Multi-State Collaborative To Advance Quality Student Learning

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SHEEO
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AAACU
Association of American Colleges and Universities

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Today’s Moderator & Speakers

Catherine Wehlburg  
Julie Carnahan  
Terrel Rhodes

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Purpose of Today

Preview “30,000 foot” initial results from the Multi-State Collaborative Demonstration Year using the LEAP Value Rubrics to inform teaching and learning.

Provide examples of detailed results to be released with full report in January 2017
These slides summarize results from the demonstration study involving 48 institutions in twelve states using common rubrics to assess more than 8,000 student work products. The sample of student work in the pilot represented the near-graduation students across the participating institutions in the twelve states only; therefore, the results are not generalizable for all students in each participating state or nationwide.
VALUE Rubric Approach Assumptions

Learning is a process that occurs over time

Student work is best representation of motivated learning

Focus on what student does in key learning outcomes

Faculty & educator expert judgment

Results are useful & actionable for learning (& accountability)
The current VALUE initiative

Purpose
Sea change in assessment
Reliability
Validity
Local \underline{value}
Policy debate = learning
The Multi-State Collaborative

• States committed to the importance of learning outcomes and quality of a degree
• Mindful of students contribution to the states in which they live
• Respectful that teaching & learning is prerogative of faculty
• Focus is on improvement of student learning not ranking states or institutions
The MSC Challenge: Scaling Direct Assessment

69 PARTICIPATING INSTITUTIONS
9 PARTICIPATING STATES
8,308 STUDENT ARTIFACTS UPLOADED

Aqua

RESULTING DATA AVAILABLE THROUGH
ONLINE REPORTS
DATA FILE EXPORT

Aqua DISTRIBUTED STUDENT WORK TO:
154 FACULTY EVALUATORS
FOR SCORING WITH VALUE RUBRICS
Demonstration Year: Taking the vision to scale from 9 to 12 states

Steering Committee
Point person from each state and reps from SHEEO & AAC&U

Institution Point Persons
From each campus in each state
Demonstration Year: Taking the vision to scale from 9 to 12 states

Goals

Root assessment of learning in authentic work & the expertise of faculty

Establish benchmarks for essential learning outcomes

Develop transparency of shared standards of learning to assist with transfer
Multi-State Collaborative To Advance Learning Outcomes Assessment

Preview of Demonstration Year (2016) Results
MSC Demonstration Year by the Numbers

48 public institutions uploaded artifacts

By sector
29 four-year, including 8 research institutions
19 two-year

These results are not generalizable across participating states or the nation in any way. Please use appropriately.
MSC Demonstration Year by the Numbers

8,308 pieces of student work were submitted

1886 assignments were submitted*

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Artifacts Scored Per Outcome
MSC Demonstration Year Profile of VALUE Scorers

<table>
<thead>
<tr>
<th>Outcome</th>
<th>MSC 2-Year</th>
<th>MSC 4-Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Civic Engagement</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>Critical Thinking</td>
<td>940</td>
<td>2,419</td>
</tr>
<tr>
<td>Quantitative Literacy</td>
<td>632</td>
<td>1,008</td>
</tr>
<tr>
<td>Written Communication</td>
<td>978</td>
<td>2,271</td>
</tr>
</tbody>
</table>

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Profile of Scorers by Discipline and/or Institutional Role

MSC Demonstration Year Profile of VALUE Scorers

- Arts and Humanities: 68
- Natural and Applied/Formal Sciences: 41
- Professions: 32
- Social Sciences: 23
- Administrative: 10

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### Critical Thinking Rubric Dimensions

