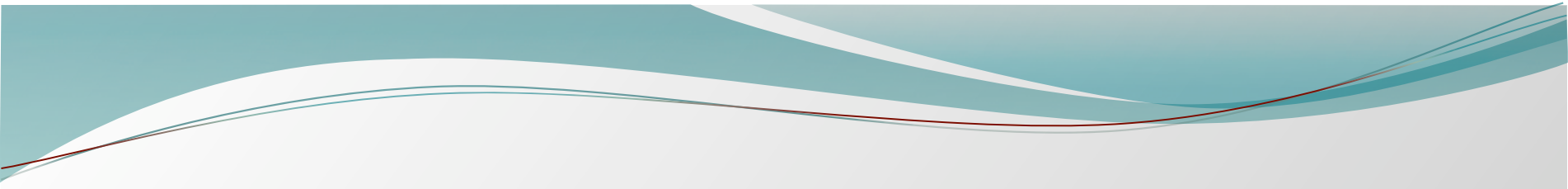


National Research Center

Implications for Change in Professional Development for Secondary Career and Technical Education: A Report from the National Research Center for Career and Technical Education

Dr. Morgan Lewis and Dr. Sandra Pritz
ACTE December 2, 2010



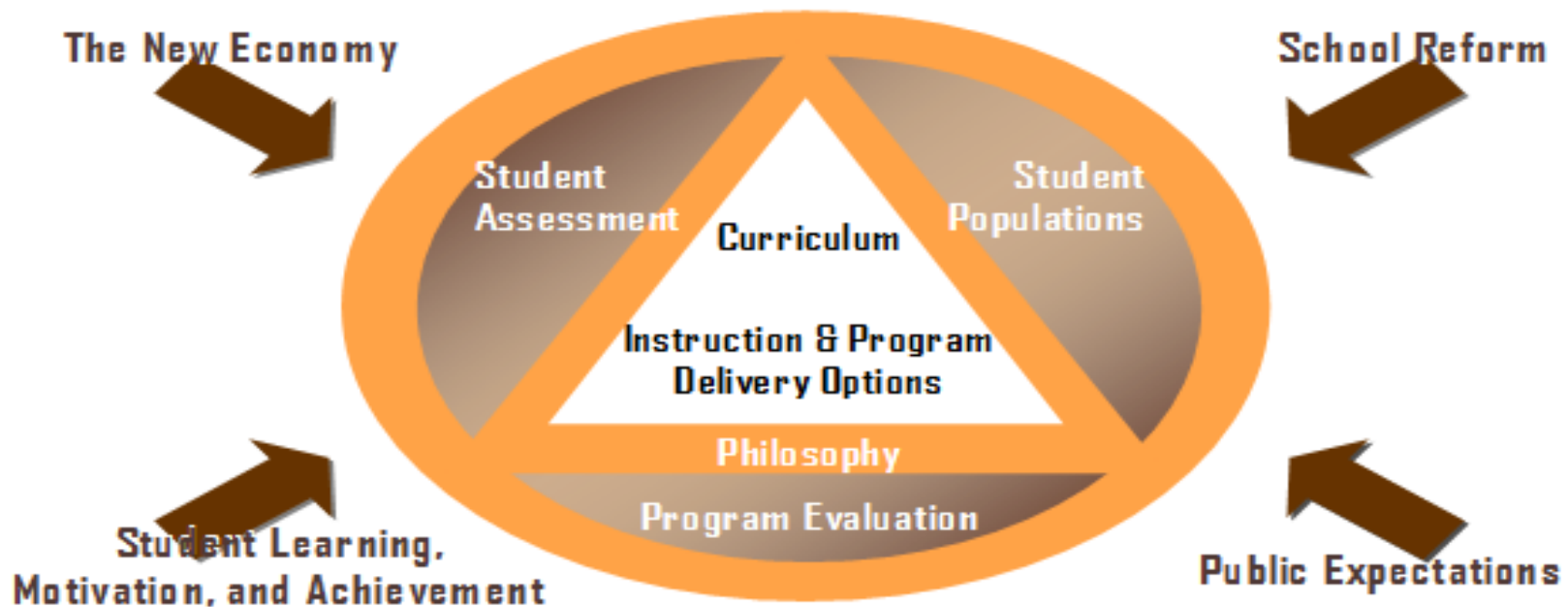


**WHAT DO YOU CONSIDER TO
BE THE MOST PRESSING
PROFESSIONAL
DEVELOPMENT NEEDS OF
SECONDARY CTE
TEACHERS?**

Rojewski's Conceptual Framework for CTE

This figure is from a PowerPoint presentation given by Rojewski to the Kentucky Career and Technical Education Conference, February 5, 2009.

