Title: Toward the development of a program quality framework for career and technical education programs: A researcher-practitioner collaborative project

Authors and Affiliations:

R. Marc Brodersen, REL Central at Marzano Research
David Yanoski, REL Central at Marzano Research
Alisha Hyslop, Association for Career and Technical Education
Catherine Imperatore, Association for Career and Technical Education

Abstract Body
Limit 4 pages single-spaced.

Background / Context:
Description of prior research and its intellectual context.

Career and technical education (CTE) programs of study are subject to rigorous state and federal accountability systems that provide information on key student outcomes. However, while these outcome measures can form a basis for identifying high- and low-performing programs, they are insufficient for answering underlying questions about how or why that level of achievement was attained. Furthermore, on their own, they do not provide the information necessary to identify and replicate best practices or to determine appropriate technical assistance for targeted program improvement. For these reasons, more extensive frameworks to define and measure CTE program components linked to student outcomes are necessary. However, there is no single source of information on what makes a CTE program more likely to lead to positive student outcomes. Currently, different states, national organizations and system stakeholders place different emphases on the various CTE program components (for example, see National Association of State Directors of Career and Technical Education Consortium (NASDCTEc), 2010; Albert Shanker Institute, 2013).

Given the variety of CTE program guidance and program quality frameworks currently available, the Regional Educational Laboratory Central (REL Central) partnered with members of its college and career readiness research alliance (CCRRA) consisting of state directors of CTE programs in the central region. These CTE stakeholders expressed a need for a comprehensive CTE program framework that could be used to provide guidance to local CTE programs and to support evaluation activities aimed at program improvement, which led to an expanded partnership with researchers at the Association for Career and Technical Education who were working on a similar project (Imperatore & Hyslop, 2015). This collaborative project was developed as a first step intended to lead to the development of such a comprehensive CTE program framework.

Purpose / Objective / Research Question / Focus of Study:
Description of the focus of the research.

This study was designed to address the following questions:
1. What CTE program components do state educational agency (SEA) policies and guidance focus upon in the central region?
2. How are current national CTE program frameworks structured, and what program components are the focused on.

To address these research questions, REL Central and ACTE conducted reviews of SEA and national framework documents, respectively. The purpose of these reviews was to provide an initial identification and categorization of the CTE program components addressed by these documents. REL Central's CCRRA members will use these categorizations to prioritize areas of future research, including identification of existing empirical research linking the CTE components to student outcomes, development of a comprehensive CTE program framework, and development of future studies to validate the framework.

Setting:
Description of the research location.

REL Central collected CTE program guidance and policy documents from the seven states composing the REL Central region: Colorado, Kansas, Missouri, Nebraska, North Dakota, South Dakota, and Wyoming. NASDCTEc provided additional policy documents they had previously collected from the central states. ACTE collected program frameworks developed by national organizations.

Research Design:
Description of the research design.

REL Central and ACTE conducted a document analysis of state CTE program guidance and policies, as well as national program frameworks. These documents were examined to identify and summarize the various CTE program components focused on.

Data Collection and Analysis:
Description of the methods for collecting and analyzing data.

To address study question #1, state CTE directors in the REL Central states (Colorado, Kansas, Missouri, Nebraska, North Dakota, South Dakota, Wyoming) shared program guidance, policies, state frameworks, or other documents they felt were relevant to the project. NASDCTEc had previously conducted a similar document collection. Upon attaining approval from all the central states, these documents were also provided to REL Central. All documents were imported into MAXQDA qualitative analysis software. An initial coding scheme was developed based on the U.S. Department of Education's Rigorous Program of Study (RPOS) framework. REL Central researchers then coded the documents, including iterative revision of the coding scheme, to identify and categorize the various CTE program components focused on in the SEA documents.

To address study question #2, ACTE conducted an online keyword search using CTE-related keywords to identify relevant, existing program frameworks. Frameworks were only included if they had been developed or updated in the last 10 years and were publically available or draft versions made available by the developers. The compiled list of frameworks was sent to CTE researchers and state and local CTE leaders for their feedback. The finalized list of 21 frameworks were then coded based on a modified set of the codes developed by REL Central to address study question #1 described above. These frameworks were coded to identify and categorize the various CTE program components focused on in the national frameworks.

Findings / Results:
Description of the main findings with specific details.

Analysis of the two sets of documents revealed nine broad categories of content:

- Course content
- Course delivery
- Guidance and counseling
- Stakeholder partnerships

- Student leadership
- Student assessment
- Program outcomes
  Administrative program guidance
- Administrative guidance for CTE teacher recruitment and training

Although there were nuanced differences in the secondary codes that fell under each of the nine broad categories, a common set of content was identified. Examination of the frequency with which each content area was addressed showed state and national guidance most frequently addressed stakeholder involvement and partnerships, course content and delivery, student assessment, and career guidance and counseling. Many of the other areas focused upon were related to administrative requirements. The proposed presentation will provide additional detail regarding the content addressed by each of the identified categories.

Conclusions:
Description of conclusions, recommendations, and limitations based on findings.

Identification of the CTE program components addressed by SEA and national CTE frameworks and policies is the first step in a process to develop a comprehensive CTE program framework that may be used to provide program guidance and inform program evaluation. Initial results of the document analyses were presented to a group of CCRRA members and other CTE leaders. The alliance working group prioritized areas for future research and those where they felt program guidance may be most impactful; such as program partnerships, career guidance and counseling, work-based learning experiences, and student assessment and data use. Future work will include continued examination of the existing frameworks to develop consolidated program recommendations within each of these areas. The research literature will be examined to identify empirical evidence of the utility of these program components, as well as data-based best-practices within these areas. Future studies will address those areas in which no empirical evidence is currently available, and to begin to validate the emerging CTE program framework.

Appendices
Not included in page count.

Appendix A. References
References are to be in APA version 6 format.

Albert Shanker Institute (2013). *A quality education for all: A career and technical education policy agenda.* Retrieved February 15, 2015 from http://shankerinstitute.org/sites/shanker/files/CTE-POLICY-AGENDA-3-10-9-131.pdf.

Imperatore, C. & Hyslop, A. (2015). *Defining high-quality CTE: Contemporary Perspective on CTE Quality.* Association for Career and Technical Education. Alexandria, VA. Retrieved September 25, 2015 from http://www.acteonline.org/uploadedFiles/What_is_CTE/ACTE_Contemporary_Perspectives_on_CTE_Quality_FINAL.pdf.

National Association of State Directors of Career and Technical Education consortium. (2010). *Reflect, transform, lead: A new vision for career technical education.* Retrieved December 5, 2014 from http://careertech.org/sites/default/files/2010-Vision-Paper.pdf.

Appendix B. Tables and Figures
Not included in page count.