at technical education. The empirical evidence produced by this study will help to close that gap.
- A goal of this project is to disseminate findings widely through reports, publications, and presentations to both practitioners and researchers. Sharing of information will increase practical and theoretical knowledge about online technical education, including best practices for development and implementation.
- Knowledge generated from this project may assist colleges in developing future ATE proposals for enhancing technical education.

Broader Impacts:

- This project focuses on funded ATE projects, but online technical education is an important issue nation-wide through pushes for accelerated and increased degree completion. Findings may assist policy makers and administrators in making decisions regarding online technical education.
- Findings from this project may help improve the effectiveness and sustainability of ATE projects incorporating online education into technician education.
- This study may encourage broader discussion about the pros and cons of incorporating online education into traditionally “hands-on” programs.