



National Center for **Research** on
Rural Education (R²Ed)

*Advances of the National Center for Research on
Rural Education (R²Ed)*

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National Center for Research on Rural Education (R²Ed)

Housed in the *Nebraska Center for Research on Children, Youth, Families and Schools (CYFS)* at UNL

Funded by Institute for Education Sciences, U.S.
Department of Education (7/2009 – 6/2014)

Research contributes to data-based understandings of *what works, for whom, and under what conditions* in the rural context, in the areas of instruction/education, professional development of teachers, and related issues (e.g., family-school partnerships)



Brief Overview of R²Ed

Goal:

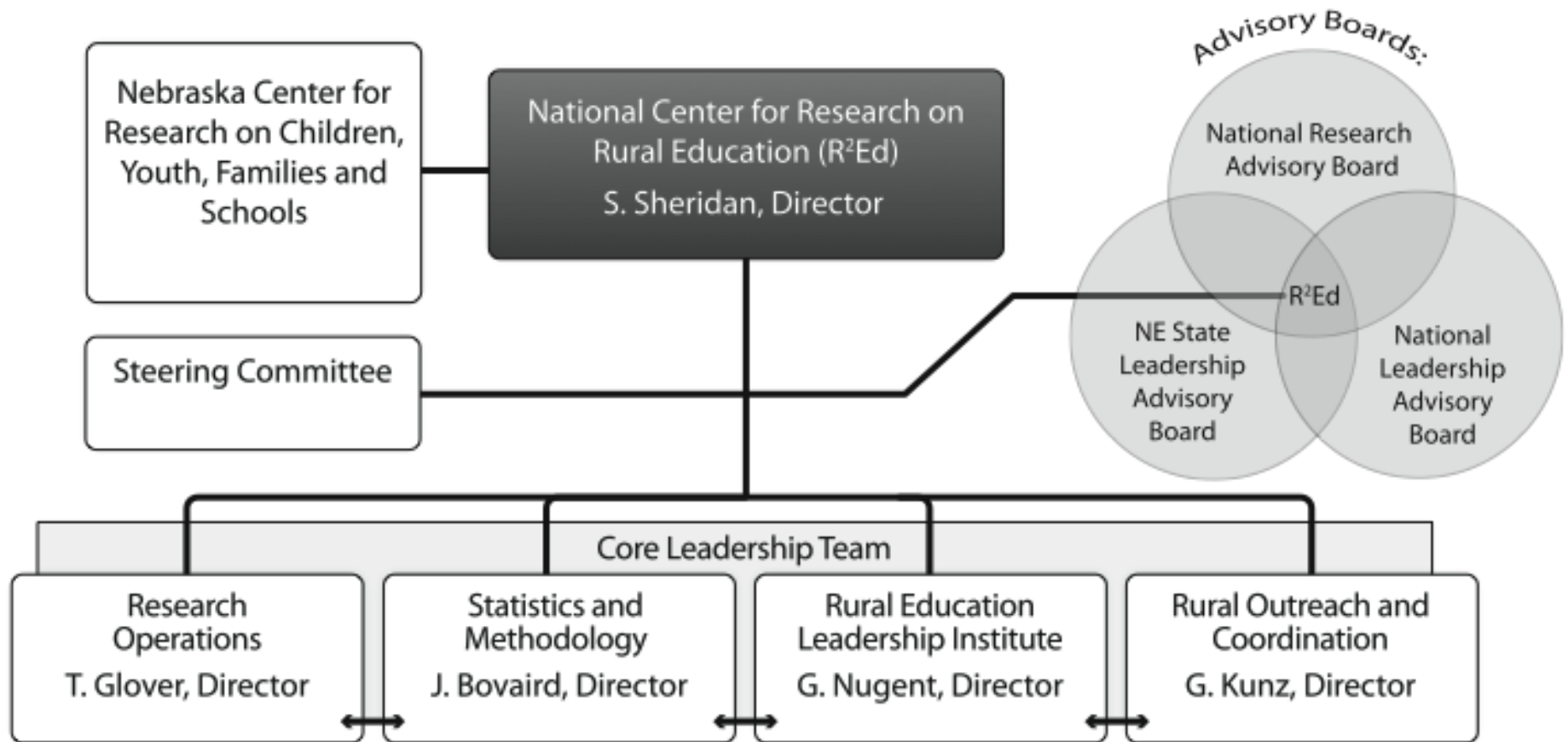
To advance and support the scientific foundation for education in rural settings

