A Framework for Considering Balanced Assessment Systems: Key Characteristics

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Opening Activity

• How would you define a “comprehensive assessment system?”
Overview

• Clarifying the Problem with Assessment Systems
• Defining an Assessment System
• Criteria to Aid Evaluation
• Moving Forward
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Clarifying the Problem

What does the field mean by an “assessment system?”

- Terminology
- Definitions
- Characteristics
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Assessment System Terminology

• Literature on assessment systems uses terms like “balanced” and “comprehensive” interchangeably and with little consistently across authors.
  
  – “Balanced Assessment Systems: Redefining Excellence in Assessment” (Stiggins, 2006)
  
  – “The Role of Interim Assessments in a Comprehensive Assessment System” (Perie, Marion, & Gong, 2007)
  
  – “Formative Assessment and Next-Generation Assessment Systems” (Heritage, 2010)
  
  – “Using Balanced Assessment Systems to Improve Student Learning and School Capacity” (Gong, 2010)
  
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  – “Today’s resurgent interest in performance tasks, coupled with new attention to the value of metacognitive learning skills, invites progress toward what I like to call a “system of assessments,” a comprehensive approach that draws from multiple sources in order to develop a holistic picture of student knowledge and skills in all of the areas that make a real difference for college, career, and life success” (Conley, 2014, p. 20).
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Emphasis on the Parts, not the Whole

• Authors give a lot of attention to the pieces that comprise an assessment system (formative, summative, interim) with little attention to how they interact.

Wake County Public School System (North Carolina, 2011):
“A comprehensive assessment system is comprised of three types of assessment routinely administered to all students in K-12 classrooms: summative, benchmark, and formative (Goren, 2010; North Carolina Department of Public Instruction [NCDPI], 2008). Outside of this realm are certain assessments, such as language proficiency or other diagnostic tests, given only to selected students. These assessments are not within the scope of this paper.”
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Why this emphasis in the literature?

• One likely reason: In 2010, a federal RTT grant called for the development of “Comprehensive Assessment Systems.”

• Grant Requirements:
  – Summative Math and English Language Arts components.
  – Must assess all students.
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Defining an Assessment System

“A collection of assessments does not entail a system any more than a pile of bricks constitutes a house” (Coladurci, 2002).
Elemental and Holistic Perspectives

• What is a “system?”

• “A group of interacting, interrelated, or interdependent elements forming a complex whole” (American Heritage Dictionary, 2011).
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Elements of Balanced Assessment Systems

• A balanced assessment environment should exhibit three properties (NRC, 2001):

1. Comprehensiveness – “a range of measurement approaches should be used to provide a variety of evidence to support educational decision-making”

2. Coherence – “the conceptual base or models of student learning underlying the various external classroom assessments within a system should be compatible”

3. Continuity – “assessments should measure student progress over time”
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Microcosm and Macrocosm

Microcosm
Microcosm and Macrocosm

Microcosm

Macrocosm

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A Holistic Perspective on Assessment

Microcosm: Classroom-Level Assessments
A Holistic Perspective on Assessment

Microcosm: Classroom-Level Assessments

Macrocosm: System of Assessments

Center for Assessment
Perspectives on Systems

- Identify critical criteria to examine the comprehensiveness of an assessment system.
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• Identify critical criteria to examine the comprehensiveness of an assessment system.
Criteria to Aid Evaluation
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• Systemic Coherence
• Well-Defined Pathways of Information Flow
• Assessment Efficiency
Systemic Coherence (NRC, 2001)

- Vertical Coherence – conceptual base or models of student learning underlying the various external and classroom assessments within a system should be compatible
- Horizontal Coherence – alignment among curriculum, instruction, and assessment along a common set of learning goals
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The diagram below represents two atoms in a molecule of oxygen that combine chemically with one atom of carbon to form a carbon dioxide molecule.

\[ \text{(Oxygen)} + \text{(Carbon)} \rightarrow \text{(Carbon dioxide)} \]

(Not drawn to scale)

Carbon dioxide is an example of:
1. a mixture
2. an element
3. a solution
4. a compound

NYS Grade 8 Science Test (2013)
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The pupil was asked if he or she had:

• any ideas as to why substances can melt or boil;
• any ideas of what an iron nail might be made of, and what might be seen if it could be magnified a huge number of times;
• what, if anything, the terms atom and molecule meant to him or her.

