NEW DIRECTION IN HIGHER EDUCATION ASSESSMENT

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ASSESSMENT BEST PRACTICES
WE HAVE EVOLVED FROM ONLY "CLOSING THE LOOP"

1. Continuous Improvement Cycle
2. Faculty Driven
3. Sustainable
4. Direct and Indirect Measures of Assessment
5. Validity, Reliability and Fairness
VALIDITY – "THE STANDARDS"

THE DEGREE TO WHICH EVIDENCE AND THEORY SUPPORT THE INTERPRETATIONS OF THE ASSESSMENTS... MOST FUNDAMENTAL CONSIDERATION (P. 11)

SOURCES OF EVIDENCE

• EVIDENCE BASED ON TEST CONTENT
• EVIDENCE BASED ON RESPONSE PROCESSES
• EVIDENCE BASED ON RELATIONS TO OTHER VARIABLES
• EVIDENCE BASED ON CONSEQUENCES OF THE ASSESSMENT

The Standards of the AERA, APA, and NCME (2014)
RELIABILITY - "THE STANDARDS"

Consistency of scores across replications of a testing procedure...always important (p. 33)

Examples of Sources of Inconsistency

- Items
- Raters
- Time
FAIRNESS - "THE STANDARDS"

• **Fundamental issue that tests are fair to all individuals**

• **Including subgroups such as race, ethnicity, gender, culture, language, age, disability or socioeconomic status**
FACULTY APPRECIATE THE SCIENTIFIC APPROACH

DATA INTEGRITY

• VALIDITY

• RELIABILITY

FAIRNESS
TOOLS TO FACILITATE THE ASSESSMENT PROCESS

- University of Florida
- New York City College of Technology
- AAC&U
CITY TECH GEN ED ASSESSMENT ACTIVITIES

• **Gen Ed Assessment Planning Meetings**
• **Content Validity Meetings**
• **Inter-rater Reliability Meetings**
General Education Assessment Workbook

General Education Assessment Workbook
Detailed Timeline: Information Literacy

Assessment Planning 2015-16 to 2020-21

**FALL 2015**
September
Drafting of improvement.

**FALL 2016 - SPRING 2018**
L4 and Gen Ed support.
Implementation of improvement plan.

**FALL 2018**
Chairs select one course for Information Literacy assessment
Full-scale data collection.

**SPRING 2019**
April
AIR returns Information Literacy results.
Report results to General Education Committee and department chairs.
Departments discuss results and consult with Faculty Commons support to formulate action items to improve and/or sustain Gen Ed competencies.

**May**
Action items finalized with plans for implementation in Fall 2018 and additional consulting with Faculty Commons for Best Practices/Pedagogical Support if requested by departments.

Chairs notify all departmental faculty of action items for Fall 2019 implementation.

Chairs select courses for Gen Ed assessment for Fall 2019 and notify AIR.

**FALL 2019 - SPRING 2021**
Implementation of improvement plan.

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**Code for Abbreviations**

DC = Data Collection
IRR/DC = inter-rater reliability and Data Collection
IRR = Inter-rater reliability
AEI = Analysis of data, evaluation of report, drafting of improvement plan
II = Implementation of improvement plan
CA = Communication about assessment and selection of assignment
P = Pilot data collection
### Writing Rubric
(Modified from AAC&U VALUE Rubric)