Immediate Aims:

- ✓ To identify effective practices that lead to the provision of evidence-based interventions for reading and science instruction
- ✓ To identify effective school, teacher, and family supports to help advance student learning
- ✓ To create and provide an infrastructure for research and outreach for the field



Organization of R²Ed



Shared Leadership Initiatives:

Outside In and Inside Out

Outside In

- “Listen and Learn”
- Coalesce a Knowledge Base

Inside Out

- Share a Knowledge Base
- Develop Future Leaders in Rural Education Research



Outside In: Listening, Learning

Needs Identified:

- Evidence for teacher support
- Distance education technologies
- Strong connections with leadership
- Effective methods of dissemination to bridge the gap between research and practice



Outside In: Coalescing a Knowledge Base

Expert Consultants/Visiting Professors

- Creating Rural Connections Series

Dr. Carolyn Denton: Student Focused Coaching

Dr. Jim Knight: Instructional Coaching for Rural Teachers

Dr. Cathy Cavanaugh: Online Professional Development

- Advances and Opportunities Series

Dr. Lou Cicchinelli: Innovation in Rural Education

- Research Methodology

Dr. David Cordray: Implementation Fidelity

Dr. Larry Hedges: Randomized Controlled Trials (RCTs)



Inside Out: Sharing a Knowledge Base

Rural Center Website r2ed.unl.edu

Key Features

- **Speaker Series**
 - Links to the presentations through both Speaker Series
 - Links to presentations on Statistics and Methodology topics
- **Research Digests**
 - Written summaries of local and national researchers' publications and video-based interviews with them of their research
- *Rural 360°: Reaching Researchers, Educators, and Communities* - electronic newsletter



Inside Out:

