Welcome to the Bridge Event

“21st Century Skills and the Common Core: Research and Practice Perspectives”

Wednesday, June 12, 2013
3:00–4:30 p.m. ET

Hosted by:
The Regional Educational Laboratory Northeast and Islands
Northeast Rural Districts Research Alliance (NRDRA)
# Agenda

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<tr>
<th>Welcome and Introduction</th>
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Goal: NRDRA provides research to support rural schools’ and districts’ efforts to ensure student success; to understand their local capacity to support these efforts; and to build capacity to understand data specific to related programs and initiatives.

Harouna Ba
Alliance Co-Facilitator

Pamela Buffington
Alliance Co-Facilitator
NRDRA Research Agenda: Focus Areas

In 2012, the alliance engaged in discussions to develop a shared research agenda that will guide current and future projects and more specifically define the direction of the alliance.

• Structures to support efficiencies, effectiveness, and equity

• School–community relationships
“Gearing Up to Teach the Math Common Core: What Are Educator Needs and Online Resources in the Rural Northeast?”

This study is identifying key emerging needs and challenges faced by rural educators as they prepare to implement the standards and linking these needs and challenges to information about available online supports and resources.
Submit Your Questions

- Submit your questions in the chat
- Clarifying questions will be directed to the presenter during the presentation
- Substantive questions will be posed to the presenter during the Q&A period
## Agenda

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“Assessing 21st Century Skills in the Context of the Common Core”

Perspectives from Research and Practice

Dr. Joan Herman
National Center for Research on Evaluation, Standards and Student Testing

UCLA | Graduate School of Education & Information Studies | cresst.org
Overview

- 21st century competencies and the Common Core State Standards: the view from National Research Council
- Principles for teaching and assessing 21st century skills
- Role of assessment in supporting learning
- Assessment examples
- Principles for moving forward
Education for Life and Work: Developing Transferable Knowledge and Skills in the 21st Century

Committee on Defining Deeper Learning and 21st Century Skills

Division of Behavioral and Social Sciences and Education
National Research Council
What Are 21\textsuperscript{st} Century Competencies: The View from the NRC

1. \textit{Transferable} knowledge and skills that include:
   – Content knowledge
   – Procedural knowledge of how, why and when to apply
   – Can apply to problems in new situations
2. 21\textsuperscript{st} century competencies are \textit{not} new
3. Not acquired independent of subject matter
4. Deeper learning facilitates their development
Three Domains of 21st Century Competence

- **Cognitive**: critical analysis, reasoning, problem solving, innovation
- **Interpersonal**: communication and collaboration
- **Intrapersonal**: self-management, motivation, emotion
Intersecting Competencies
CCSS and 21st Century Skills

- ELA and math CCSS and new science standards call for deeper learning
- All three emphasize some 21st century skills
  - Cognitive competencies well represented
  - Uneven treatment of intra- and interpersonal skills
Integration of CCSS and 21st Century Competencies
Major Messages from NRC Report

- 21st century skills are teachable—but not independent of subject matter
- All students are capable of deeper learning—reasoning, problem solving
- Research provides guiding principles
- Instruction and assessment inseparable
Instruction and Assessment Intertwined in Development of 21st Century Competencies

Well-Defined  Instruction + Assessment  Evaluation of goal accomplishment

Student Summative Assessment

Classroom Instruction

Regional Educational Laboratory at EDC relnei.org
Instruction and Assessment Intertwined in Development of 21st Century Competencies

- Expected learning progression
- Instructional activities
  - Develop student competencies
  - Elicit evidence of learning, make thinking visible
- Evidence used to diagnose/inform subsequent instruction
- Formative assessment = responsive, differentiated teaching and learning
Coherent Learning-Based Systems
Coherent Systems of Standards, Instruction, and Assessment

Intermediate Assessment/Project

Formative Assessment

End of the Year Assessment Builds K–12 to College Readiness
CRESST Integrated Learning Assessment (ILA)

- Combines content, literacy development, critical thinking, and communication (writing) goals
- Focus on core, subject matter concept, or principle
- Students required to:
  - Closely read variety of (authentic) texts related to the selected topic
  - Respond to reading comprehension and analysis questions
  - Respond to an expository or persuasive writing prompt that requires synthesis and critical analysis
ILA Reading, Critical Thinking/ Writing Performance: US History

• This is a two-part assessment. In part 1, you will have 45 minutes to go over the directions, read the materials, and answer questions. In part 2, you will have 45 minutes to write an essay.