Shepard (2000)

Johnson (1998)
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Briggs & Peck (2015)

- This model also helps address the criterion of continuity.
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Strategies to Evaluate Coherence

• Evaluate the cognitive complexity of assessment tasks (e.g., using Webb’s Depth-of-Knowledge (DOK) levels).

• Identify and evaluate the appropriateness of models of student learning that underpin macro assessment systems.

• Develop, use, or adapt observation protocols focused on evaluating horizontal coherence during micro assessment system evaluations.
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<tr>
<th>Domain 1: Planning and Preparation</th>
<th>Domain 2: Classroom Environment</th>
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<td>2a Creating an Environment of Respect and Rapport</td>
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<td>1b Demonstrating Knowledge of Students</td>
<td>2b Establishing a Culture for Learning</td>
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<tr>
<td>1c Setting Instructional Outcomes</td>
<td>2c Managing Classroom Procedures</td>
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<td>1d Demonstrating Knowledge of Resources</td>
<td>2d Managing Student Behavior</td>
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<td>1e Designing Coherent Instruction</td>
<td>2e Organizing Physical Space</td>
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<td>1f Designing Student Assessments</td>
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<th>Domain 3: Instruction</th>
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<td>3c Engaging Students in Learning</td>
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<td>3d Using Assessment in Instruction</td>
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<td>3e Demonstrating Flexibility and Responsiveness</td>
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<td>4a Reflecting on Teaching</td>
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<td>4b Maintaining Accurate Records</td>
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https://danielsongroup.org/framework/
Strategies to Evaluate Coherence

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https://danielsongroup.org/framework/
• Identify how information flows through the assessment system to meet the needs of organizations/stakeholders.
Well-Defined Pathways of Information Flow

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Strategies to Evaluate Information Flow

• Identify a well-articulated theory-of-action for information flow in an assessment system.
  – Identify stakeholders in an assessment system and their needs from assessments.
  – Map how existing or new assessments meet the needs of each stakeholder, while ensuring that each assessment is being used and is valid for its intended purpose.
  – Evaluate the extent to which stakeholders’ needs are being met by the existing assessment system.

• Audit each assessment for coherence using strategies described earlier.
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• Maximize assessment resources and reduce redundant, unused, and untimely assessment.
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<th>November</th>
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<td>M T W T F S S</td>
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<td>Math Rt12 Assessment</td>
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<td>Fall break</td>
<td>PSAT</td>
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<td>Explore</td>
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<td>Plan</td>
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<td>December</td>
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<td>Online TCAP writing</td>
<td>Thanksgiving Break</td>
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<td>Mist assessment window and writing prep</td>
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<td>March</td>
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<td>Online Social Studies test window</td>
<td>Throughout May: IB, AP, EOC Finals, Gateway</td>
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<td>TCAP TCAP TCAP TCAP</td>
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<td>ELL, Disability TCAP Testing</td>
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https://treetn.org/call-for-testing-transparency/
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- **September**
  - RTI2 Reading Assessment

- **October**
  - RTI2 Math Assessment, Explore, PSAT, PLAN (pre-college board exams)
  - Fall break

- **November**
  - Instruction aligned to test results

- **December**
  - End of Course Mid-term Exams and untested subject exams, teacher-created exams.

- **January**
  - Double up Assessment, Mid Year Benchmark Reading and Math RTi2

- **February**
  - TCAP Online Writing Test, will be given staggered to all students throughout the month of February. And when children are not doing the test they are practicing writing the test formula.

- **March**
  - TCAP prep,

- **April**
  - Test Prep, test pilots and full TCAP

- **May**
  - Another round of Math and Reading RTi2 and then end of course exams, gateway exam for High School, AP and IB exams and regular final exams for subjects untested by mandated tests.

https://treetn.org/call-for-testing-transparency/
Strategies to Evaluate Assessment Efficiency

• Define the minimum amount of assessments necessary to meet the needs of all stakeholders.

• Identify and reduce assessments that are not coherent with the local curricula and that are not mandated.

• Evaluate assessment practices in conjunction with supports for assessment literacy and instruction.
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Emerging Tools:
- Achieve’s (2014) Student Assessment Inventory for School Districts
Moving Forward

• Districts/states need to identify a clear model for how students learn and articulate a theory-of-action for an assessment system.
  • Important to first evaluate the current state of assessments in a district or state, instead of adopting a new reform or adding something new.
  • Pay attention to coherence among the program of assessments and connection between assessment and instruction.
• Additional work is needed regarding how to extract information from assessments to meet the needs of stakeholders.
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