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

Dr. James R. Stone III

Dr. Sandy Pritz

ACTE Convention

Las Vegas; Dec. 3, 2010

The work reported herein was supported under the National Research Center for Career and Technical Education, PR/Award (No. VO51A070003) as administered by the Office of Vocational and Adult Education, U.S. Department of Education. However, the contents do not necessarily represent the positions or policies of the Office of Vocational and Adult Education or the U.S. Department of Education and you should not assume endorsement by the Federal Government.

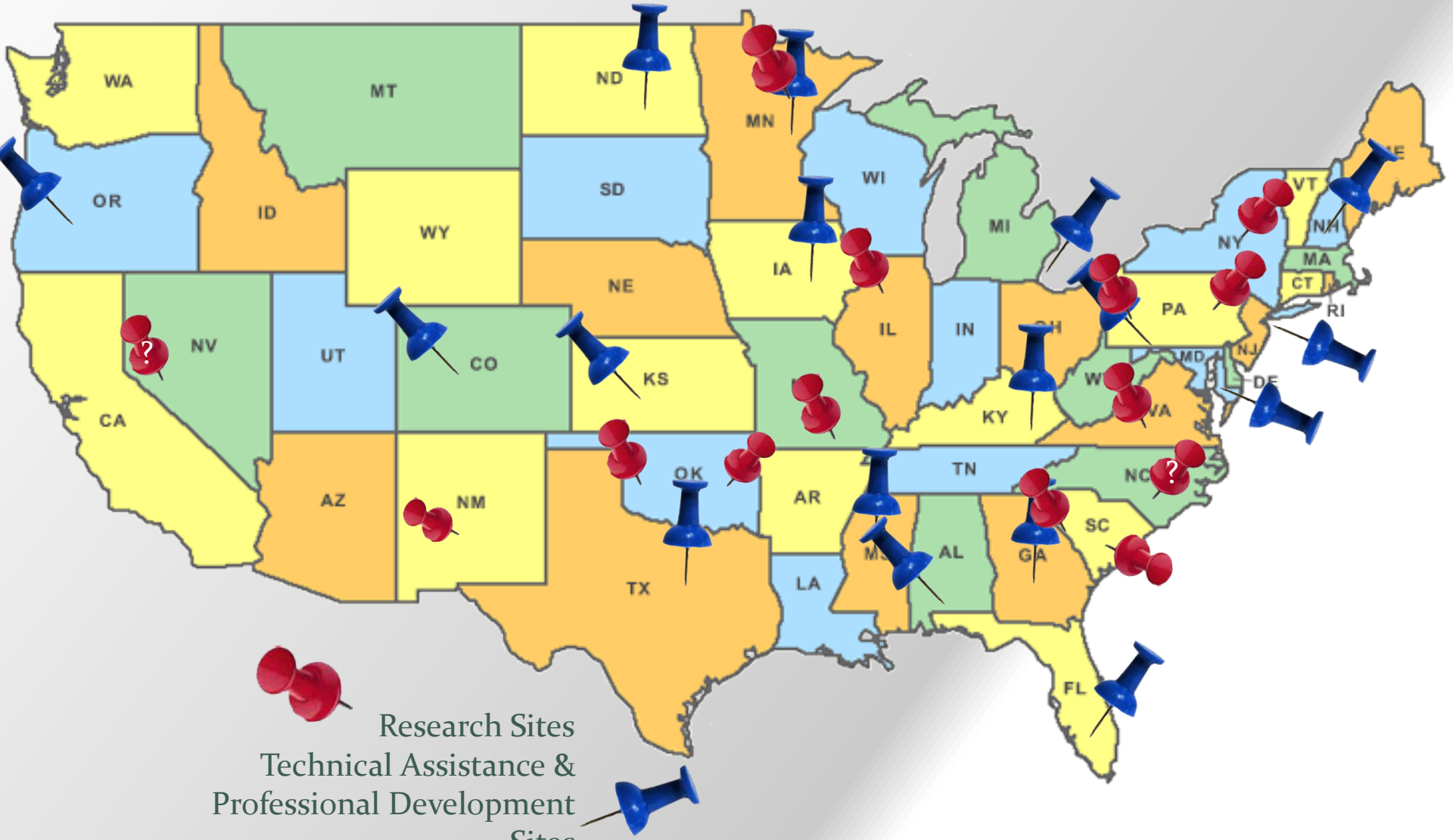