Conceptual Framework Components



National Teaching Standards

NBTS (CTE) Categories

- **Creating a productive learning environment**
- **Advancing student learning**
- **Helping students transition to workplace and adult roles**
- **Improving education through professional development and outreach**

INTASC (State Education Agencies and Ed. Orgs)

- **10 principles for what the new teacher should understand, use and plan**
- **Translation of core standards into model licensing standards for each discipline; CTE not addressed**

National Staff Development Council Standards: Beliefs

- Every student learns when every educator engages in effective professional learning.
- Schools' most complex problems best solved by educators collaborating and learning together.
- Remarkable PL begins with ambitious goals for students.
- Professional learning decisions are strengthened by diversity.
- Sustainable learning cultures require skillful leadership.
- Student learning increases when educators reflect on professional practices and student progress.



**Your responses
summarized**

Critical Needs Identified by NRCCTE

- **Responses to Changes in Technical K&S Demands**
- **Integration of academic and technical content**
- **Research-based instructional strategies**
- **Standards-based instructional planning**
- **Assessment strategies**
- **Management of diverse classrooms**

Changes in Technical K&S Demands

- **New occupations stem from technological advances, legislation, changed demographics**
- **Emerging occupations often multi-disciplinary, specialized, and/or international**
- **Evolving occupations involve changing tasks that require new/additional skills**
- **Green occupations in sectors such as:**
 - **energy conservation and generation**
 - **environmental conservation**
 - **construction**

Integration

- **Perkins IV**
 - Technical content aligned with challenging academic standards
 - CTE students meet academic standards for NCLB
- **Common core standards**

Specific 11-12 grade standards for science and technical subjects in reading and writing
- **College readiness ≠ Career readiness**

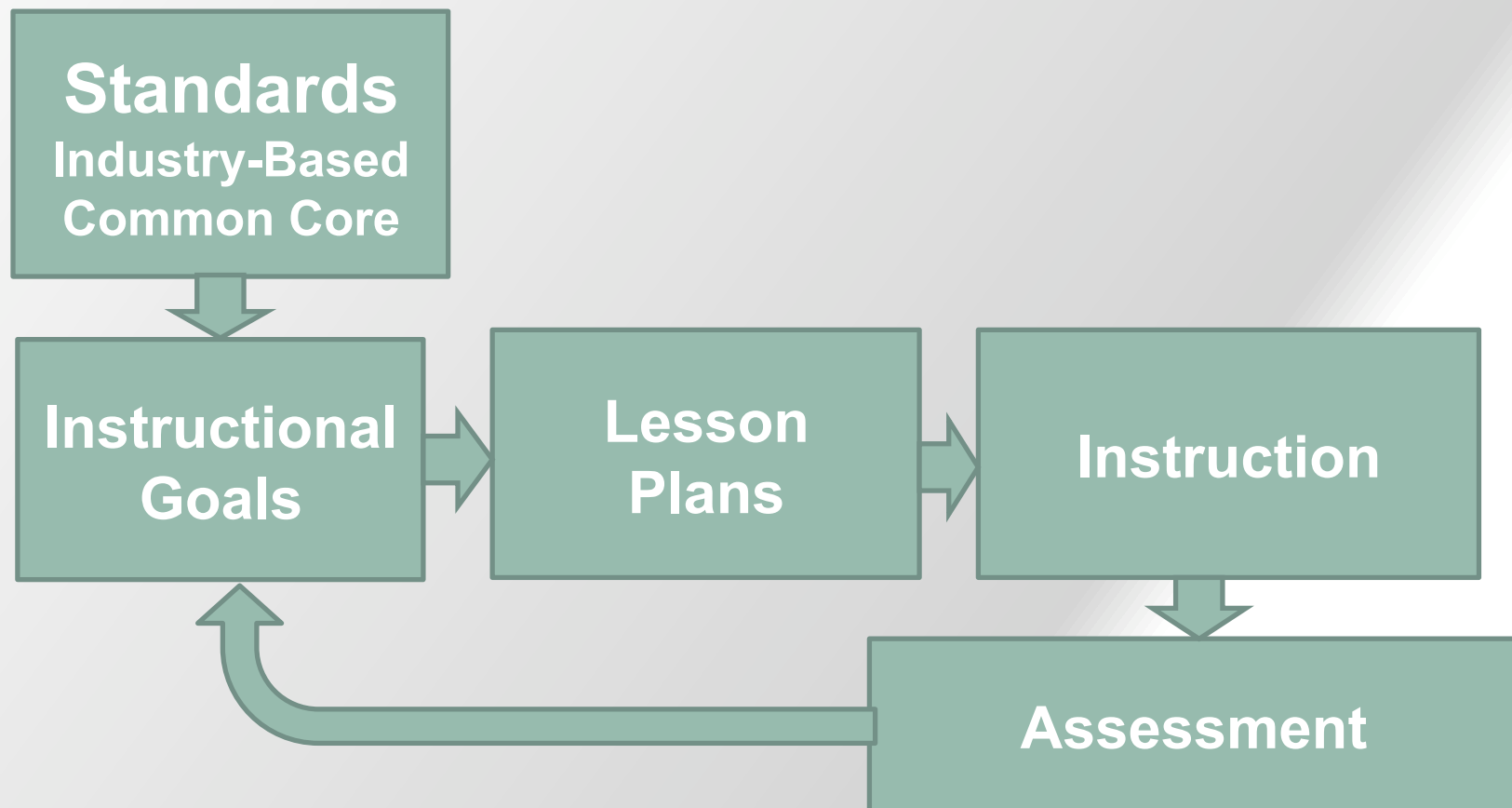
ACTE – NASDCTEc – Partnership for 21st Century Skills