Developing Future Research Leaders

- Post-doctoral Research Fellowship Program

- ✓ Danielle Parisi

- Focus: Data-based decision making
- Background: School Psychology

- ✓ Sue Ellen DeChenne

- Focus: Guided science inquiry and coaching
- Background: Science Education

- ✓ Ji Hoon Ryoo

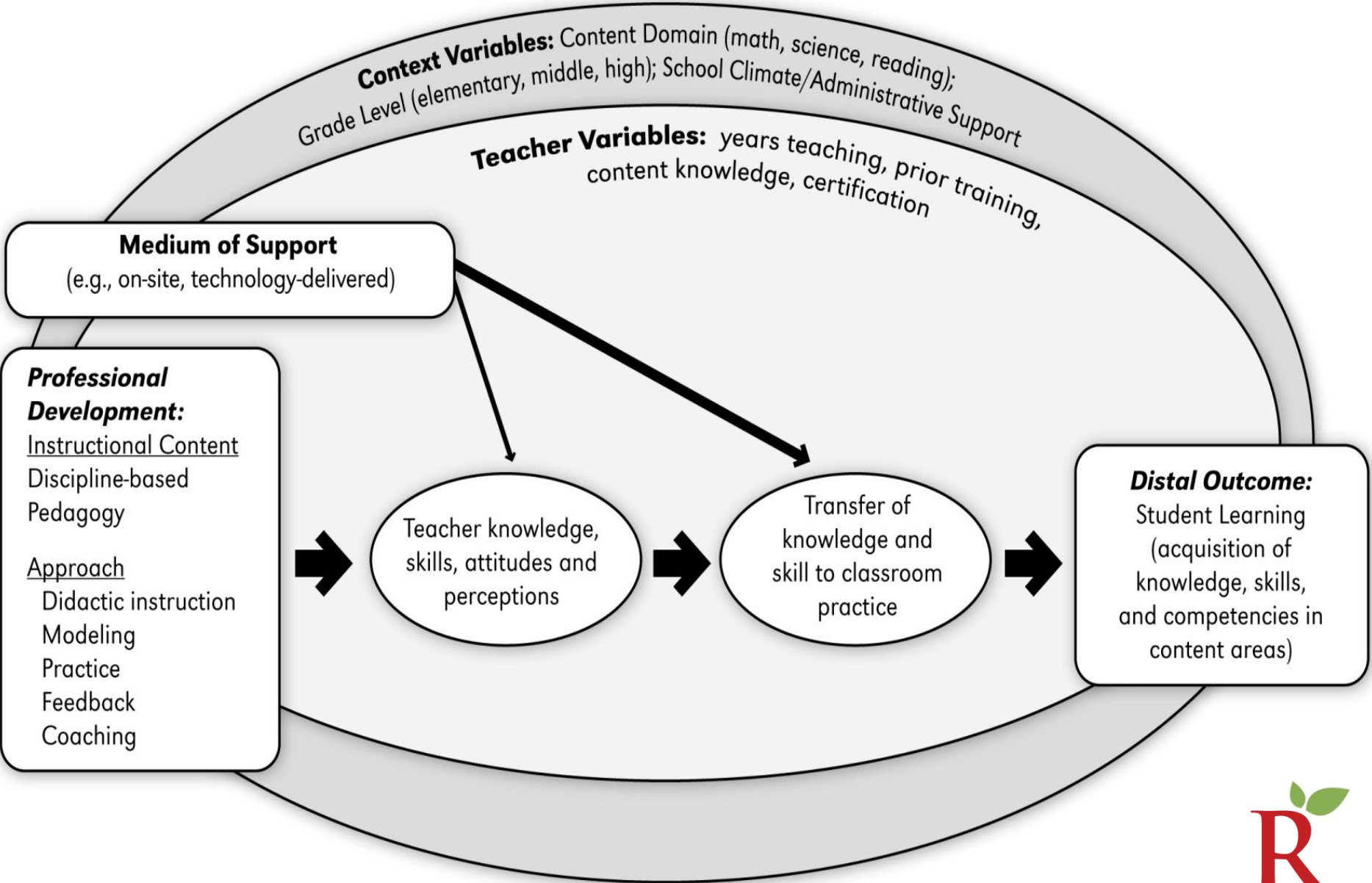
- Focus: Quantitative methods
- Background: Statistics and Research Methods

- ✓ Andy Garbacz

- Focus: Family-school partnerships
- Background: School Psychology



Theory of Change for Professional Development



Professional Development Framework

Process	Approach	Definition
Assessment (identification of student needs)	Self-report	Teacher appraisal of student knowledge, skills, needs, and/or capabilities
	Direct observations	Direct, objective assessment of student performance
	Progress monitoring	Teacher-administered probes document students' performance
Promotion of knowledge/skills	Content instruction	Evidence-based, domain-specific information presented by content experts
	Modeling	Demonstration of effective instructional strategies by coaches
	Practice	Enactment of newly learned skills by teachers
	Feedback	Written and/or verbal evaluations of teacher practice
Skill transfer (classroom implementation)	Coaching/ consultation	Individualized coordination and oversight by coaches, from training through classroom implementation



Growing a Research Profile

- Teachers Speak (National survey of professional development)
- Project READERS (Randomized controlled trial; RCT)
- CBC in Rural Communities (RCT)
- Starting Off Right (Secondary data analysis)
- Coaching Science Inquiry (CSI): Rural Schools (RCT)



Professional Development Survey Study: *Teachers Speak*

Introduction/Rationale (cont.)