NOCTI®

NRC CTE National Research Center for Career and Technical Education

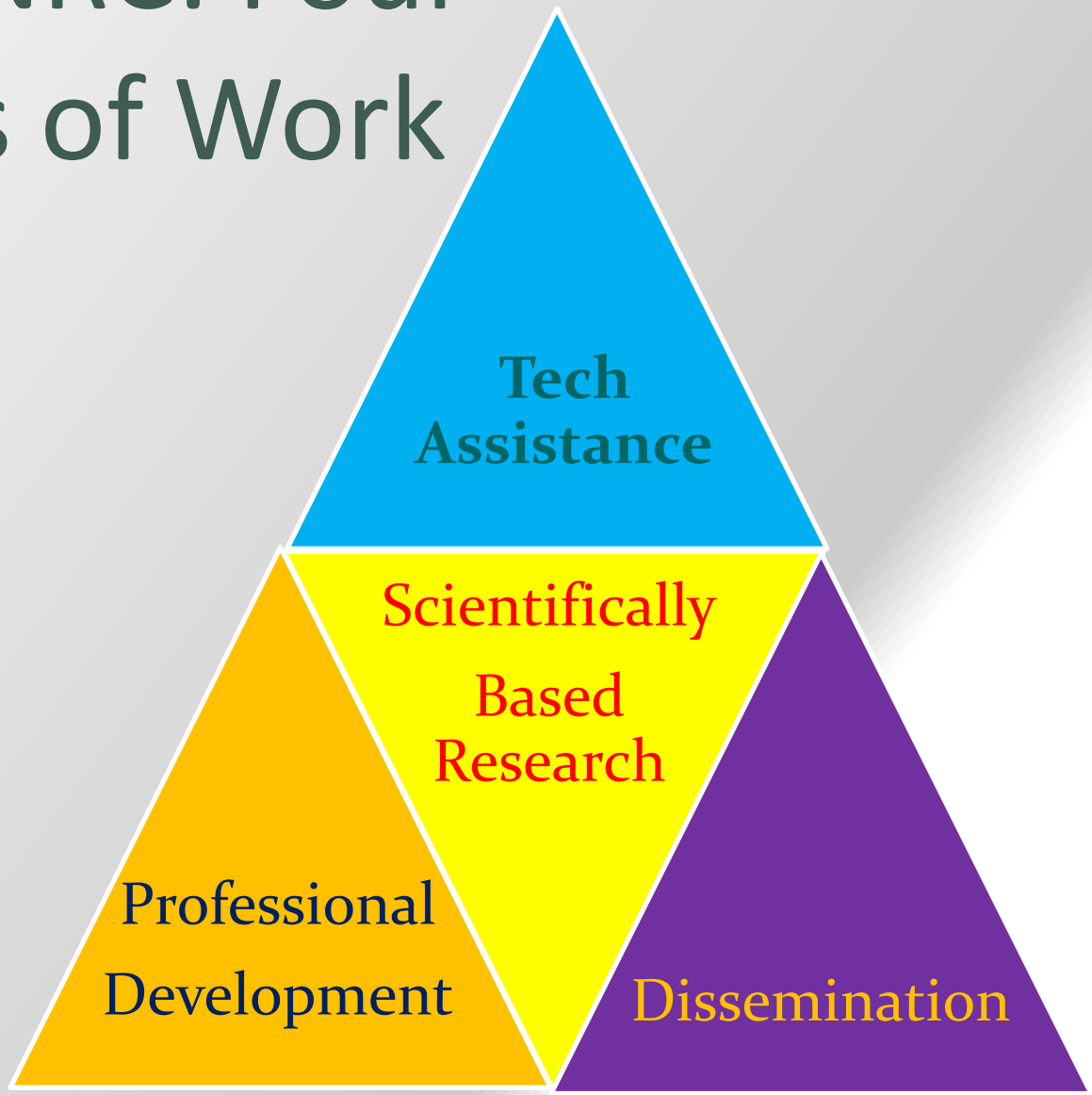
The National Research Center

Partner Organizations

A National Research Center for CTE



The NRC: Four Plans of Work



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

NRC CTE
National Research Center for Career and Technical Education

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**

NRC CTE
National Research Center for Career and Technical Education

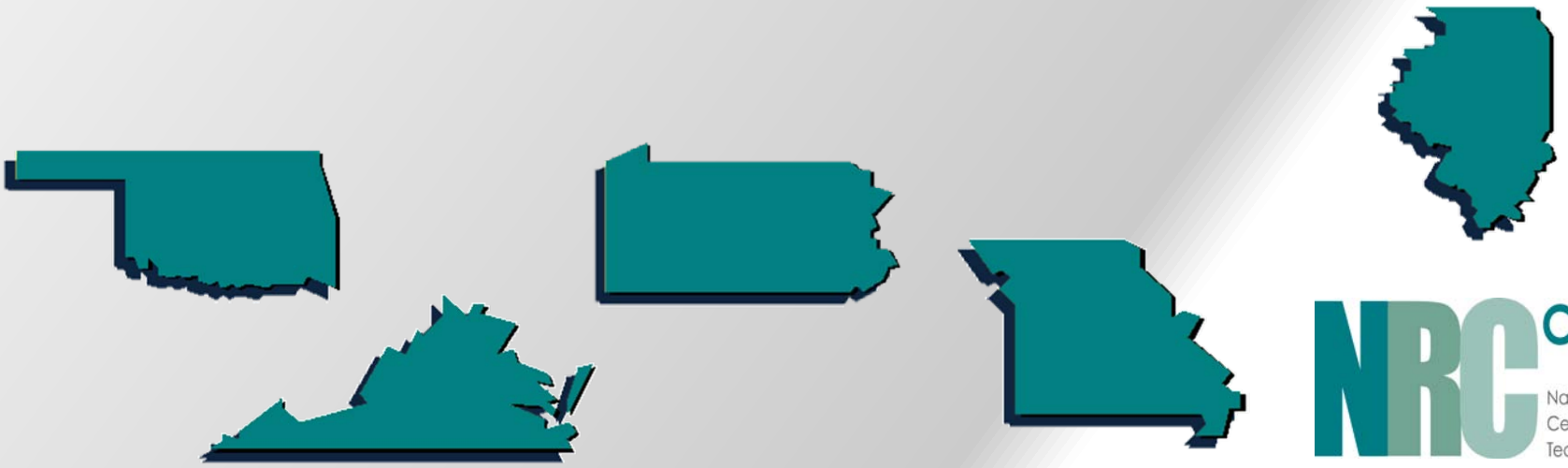
Observations of existing *data driven decision* making showed gains in use of data by teachers

