Research-Based Professional Development Designed for CTE Teachers: a NEW National Research Center Offering

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Dr. Sandy Pritz
ACTE Convention
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The National Research Center

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University of Louisville
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Clemson University
Cornell University
ACTE
AED
State Directors
National Association of State Directors of Career Technical Education Consortium
A National Research Center for CTE

Research Sites
Technical Assistance & Professional Development Sites
The NRC: Four Plans of Work

- Scientifically Based Research
- Professional Development
- Tech Assistance
- Dissemination
Why?

“We are drowning in data and starved for knowledge”
Primary Topics

• Data-driven decision making in career-technical education

• Professional development related to use of technical skills assessment data
The Process

- Phase 1. Survey of state of the art in data use in secondary CTE
- Phase 2. Develop and test model for data-driven decision making (5 states)
- Phase 3. Iterative improvement (7 state review)
- Phase 4. Refine model, roll out CTE-DEI (Career Technical Education Data Driven Decision Making)
Phase 1

- Investigated secondary CTE educator use of technical assessment data to inform instructional decisions and sources of their knowledge that enables them to do so

- Examined the types of professional development that CTE educators have received related to the primary objective and how they have been applied
Phase 1 Data Collection

Survey research in 5 selected states with 4 selected CTE clusters:

- Manufacturing (welding),
- Business (accounting)
- Health Services (nurse assisting)
- Construction (carpentry)

Survey emailed to all CTE center directors and a sample of comprehensive high school CTE directors with the 4 selected programs
Survey Key Findings

- Majority use end-of-program tests
- Respondents felt training with follow up was needed (About 1/3 have not received any PD on data use)

Respondents needs:
- How to interpret the data they have
- Prefer Peer interaction based PD
Observations of existing data driven decision making showed gains in use of data by teachers
Phase 2 (2009-2010)

- Developed a data-driven decision making model
- Sources
  - Original survey & observations
  - Other literature
  - NRC partners work (Math-in-CTE, Authentic Literacy)
- And . . .
Phase 2 (2009-2010)

- Delivered through in-state facilitators
- Started 3 sites early and collected iterative data for PD refinement
Methodology and Process

- Used a social networking site as a means of building a community of practice
- Used pre-test, post-test, questionnaires, facilitator surveys, self-reported perceptions
- Involved 48 individual educators
Instructional Improvement Cycle

5 Steps

- Collect Data
- Analyze Data
- Verify & Corroborate
- Design Action Plan
- Implement Plan & Review Outcomes

OUTCOME of Workshop:
Action Plan
To improve learning and instruction

Workshop Goals
LEARN TODAY:
- Data sources available
- How to use data
- Assessments (types of assessment, terminology, how assessments are developed)
Sample Workshop Content of Educator Training

- Common assessment terms
- Sample reporting formats
- Methods of interpreting data
- How to interpret data in an applied setting
- External factors that can impact test scores and trends over time
- Strategies for using data
- Emphasis on interactive activities, contextualized to participants’ own school, follow up in terms of an action plan
**Step 4: Design an Action Plan Final**

**Worksheet 5: Prioritize**

<table>
<thead>
<tr>
<th>Name:</th>
<th>Program: Business Administration</th>
<th>School:</th>
</tr>
</thead>
</table>

**Directions:** From your program’s baseline (pretest) data, develop goals and performance targets; determine the indicators of success and whether new practices need to be implemented as part of the next steps and timing. Use information and data sources identified in the previous worksheets for this exercise.

**Overall Goal:** To further improve the technical competency of the KTC McAlester Business Administration program using evidence from class results on the NOCTI and ODCTE state competency test.

**Summarize the strengths in your data:** My program’s data shows strengths in the areas of computer applications, working in an office environment, and office procedures.

**Summarize the weaknesses or gaps between the status and the standards your program or school needs to achieve:** The class has weaknesses in the areas of accounting and computational skills and records management.

<table>
<thead>
<tr>
<th>Prioritize desired short term</th>
<th>Data Required:</th>
<th>Indicators of Success:</th>
<th>Steps for current school year:</th>
<th>Strategies for groups or individual students</th>
</tr>
</thead>
</table>
Educational Resource Articles

- DesignActionPlanFinal.docx
- Form for Credit.jpg
- Course credit through Oklahoma State University.docx
- Statistical resources for data.doc
- Data plan narrative.doc
- Step 4 Worksheet 3 Final.doc
- NOCTI White Paper.pdf
- Dreams1.jpg

NRC cte Site Coordinator Training

Type comment here, then click Add Comment to post a message...