<table>
<thead>
<tr>
<th></th>
<th>Capstone</th>
<th>Milestones</th>
<th>Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explanation of issues</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Issue/problem to be considered critically is stated clearly and described comprehensively, delivering all relevant information necessary for full understanding.</td>
<td>Issue/problem to be considered critically is stated, described, and clarified so that understanding is not seriously impeded by omissions.</td>
<td>Issue/problem to be considered critically is stated but description leaves some terms undefined, ambiguities unexplored, boundaries undetermined, and/or backgrounds unknown.</td>
<td>Issue/problem to be considered critically is stated without clarification or description.</td>
</tr>
<tr>
<td><strong>Evidence</strong>&lt;br&gt;Selecting and using information to investigate a point of view or conclusion</td>
<td>Information is taken from source(s) with enough interpretation/evaluation to develop a comprehensive analysis or synthesis. Viewpoints of experts are questioned thoroughly.</td>
<td>Information is taken from source(s) with enough interpretation/evaluation to develop a coherent analysis or synthesis. Viewpoints of experts are subject to questioning.</td>
<td>Information is taken from source(s) without any interpretation/evaluation. Viewpoints of experts are taken as fact, without question.</td>
</tr>
<tr>
<td><strong>Influence of context and assumptions</strong></td>
<td>Thoroughly (systematically and methodically) analyzes own and others' assumptions and carefully evaluates the relevance of contexts when presenting a position.</td>
<td>Identifies own and others' assumptions and several relevant contexts when presenting a position.</td>
<td>Questions some assumptions. Identifies several relevant contexts when presenting a position. May be more aware of others' assumptions than one's own (or vice versa).</td>
</tr>
<tr>
<td><strong>Student's position (perspective, thesis/hypothesis)</strong></td>
<td>Specific position (perspective, thesis/hypothesis) is imaginative, taking into account the complexities of an issue. Limits of position (perspective, thesis/hypothesis) are acknowledged. Others' points of view are synthesized within position (perspective, thesis/hypothesis).</td>
<td>Specific position (perspective, thesis/hypothesis) takes into account the complexities of an issue. Others' points of view are acknowledged within position (perspective, thesis/hypothesis).</td>
<td>Specific position (perspective, thesis/hypothesis) is stated, but is simplistic and obvious.</td>
</tr>
<tr>
<td><strong>Conclusions and related outcomes (implications and consequences)</strong></td>
<td>Conclusions and related outcomes (consequences and implications) are logical and reflect student's informed evaluation and ability to place evidence and perspectives discussed in priority order.</td>
<td>Conclusion is logically tied to a range of information, including opposing viewpoints; related outcomes (consequences and implications) are identified clearly.</td>
<td>Conclusion is inconsistently tied to some of the information discussed; related outcomes (consequences and implications) are oversimplified.</td>
</tr>
</tbody>
</table>

Preview of MSC Demonstration Year (2016) Results

Critical Thinking Dimension

2-Year Institutional Score Distribution
% of student work products scored 4-0 by faculty scorers

<table>
<thead>
<tr>
<th>Category</th>
<th>Score Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explanation of issues</td>
<td>4 3 2 1 0</td>
</tr>
<tr>
<td>Evidence</td>
<td>45</td>
</tr>
<tr>
<td>Context / Assumptions</td>
<td>35</td>
</tr>
<tr>
<td>Student's Position</td>
<td>40</td>
</tr>
<tr>
<td>Conclusions / Outcomes</td>
<td>45</td>
</tr>
</tbody>
</table>

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## Quantitative Literacy Rubric Dimensions

<table>
<thead>
<tr>
<th></th>
<th>Capstone</th>
<th>Milestones</th>
<th>Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Interpretation</strong></td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Ability to explain</td>
<td>Provides accurate explanations of information presented in mathematical forms. Makes appropriate inferences based on that information. For example, accurately explains the trend data shown in a graph and makes reasonable predictions regarding what the data suggest about future events.</td>
<td>Provides accurate explanations of information presented in mathematical forms. For instance, accurately explains the trend data shown in a graph.</td>
<td>Provides somewhat accurate explanations of information presented in mathematical forms, but occasionally makes minor errors related to computations or units. For instance, accurately explains trend data shown in a graph, but may miscalculate the slope of the trend line.</td>
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<tr>
<td><strong>Representation</strong></td>
<td>Skillfully converts relevant information into an insightful mathematical portrayal in a way that contributes to a further or deeper understanding.</td>
<td>Competently converts relevant information into an appropriate and desired mathematical portrayal.</td>
<td>Completes conversion of information but resulting mathematical portrayal is only partially appropriate or accurate.</td>
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<tr>
<td><strong>Calculation</strong></td>
<td>Calculations attempted are essentially all successful and sufficiently comprehensive to solve the problem. Calculations are also presented elegantly (clearly, concisely, etc.)</td>
<td>Calculations attempted are essentially all successful and sufficiently comprehensive to solve the problem.</td>
<td>Calculations attempted are either unsuccessful or represent only a portion of the calculations required to comprehensively solve the problem.</td>
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<tr>
<td><strong>Application / Analysis</strong></td>
<td>Uses the quantitative analysis of data as the basis for deep and thoughtful judgments, drawing insightful, carefully qualified conclusions from this work.</td>
<td>Uses the quantitative analysis of data as the basis for competent judgments, drawing reasonable and appropriately qualified conclusions from this work.</td>
<td>Uses the quantitative analysis of data as the basis for workmanlike (without inspiration or nuance, ordinary) judgments, drawing plausible conclusions from this work.</td>
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</tr>
<tr>
<td><strong>Assumptions</strong></td>
<td>Explicitly describes assumptions and provides compelling rationale for why each assumption is appropriate. Shows awareness that confidence in final conclusions is limited by the accuracy of the assumptions.</td>
<td>Explicitly describes assumptions and provides compelling rationale for why assumptions are appropriate.</td>
<td>Explicitly describes assumptions.</td>
</tr>
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<tr>
<td><strong>Communication</strong></td>
<td>Uses quantitative information in connection with the argument or purpose of the work, presents it in an effective format, and explicates it with consistently high quality.</td>
<td>Uses quantitative information in connection with the argument or purpose of the work, though data may be presented in a less than completely effective format or some parts of the explication may be uneven.</td>
<td>Uses quantitative information, but does not effectively connect it to the argument or purpose of the work.</td>
</tr>
</tbody>
</table>