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)

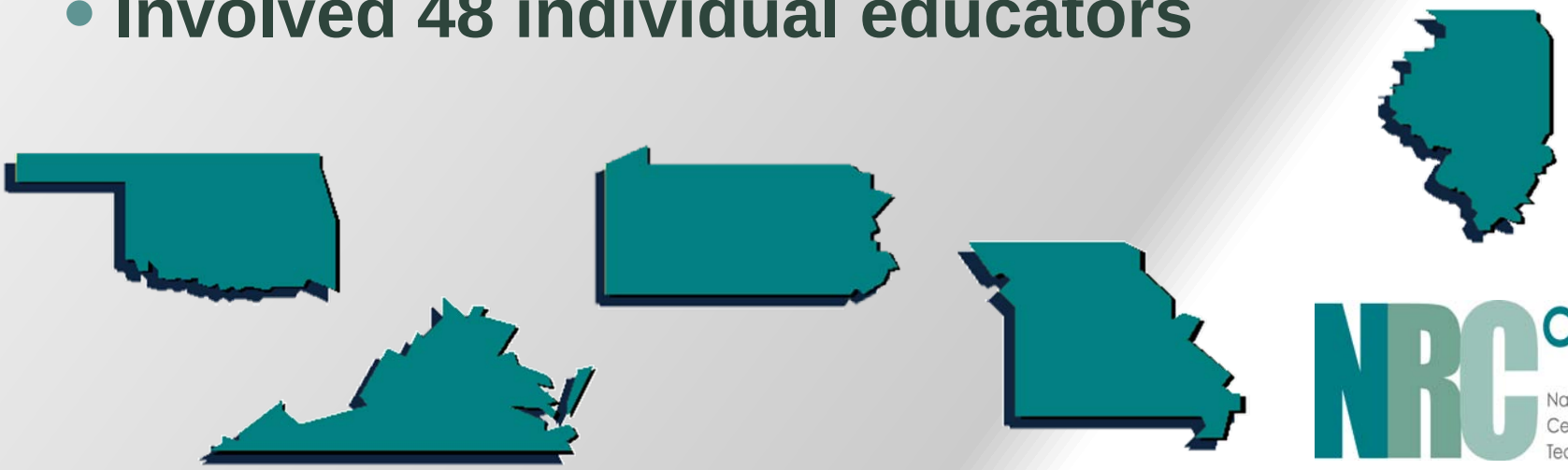
- Delivered through in-state facilitators
- Started 3 sites early and collected iterative data for PD refinement



NRC CTE
National Research Center for Career and Technical Education

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



NRC CTE
National Research Center for Career and Technical Education

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)

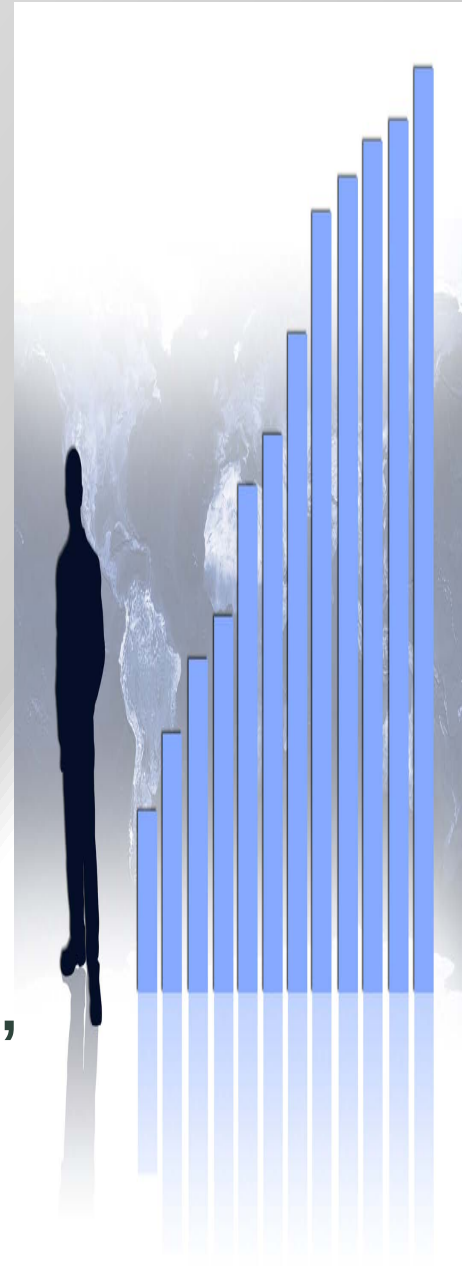
OUTCOME of Workshop:

Action Plan

To improve learning and instruction

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

Name: Program: Business Administration School:

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.