- Investigates PD in 4 areas:
 - Reading
 - Science inquiry
 - Mathematics instruction
 - Teachers' use of data to inform reading instruction/intervention
- Findings useful for informing:
 - Future PD in rural schools
 - Ongoing research on PD



Professional Development Survey Study: *Teachers Speak*

Participants

- Randomly selected from national NCES database
- Sample included 268 rural and 327 non-rural K-5 teachers from 43 U.S. states
- Within each locale, sample was stratified by school size



Professional Development Survey Study: *Teachers Speak*

Procedure

- Surveys mailed in April and September of 2010
- Small incentives were provided to teachers (pen, sticky notes, and tote bag)
- Surveys returned via prepaid envelope
- Teachers responded to questions about their ***best professional development experience within the past year pertaining to one of four content areas***



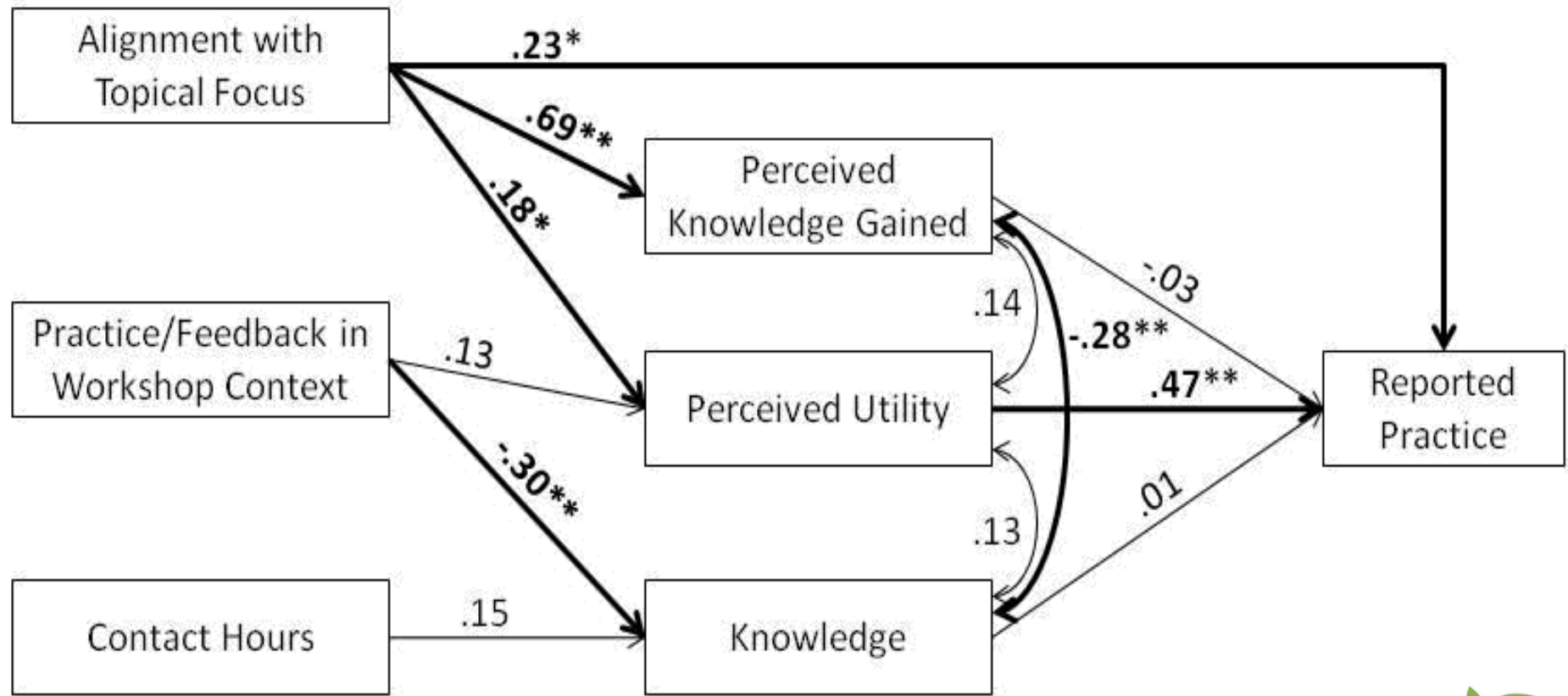
Professional Development Survey Study: *Teachers Speak*