Up to the Challenge

Research-Based Instruction

- **Project/Problem-based learning**
Buck Institute for Education
- **Cooperative learning**
- **NRCCTE tested approaches**
 - **Math-in-CTE**
 - **Literacy-in-CTE**

Standards-Based Planning



Classroom Management

- **Increasingly diverse students**
- **Teaching special needs students**
- **Formal induction including**
 - Mentoring**
 - Workshops**
 - Continuous orientation**
 - Handbook**
 - Help hotline**

Formative Assessment for Learning by Teachers

Knowledge Measures	Performance Measures
Multiple choice	Checklists
True-false	Rating scales
Completion	Rubrics
Matching	Portfolios
Essay	Other authentic tasks—competitions, work samples, employment-based

Topics for which PD is needed	% teachers indicating need
Source: 2008 HSTW special analysis of data from teachers with five years or less experience	
Developing rubrics in academic content areas	47
Using performance assessment	44
Using student portfolios	52

Summative Assessment of Student Learning and Program Evaluation

- **Perkins IV mandates measures of “student achievement on technical assessments that are aligned to industry-recognized standards.”**
- **Third-party technical skills assessments allows for objectivity, secure items, comparisons across groups.**
- **If pre-post sequence, can be used for formative as well as summative purposes; informs student or class improvements in instruction**
- **Results inform year-to-year program changes.**
- **Important that educators know how to analyze and interpret data**

NRCCTE PD Projects

Currently offering technical assistance:

- **Math-in-CTE**
- **Authentic Literacy-in-CTE**

Moving soon to technical assistance:

- **Science in CTE**
- **Alternative Licensure Career/Technical Teacher Induction Model**
- **Professional Development for Educators on the Use of Assessment Data (CTEDDI)**

CTEDDI



Career and Technical Educators
Using a Data Driven Improvement Model



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Instructional Improvement Cycle

5 Steps



Workshop Goals

LEARN TODAY:

- Data sources available
- How to use data
- Assessments (types of assessment, terminology, how assessments are developed)

OUTCOME of Workshop:

Action Plan

To improve learning and instruction



Career and Technical Educators Using Data Driven Improvement Model

In an NRCCTE-sponsored research study, NOCTI investigated how educators are prepared to use assessment data to improve programs and to target individual and group instructional needs in the secondary-level career and technical education (CTE) classroom.

Findings from the research on 1) professional development and 2) educator use of assessment data were used to create a professional development program geared toward secondary CTE teachers and administrators on how to effectively interpret assessment data and use it to make instructional improvements in the classroom.

CTEDDI will be available to states in 2011-2012.

Interested in signing up for your state to participate in the CTEDDI professional development? Email nrccte@louisville.edu with your contact information. We'll get in touch with more details as they develop.



NOCTI's CTEDDI professional development will provide educators from participating states with professional development tools. This program uses proven research strategies to increase a teacher's skills and knowledge in using technical assessment data for instructional improvement.

The professional development will be delivered by facilitators who will also serve as coaches for the educators for applying their initial training at their school sites.

nrccte@louisville.edu

Jumpstart Programs at Both 2011 HSTW & ACTE

Visit <http://www.nrccte.org/>

**To discuss your questions, email
Sandy.Pritz@nocti.org or
mvlewis13@gmail.com**

Thank You for Coming!