• You will be asked about the United States’ participation in World War I. As you read the materials, please consider the reasons why the US entered World War I.

• You may take notes directly on the assessment.

• Underlined terms are defined in a glossary.

• Stop at the sign at the end of part 1.
World War I ILA (cont.)

• The materials include four reading passages:
  1. President Woodrow Wilson’s War Message to Congress
  2. Speech by Senator George W. Norris
  3. McAdoo Letter
  4. The Zimmerman Telegram
World War I Writing Task: Argument

• On April 2, 1917, Wilson urged Congress to declare war on Germany. He claimed that the United States should enter the war to make the world safe for democracy. Others, such as Senator George W. Norris, felt that the US entered the war for different reasons than those set forth in Wilson’s speech. Write a formal essay arguing whether or not the preservation of democracy was the primary reason for US entry into World War I.

• Be sure to support your position using information from both (a) the passages provided and (b) general concepts and specific facts you already know about World War I.

• Your essay will be scored on how well you: ....
## Scoring Rubric: Argument

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<tr>
<th>Category</th>
<th>Description</th>
<th>Score</th>
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<tbody>
<tr>
<td><strong>Content understanding</strong></td>
<td>The response demonstrates well-developed and thorough understanding of the topic.</td>
<td>4 □</td>
</tr>
<tr>
<td></td>
<td>The response demonstrates solid understanding of the topic.</td>
<td>3 □</td>
</tr>
<tr>
<td></td>
<td>The response demonstrates some understanding of the topic.</td>
<td>2 □</td>
</tr>
<tr>
<td></td>
<td>The response demonstrates little or no understanding of the topic.</td>
<td>1 □</td>
</tr>
<tr>
<td><strong>Rhetorical structure/quality</strong></td>
<td>Important elements of the argument are clearly and thoroughly described and articulated.</td>
<td>4 □</td>
</tr>
<tr>
<td></td>
<td>Elements of the argument are clearly described.</td>
<td>3 □</td>
</tr>
<tr>
<td></td>
<td>There is an attempt to describe some elements of the argument.</td>
<td>2 □</td>
</tr>
<tr>
<td></td>
<td>Elements of the argument are not described, or the descriptions are unclear.</td>
<td>1 □</td>
</tr>
<tr>
<td><strong>Organization</strong></td>
<td>Essay is logically and well organized.</td>
<td>4 □</td>
</tr>
<tr>
<td></td>
<td>Most of the essay is logically and well organized.</td>
<td>3 □</td>
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<td>Little or none of the essay is logically and well organized.</td>
<td>1 □</td>
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<td><strong>Use of evidence/reference support with text</strong></td>
<td>Statements about the argument are well supported or explained through detailed references to the text.</td>
<td>4 □</td>
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ILA Reading, Critical Thinking/ Writing Performance: Osmosis

• Students read and respond to questions about an article, experiment summary, and diagrams.
  ✓ These are scored relative to reading comprehension and critical analysis standards.