Key Descriptive Survey Results

- Many similarities existed across rural and non-rural teachers with regard to professional development
- Interesting differences
 - The format and method of professional development
 - The leader of professional development experiences
 - Amount of interaction and collaboration
 - Difference in distance traveled
 - Time and duration
 - Topical Alignment



Rural Analytic Model for the *Teachers Speak* Survey Study of Professional Development



Project READERS

Purpose of Study

- Purpose of this study is to investigate the efficacy of two variations of teacher PD with coaching in the use of student data to inform K-5 reading instruction/intervention:
 - PD with distance (web-based) coaching
 - PD with on-site (face-to-face) coaching



Project READERS

- Approximately 360 rural classrooms teachers (3 from each of 120 participating schools) and their special education and/or Title I support staff
- Three-cohort, randomized experimental design with 120 schools randomly assigned to one of three conditions
 - *No PD, PD with onsite (face-to-face) coaching, PD with distance (web-based) coaching*
- Teachers in PD conditions participate in institute-based PD accompanied by either distance or onsite coaching



Project READERS

- Distance technology is an effective means of providing coaching, instructional observations, and feedback
- Teachers are equally satisfied with distance and face-to-face coaching and feedback
- Both modes of delivery increase teachers' self-efficacy for using data to make instructional decisions for their students
- Study will conclude in June, 2014




CBC in Rural Communities

- One of two studies studying parent involvement in rural settings
- Purpose is to examine efficacy of CBC on teacher, parent and student outcomes (social, behavioral, academic) in K-3
 - Structured support model that increases parent involvement and family-school partnerships to promote student goals
- Two conditions: CBC (experimental) and business as usual (control)
- 90 teacher participants (1-3 students/parents per classroom)



CBC in Rural Communities

Preliminary Findings

- Participants in CBC condition reported increased parent-teacher cooperation and improved student behaviors as a result of participation
 - Participants in CBC expressed high levels of satisfaction with consultation services in rural schools
- 

Starting Off Right

- Purposes are to:
 - examine the influence of setting (rural, town, suburb, city) on family and school variables that predict school readiness and academic achievement
 - understand whether setting affects the impact of preschool parental involvement on kindergarten school readiness
- Using data from the Early Childhood Longitudinal Study- Birth Cohort (ECLS-B)



Starting Off Right

- Preliminary analyses indicate some moderating effects of setting on
 - Family and school variables that predict parent involvement (certain family and school factors predict involvement differentially for rural and other settings)
 - Family and school variables that affect school readiness (certain family and school factors predict readiness differentially across settings)
 - The relationship between preschool parent involvement and school readiness (certain relationships between parent involvement and children's school readiness are influenced by the setting in which children reside)



Coaching Science Inquiry (CSI): Rural Schools

- Test the efficacy of guided science inquiry professional development with instructional coaching on teacher and student outcomes
- Two conditions
 - Experimental: Professional development for middle and high school science teachers on guided science inquiry plus distance-delivered instructional coaching
 - Control: “business as usual” – no professional development or coaching
- 162 teacher participants: 81 in each condition
- First PD Summer Institute is June 2012
- Piloted measures and procedures with positive responses from 10 teachers and 7 coaches in 2011



Comparison of Guided Inquiry Instruction to Common Practice

Guided Inquiry

- Students gather data
- Students synthesize and analyze data
- Teacher guides students to articulate concept from the data
- Further application/elaboration of concept

• Cobern et al., 2005; Wilson et al., 2010

Common Practice

- Introduce content through a formal presentation
- Verify content through demonstration
- Practice content through laboratory exercise
- Answer textbook or worksheet questions about content

Hudson et al, 2002; Weiss et al., 2003



SAVE THE DATE:

R²Ed National Conference Fall 2012

Promoting Academic Success of Rural Students: Translating Research into Practice

- Omaha, Nebraska
- Details to follow at www.r2ed.unl.edu



Contact Information

R²Ed Leadership

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