Prioritize desired short term	Data Required:	Indicators of Success:	Steps for current school year:	Strategies for groups or individual students

Professional Development Sharing Center

Browse... Upload

To upload a file... Click Browse to select, then Upload.

Educational Resource Articles

DesignActionPlanFinal.docx
mark.jett

Form for Credit.jpg
sandy.pritz

Course credit through Oklahoma State University.docx
sandy.pritz

Statistical resources for data.doc
carol.hodes

Data plan narrative.doc
carol.hodes

Step 4Worksheet 5 Final.doc
carol.hodes

NOCTIWhitePaper.pdf
sandy.pritz

Dreams1.jpg
david.hall

NRCcte 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

(0) View/Create Threaded Conversation

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

(0) View/Create Threaded Conversation

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?

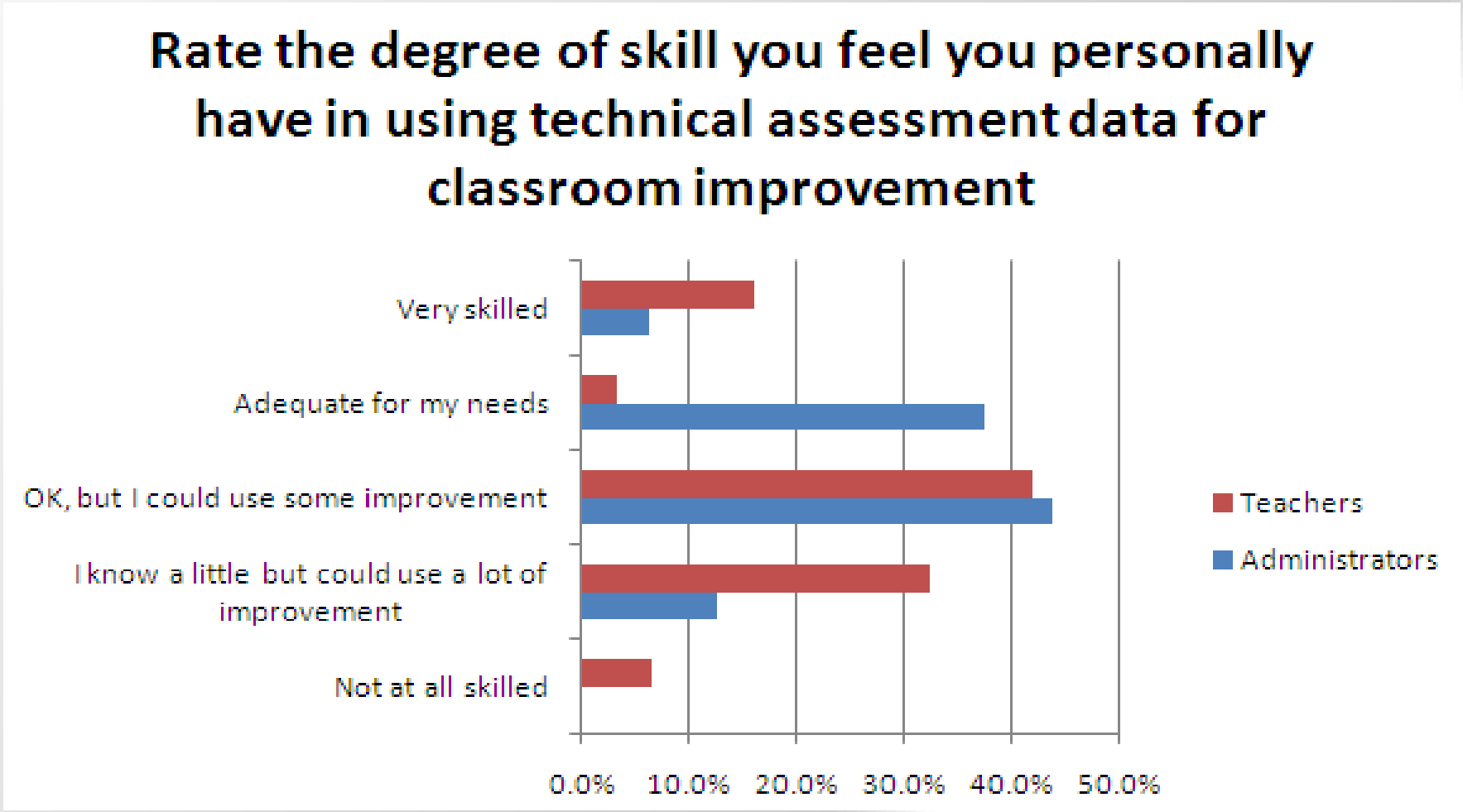
Next Steps:

- Continue to implement action plan
- Make notes of any successes or barriers
- Share on the professional sharing site

NRCCTE
National Research Center for Career and Technical Education

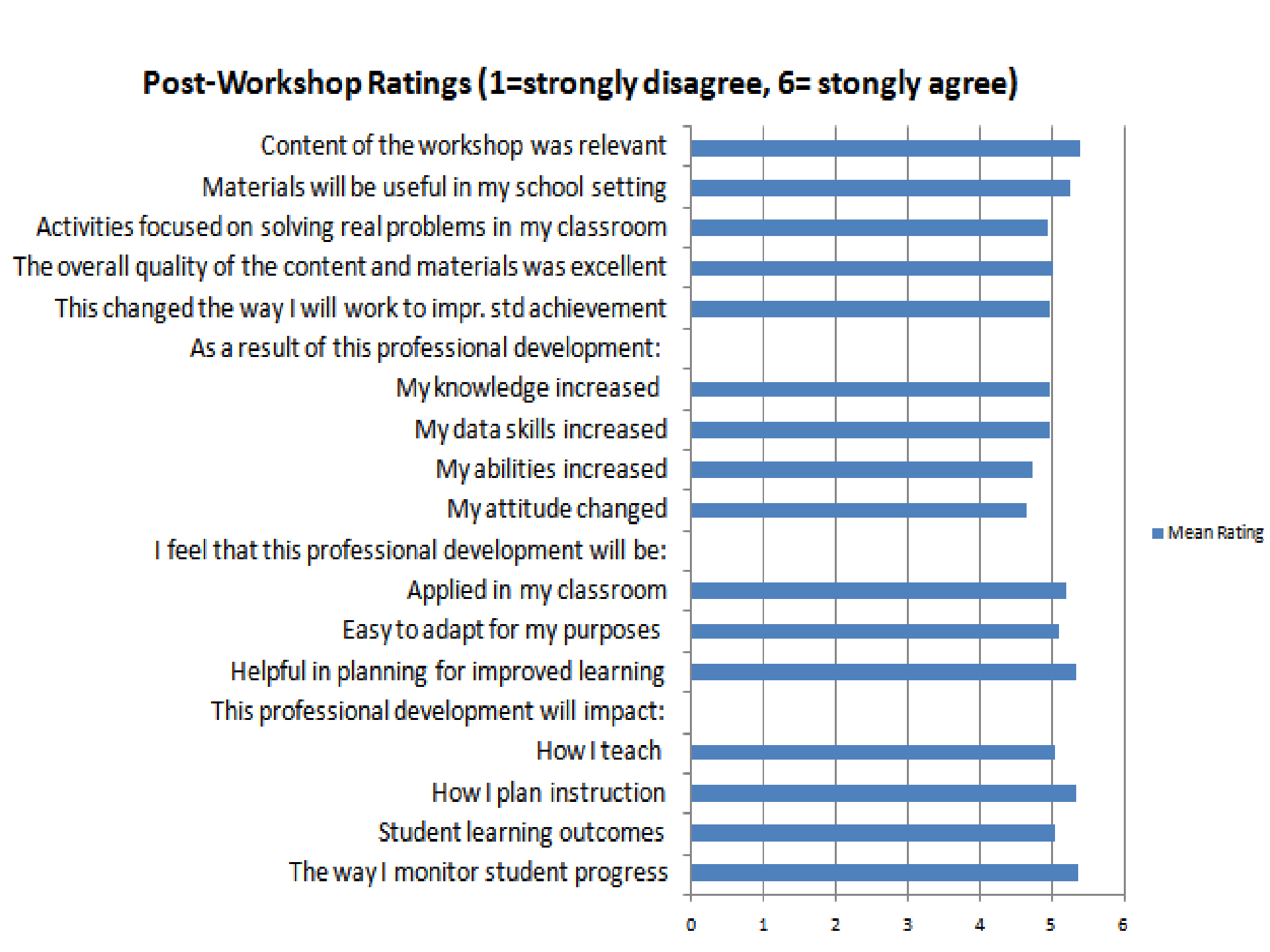
Early findings

Self-Reported Skill



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= stongly 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 impr. std 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
0
1
2
3
4
5
6
Mean Rating

I think I will continue to use technical assessments for instructional improvements *during* this project.

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

	Mean	SD
Overall	5.00	0.92
Administrators	5.25	0.75
Teachers	4.89	0.97

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

	Mean	SD
Overall	4.95	1.03
Administrators	5.33	0.78
Teachers	4.78	1.08

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.