• Writing task:
  ✓ Describing the process of osmosis, explain what happens when a person consumes too much water and why it is so dangerous.
  ✓ In your essay, also contrast water intoxication with the problems that come from consuming sea water.
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Teaching and Assessment Progressions
ILA Summative Success

- Questions about individual readings: comprehension and inferences about content
- Note taking: Claims (counter claims) evidence, connections among ideas, concepts, principles
- Identification and analysis of evidence supporting claims
- Comparisons/synthesis of themes, perspectives, ideas across documents
- Quick-writes, journal entries, essay writing
- Teacher, self, peer assessment and feedback
CRESST Assessment Models Serve Multiple Subjects and Purposes

- General task, item, and scoring rubric designs that map to selected 21\textsuperscript{st} century competencies
- For a given course, specify \textit{performance goals} that integrate key content and selected 21\textsuperscript{st} century competencies
- Use task, items and rubrics to measure performance goals—customized to subject matter content and ways of thinking
- Reusable, learning-based designs that can be adapted across grades, subject areas and contexts
CRESST Learning Types: 21st Century Competency

- Content Understanding
- Collaboration
- Problem Solving
- Communication
- Metacognition
Q&A
21st Century Competencies and Project-Based Learning

Combination of year long work may tell us more about student capability.
PBS Highlight: Portland, ME Middle School

– “You're going to create a device that captures natural energy and transforms it into something that's useful for people in some part of the world.”

– Developmental progression of learning and assessment, evaluation and improvement:
  • Design a robot to collect golf balls
  • Learn about energy
  • Design a wind turbine
  • Learn about social realities
  • Design and justify device

– Integration: courses, academic and 21st century skills, formative and summative assessment
21st Century Learning and Projects: Senior Exhibitions in Rhode Island

• Applied learning goals:
  – Problem solving
  – Communication tools and techniques
  – ICT tools and techniques
  – Self management

• Personalized, choice

• Core project types ➔ design a product/service/system; troubleshoot/improve a system; plan and organize an event/activity
Evaluating Rhode Island Senior Exhibitions

- Multiple products: written report; oral presentation/defense
- Rubrics customized for project type
- Multiple rubrics applied
  - Focal applied learning standard
  - Content
  - Writing conventions
  - Oral presentation
Rubric Dimensions: Design a Service (Rhode Island)

- Design ideas
- Choices
- Establishing criteria
- Implementation plan
- Product evaluation
Rubric Dimensions: Content of Final Product (Rhode Island)

- Finding/citing information
- Evaluating information
- Analyzing/synthesizing information
- Conventions
- Structure and organization
- Distribution of information in many forms
GCSE Course-Based Tasks: ICT
Example

• Authentic scenario: Music promotion company needs software solution to keep up to date on projected/actual expenses, income, and profit

• Students work with others to conduct research and propose a solution

• Students produce a solution that meets given parameters and constraints

• Produce report that includes self and peer evaluation
Lessons Learned/Principles: System Design Issues

1. Start with clear goals for 21\textsuperscript{st} century learning and models of how learning is expected to develop

2. Have clear performance expectations that integrate content and 21\textsuperscript{st} century competencies

3. Integrate expected learning progressions for content and 21\textsuperscript{st} century competency development

4. Design teaching and learning environments/activities that will diagnose and provide evidence of student learning

5. Use formative assessment—AfL—to bridge identified learning gaps and support student success on AoL.

6. Use summative assessments to refine, reflect and improve
Lessons Learned: System Challenges

- Teacher capacity
- Validity of progressions
- Incentives/motivation to incorporate 21st century competencies
- Questions about equity
- Time, resources and perceived competing priorities
Learn More

National Center for Research on Evaluation, Standards, & Student Testing

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VISIT US ON THE WEB
cresst.org
Discussion

Heather Perry, Superintendent
Deborah McIntyre, Assistant Superintendent
Maine Regional School Unit # 3
Discussion

Rhonda Poliquin, Principal
Courtney Smith, Teacher, Grades 4 and 5
Maine School Administrative District #72
New Suncook School Lovell, Maine
Take the Participant Survey!

**USED and REL-NEI want your feedback on this Bridge Event:**

https://www.surveymonkey.com/s/NRDRA06122013
Thank You!

- Facilitators:
  Dr. Pamela J. Buffington – pbuffington@edc.org
  Dr. Harouna Ba – hba@edc.org

- Presenter:
  Dr. Joan Herman – herman@cse.ucla.edu