For full text of AAC&U VALUE Rubric for Quantitative Literacy, see: [https://www.aacu.org/value/rubrics/quantitative-literacy](https://www.aacu.org/value/rubrics/quantitative-literacy)
Preview of MSC Demonstration Year (2016) Results

Quantitative Literacy Dimension

4-Year Institutional Score Distribution
% of student work products scored 4-0 by faculty scorers

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Questions?
Potential to disaggregate by demographic characteristics
Critical Thinking scores by race

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State Level Results

Potential to Inform State Level Policy

• Transfer & Articulation
• Equity
• Increase resources to support professional development
• Inform policy leaders about the learning outcomes students in state are demonstrating
Quantitative Literacy Dimension (State)

2-Year Institutional Score Distribution

% of student work products scored 4-0 by faculty scorers

MSC Criterion State Level Score Distribution
Preview of MSC Demonstration Year (2016) Results

Quantitative Literacy (Context/Assumptions)

2-Year State vs. Project Score Distribution
% of student work products scored 4-0 by faculty scorers
Institution-Level Results

Outcome Performance
Written Communication

View by All Criteria

Filtering by
Faculty Intention: Yes
Course Discipline: All
Major: All
Course: All
Degree Level: All
Gender: All
Pell Eligibility: Yes
Race/Ethnicity: All
Assignment: All

AVERAGE BY CRITERION

Criterion
Context of and Purpose for Writing
Content Development
Genre and Disciplinary Conventions
Sources and Evidence
Control of Syntax and Mechanics

Average: 2.37

1 Benchmark
2 Milestones
3 Milestones
4 Capstone
Institution-Level Results

2015-2016 AACU VALUE Project- MSC, GLCA, and MN

Outcome Performance
Written Communication

View by: All Criteria

Filtering by:
- Faculty Intention: Yes
- Course Discipline: All
- Course Level: All
- Degree Level: All
- Gender: All
- Pell Eligibility: Yes
- Race/Ethnicity: All

Average by Criterion:
- Context of and Purpose for Writing
- Content Development
- Genre and Disciplinary Conventions
- Sources and Evidence
- Control of Syntax and Mechanics

Average: 2.37
Questions?
Inherent Challenge for VALUE
Navigating Methodological Complexity
Nature & implications of complexity

Establishing the validity & reliability of VALUE is a key priority
Reality Check
There is no large-scale model for what we are doing.

The very variables other assessment approaches “control” or “eliminate” VALUE embraces.
Purpose = Discuss validity & reliability in relation to inherent complexity of VALUE
A careful balancing act

- Methodological
  - Stringent assignment design requirements
  - Required common prompts
  - Strict parameters to be included as a scorer

- Philosophical/Pedagogical
  - Institutional autonomy
  - Faculty autonomy/academic freedom
  - Curricular alignment
  - Faculty development opportunities
VALUE & Validity
Faculty & staff saw the VALUE rubrics as valid.

Percent of scorers who reported Strongly Agree or Agree with each aspect of rubric use

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Useful for evaluating student work</td>
<td>89%</td>
</tr>
<tr>
<td>Scoring levels provided sufficient range</td>
<td>86%</td>
</tr>
<tr>
<td>Descriptors were understandable</td>
<td>83%</td>
</tr>
<tr>
<td>Descriptors were relevant</td>
<td>80%</td>
</tr>
<tr>
<td>Encompassed meaning of outcome</td>
<td>75%</td>
</tr>
</tbody>
</table>

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Lessons Learned

- Actionable data about student achievement and improvement of key learning outcomes on specific key dimensions of these important learning outcomes can be generated via a common rubric-based assessment approach.
- Faculty can effectively use common rubrics to evaluate student work products—even those produced for courses outside their area of expertise.
- Following training, faculty members can produce reliable results using a rubric-based assessment approach.
- Faculty report that the VALUE Rubrics used in the study do encompass key elements of each learning outcome studied, and were very useful for assessing student work and for improving assignments.
- A web-based platform can create an easily usable framework for uploading student work products and facilitating their assessment.
Next Steps

MSC Refinement year (year three)

- 13 states, five with representative samples for the state
- 20,000 artifacts collected and uploaded
- Establishment of inter-state “SWAT” teams
- Increased focus on evaluation – panel of data scientists
- Increased focus on equity
- Explore feasibility of sub-study following students into the workforce
Virginia joins as 13th state.
Questions?
Contact Us!

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