NRCCTE
National Research Center for Career and Technical Education

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

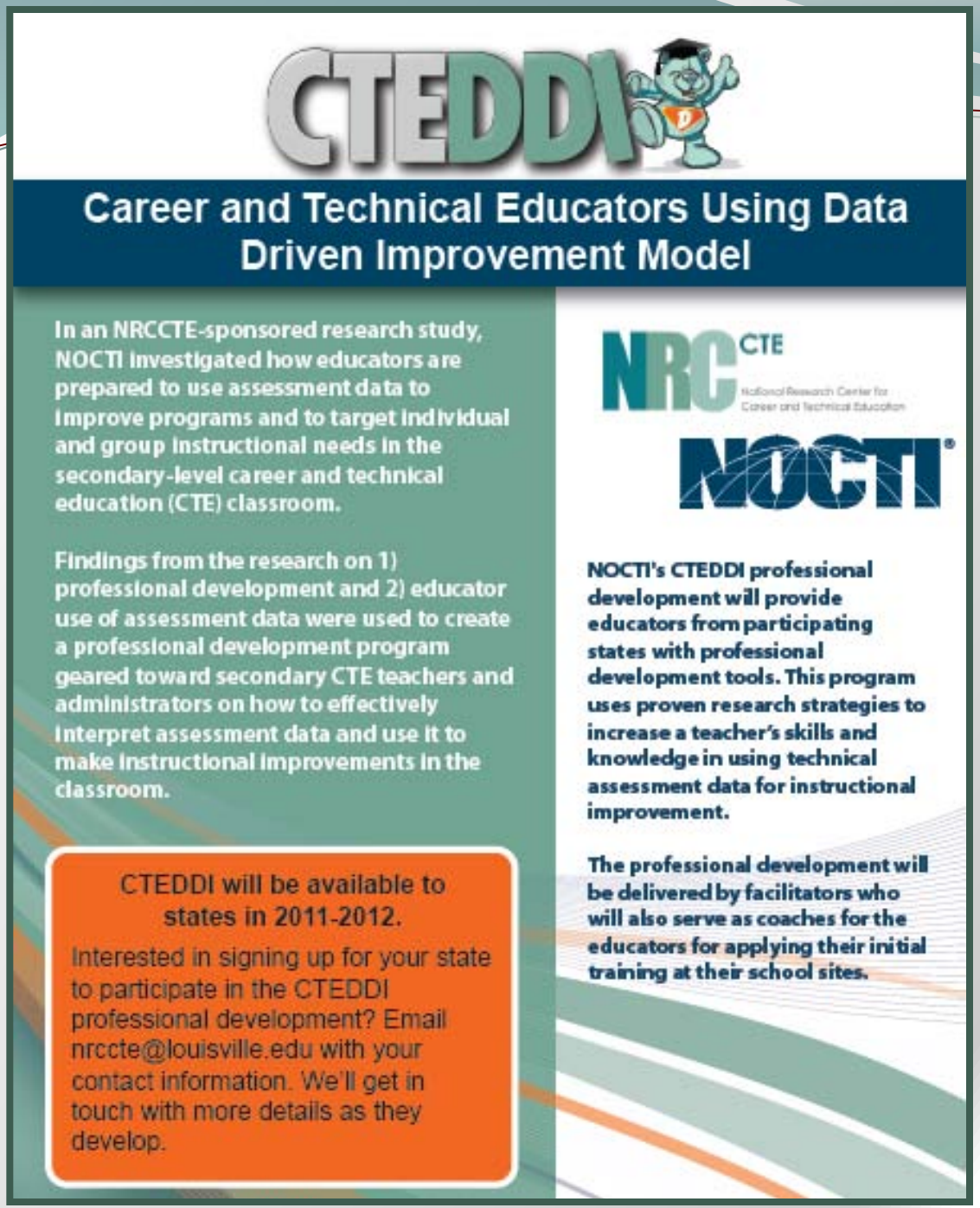
- Continue PD intervention modifications
- Follow up of original 5 state/9site participants
- To conduct educator reviews of the PD in new states
- Roll out CTEDDI technical assistance

NRC CTE
National Research Center for Career anc Technical Education

CTEDDI

Career and Technical Educators Using a Data Driven Improvement Model

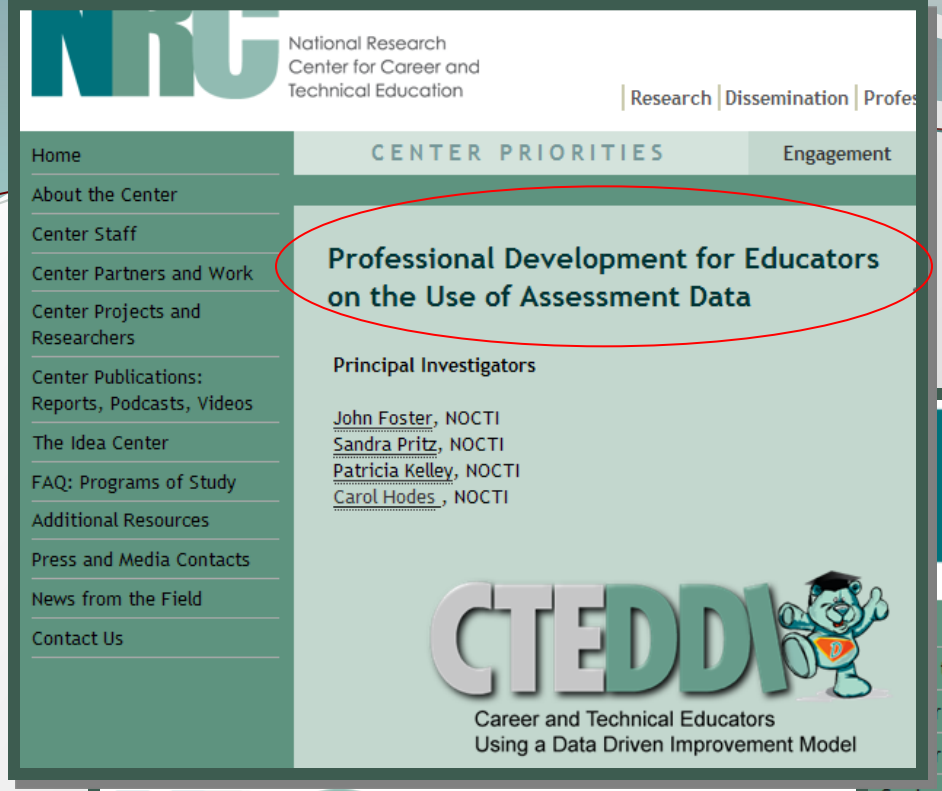
NRC CTE
National Research Center for Career and Technical Education