Add Comment

Health Occupations people, how are you using Nocti Pretest data? --- beth.rhymestine 3/17/10

Received my first homework assignment. Looking for carpentry instructors willing to discuss NOCTI strategies utilizing Pre-Test data to improve instruction. We have created some helpful NOCTI driven curricular documents in the School Dist. of Phila. recently that are aiding us in focusing the carpentry, electrical and plumbing programs in an organized framework. Hope we can be helpful. --- Patrick.durkin 3/16/10
Follow-up (webinar, visit, phone)

Purpose:
- To provide mentoring for implementation of action plans
- To share strategies that are working
- To identify any barriers

Questions:
- What is going well?
- What are your challenges?
- What has been the reaction by students?
- What additional resources do you need?

Next Steps:
- Continue to implement action plan
- Make notes of any successes or barriers
- Share on the professional sharing site
Early findings
Self-Reported Skill

Rate the degree of skill you feel you personally have in using technical assessment data for classroom improvement:

- Very skilled
- Adequate for my needs
- OK, but I could use some improvement
- I know a little but could use a lot of improvement
- Not at all skilled

The chart compares the ratings of teachers and administrators.
Post-Workshop Comments

- “Our school will utilize assessment analysis to modify instruction and planned improvements.”
- “We will collaborate more on looking at assessment data and planning for improvements in instruction.”
- “Looking at performance as a group and establish trends to address rather than just at individual performance”
- “As an administrator, I plan to utilize practices learned to bring instructors together and to share ideas”
- “Hopefully, we will be able to take it back to our PLC and CSD teams so that all of our teachers will become more comfortable with utilizing data to improve student learning.”
Post-Workshop Ratings (1=strongly disagree, 6=strongly agree)

- Content of the workshop was relevant
- Materials will be useful in my school setting
- Activities focused on solving real problems in my classroom
- The overall quality of the content and materials was excellent
- This changed the way I will work to improve student achievement
- As a result of this professional development:
  - My knowledge increased
  - My data skills increased
  - My abilities increased
  - My attitude changed
- I feel that this professional development will be:
  - Applied in my classroom
  - Easy to adapt for my purposes
  - Helpful in planning for improved learning
- This professional development will impact:
  - How I teach
  - How I plan instruction
  - Student learning outcomes
  - The way I monitor student progress
I think I will continue to use technical assessments for instructional improvements *during* this project.

Scale 1 (strongly disagree) to 6 (strongly agree)

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>5.00</td>
<td>0.92</td>
</tr>
<tr>
<td>Administrators</td>
<td>5.25</td>
<td>0.75</td>
</tr>
<tr>
<td>Teachers</td>
<td>4.89</td>
<td>0.97</td>
</tr>
</tbody>
</table>

I think I will continue to use technical assessment data for making instructional improvements *after* this project.

<table>
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<tr>
<th></th>
<th>Mean</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>4.95</td>
<td>1.03</td>
</tr>
<tr>
<td>Administrators</td>
<td>5.33</td>
<td>0.78</td>
</tr>
<tr>
<td>Teachers</td>
<td>4.78</td>
<td>1.08</td>
</tr>
</tbody>
</table>
Successes reported

Educators saw positive improvements based on the instructional changes they had made, such as:

• reviewing areas of general weakness,
• finding new materials and resources to use with the students,
• adding to the curriculum or changing curriculum timing,
• assisting or getting assistance for individual students to address weaknesses.
Key Survey Results-Pilot Sites

- Skill in using data had increased & useful
- Planning instruction and monitoring student progress
- Valued technical assessment data as a useful tool, and felt they would continue to use data after the project was concluded
Effects

- Focus Improvements where students were weak
- Changes to curricula based on test results
- Teachers reported increased student interest
TA Planned Improvements

What we learned

- Intervention spread out over longer timeframe, including more meetings/mentoring
- Altering the timeline of the program so that the initial workshop occurs early in the school year and the mentoring time is increased
- Incorporating more administrator-specific exercises into the workshop
Phase 3: 2010-2011

• Continue PD intervention modifications
• Follow up of original 5 state/9site participants
• To conduct educator reviews of the PD in new states
• Roll out CTEEDDI technical assistance
Career and Technical Educators Using a 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.

Jumpstart Programs at Both 2011 HSTW & ACTE

nrccte@louisville.edu
Other Valuable Resources at NRCCTE

- Professional Development for Educators on the Use of Assessment Data
  Principal Investigators:
  - John Foster, NOCTI
  - Sandra Pritz, NOCTI
  - Patricia Kelley, NOCTI
  - Carol Hodges, NOCTI

- Math in CTE and Authentic Literacy in CTE
  Principal Investigators:
  - Donna Pearson, University of Louisville
  - Travis Park, Cornell University

- Green Programs of Study at Los Angeles Trade-Tech College - Part 1
  Download
  The NRCCTE visited Los Angeles Trade-Tech College (LATTC) to learn more about its groundbreaking green workforce education programs, commitment to serving the needs...
And Podcasts!

NOCTI PD on Assessment Data Use: Case Study with Aldo Jackson of Erie Co. Technical School

Use of Assessment Data at High Desert Education Service District - A Podcast with Ray Hasart

www.nrccte.org
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Thank You