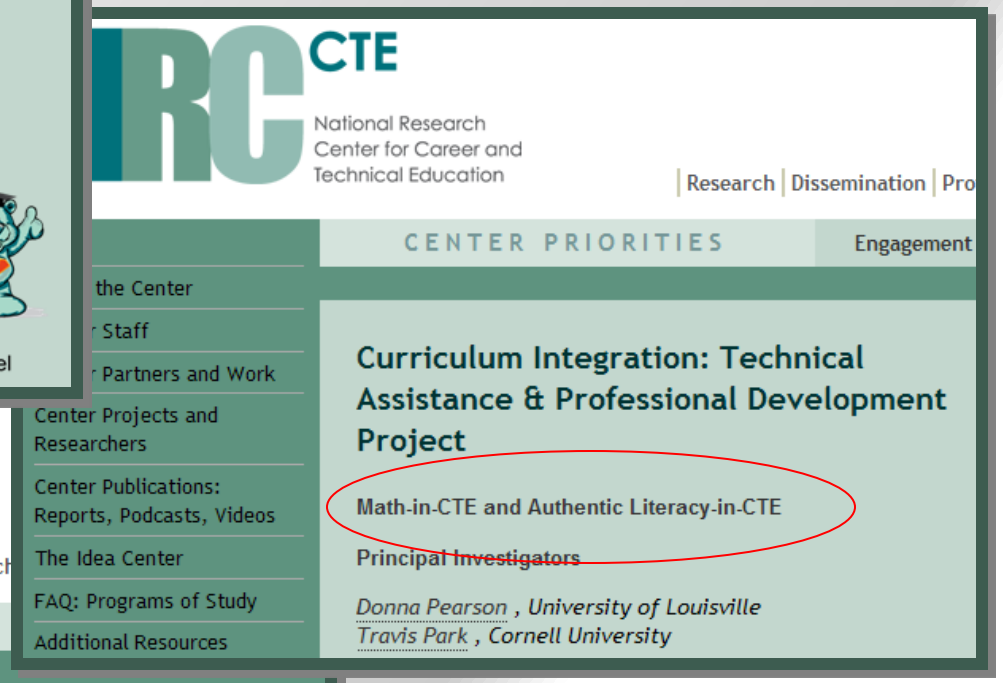


Jumpstart Programs at Both 2011 HSTW & ACTE

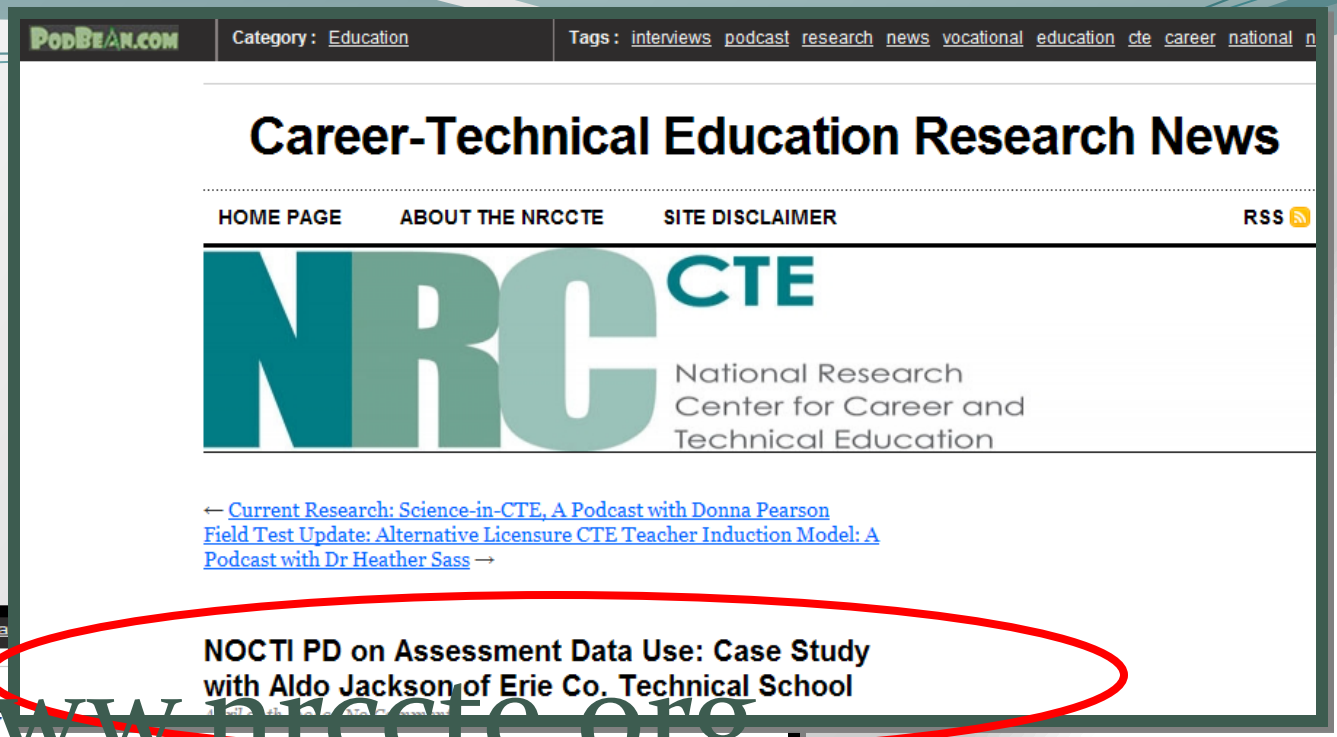
nrccte@louisville.edu

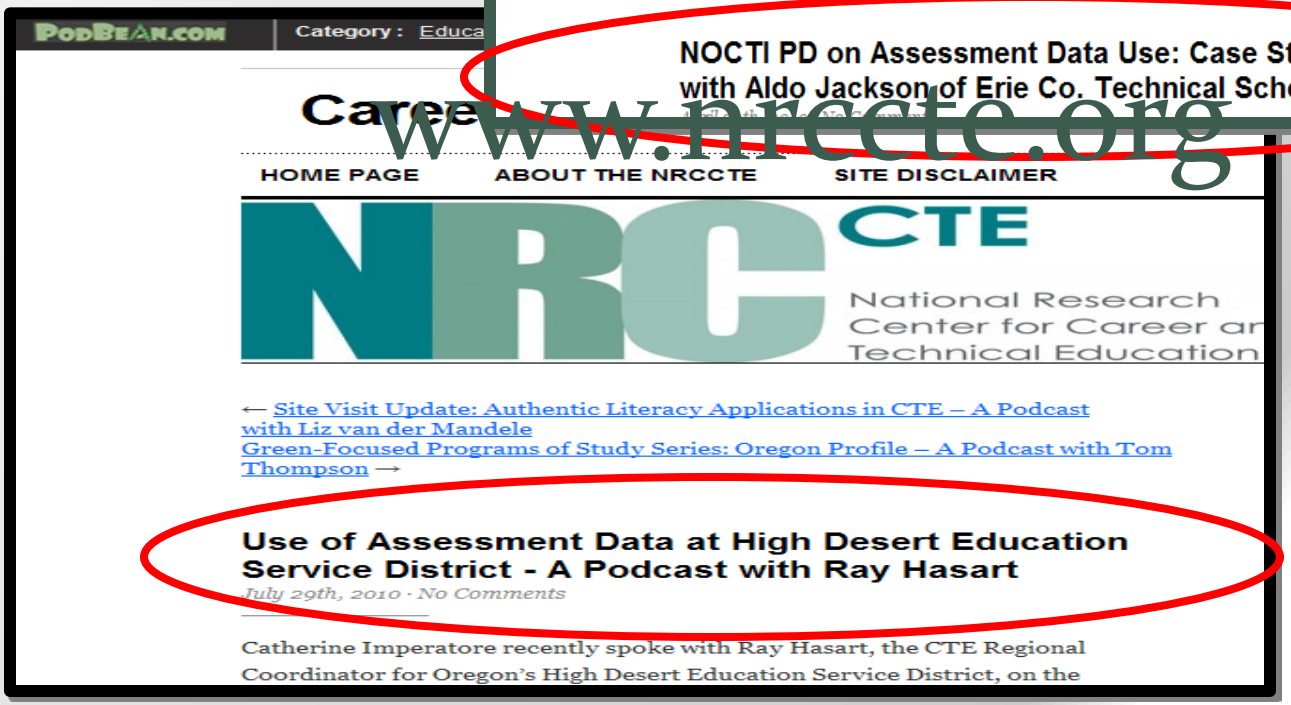
Other Valuable Resources at NRCCTE





And Podcasts!





www.nrccte.org

Project Principals

John.Foster@nocti.org
Sandy.Pritz@nocti.org
Patricia.Kelley@nocti.org
Carol.Hodes@nocti.org

James.stone@nrccte.org for slides

Thank You

NRC CTE
National Research Center for Career and Technical Education