<table>
<thead>
<tr>
<th>Performance Indicator</th>
<th>No Proficiency</th>
<th>Some Proficiency</th>
<th>Proficiency</th>
<th>High Proficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Context and Purpose for Writing</strong> (includes consideration of audience &amp; circumstances surrounding the task)</td>
<td>Minimal attention to context, audience, purpose, and to the assigned task(s).</td>
<td>Some evidence of awareness of context, audience, purpose, and the assigned task(s), begins to show awareness of audience's perceptions and assumptions.</td>
<td>Adequate consideration of context, audience, and purpose with a focus on the assigned task(s).</td>
<td>Thorough understanding of context, audience, and purpose that is responsive to the assigned task(s).</td>
</tr>
<tr>
<td><strong>Format</strong></td>
<td>Does not adhere to standardized format (APA, MLA, etc.) or given instructions; no sense of introduction, body, conclusion; does not contain all sections required; handwritten/loppy in appearance.</td>
<td>Minimally follows the standardized format or given instructions; some sense of organization and structure; contains all sections, but the content within each section is not appropriate.</td>
<td>Mostly follows the standardized format or given instructions; contains all sections, whose content is generally correct but only occasional lapses; minor edits are required.</td>
<td>Accurately follows the standardized format or given instructions; all sections are present and clearly labeled, each section contains all of the appropriate information.</td>
</tr>
<tr>
<td><strong>Language</strong></td>
<td>Numerous errors in spelling, grammar, verb tense and punctuation; no paragraphs, numerous fragmented sentences, extremely limited vocabulary; use of language impedes meaning because of errors in usage.</td>
<td>Several instances of grammatical errors and demonstrates a lack of editing; sentence structure is simplistic, little variety, although these are error, uses language that conveys meaning to the reader.</td>
<td>Few errors in spelling, grammar, verb tense and punctuation; sentence structure (subject and predicate) is generally correct although still simplistic and occasionally repetitions; generally straightforward language that conveys meaning to the reader.</td>
<td>Very few errors in sentence structure and mechanics; exhibits good to excellent command of language and professional terminology; sentences are complex and vocabulary is sophisticated, skillfully communicates meaning to readers with clarity and fluency.</td>
</tr>
<tr>
<td><strong>Communication</strong></td>
<td>Does not articulate thoughts or ideas; organization of the document is not clear enough for reader to follow arguments; lacks focus and theory in writing.</td>
<td>Thoughts are expressed using vague language, attempts to convey main ideas of the paper but lacks focus and theory; overall document is somewhat confusing.</td>
<td>Thoughts are organized and the main ideas are exposed, but some connections are not clearly supported by the written text; topic presented (or proof if applicable) is clear, with very minor lapses.</td>
<td>Thoughts are carefully organized and allow reader to easily follow all of the arguments; no lapses in logic or clarity; thoughts are clearly expressed with focus and fluency.</td>
</tr>
<tr>
<td><strong>Analysis/Synthesis</strong></td>
<td>Demonstrates little understanding of what the important data/content that should be presented, comments, if present, are superficial or not related to the main topic discussed, does not identify significant professional standard findings; analysis of important points (or data) is lacking.</td>
<td>Statement of important results/content is incomplete, some personal comments are present but not particularly relevant for the discussion, identifies the critical elements but does not demonstrate an accurate comprehension of the concept; analysis of important points (or data) is inconsistent and incomplete.</td>
<td>Statement of the important results are clear and complete but may include too much information or information that is not relevant; analysis of important points (or data) is well thought out but lacks a few important points, relevant comments or real world connections are included.</td>
<td>Successfully performed a thorough analysis; all important results/arguments are clearly identified and motivated; presence of significant personal comments and observations prove a real understanding of the topic.</td>
</tr>
<tr>
<td><strong>Supporting Evidence</strong></td>
<td>Does not attempt to use sources to support ideas in the writing, or provides inappropriate sources.</td>
<td>Demonstrates an attempt to use credible and/or relevant sources to support ideas that are appropriate for the discipline and genre of the writing.</td>
<td>Demonstrates consistent use of credible, relevant sources to support ideas that are limited within the discipline and genre of the writing.</td>
<td>Demonstrates skillful use of high-quality, credible, relevant sources to develop ideas that are appropriate for the discipline and genre of the writing.</td>
</tr>
</tbody>
</table>
CONTENT VALIDITY MEETING

CITY TECH GEN ED ASSESSMENT PILOT FALL 2016

For every assignment, there should be (it was requested of all faculty) a completed Gen Ed Assignment worksheet, assignment sheet (created by participating faculty), and a blank Content Validity worksheet. There is also an AAC&U VALUE rubric in your packet.

PART I. Reviewing the Assignments in Alignment with the Rubric

1. Please review the AAC&U VALUE rubric and the assignment you are reviewing.
2. After you have finished reading the assignment sheet (created by participating faculty), please fill out the blank Content Validity sheet where you will document how the assignment aligns with the measures for the performance indicators in the AAC&U VALUE rubric.
3. Document any concerns or questions you have regarding the assignment or confusion regarding what is expected of the students or any areas that may not be addressed fully by the assignment as written.
4. Repeat for next assignment.

PART II. Discussion of Each Assignment

1. The table facilitator will lead a discussion for each of the assignments reviewed. This provides the faculty member who created the assignment to gain feedback, as well as give participating faculty an overview of the scope of student measurement activities across the college.
2. After the facilitator has lead a discussion for each of the assignments reviewed, please continue to the general education summary activity.

PART III. Group Summary

1. The table facilitator will assist faculty in summarizing the assessments in a holistic manner, including the commonalities and innovative features of the assignments reviewed. This can be done
Assignment Worksheet for Critical Thinking

Name: 
Department: 

1. Please describe the assignment you plan to use with the General Education assessment...

2. Please review the assignment and verify the assignment addresses the performance criteria by checking the box on the right.
   1. Explanation of Issues
   2. Evidence: Selecting and using information to investigate a point of view or conclusion
   3. Influence of Context and Assumptions
   4. Student's Position (perspective, thesis/hypothesis)
   5. Conclusions and Related Outcomes (implications and consequences)

Content Validity for Critical Thinking

Reviewer Name: 
Reviewer Department: 

Department Assignment Sample:

Instructions: Please read over your assignment carefully and familiarize yourself with the City Tech Critical Thinking Rubric. Please document how the assignment (and instructions) will cover each of the following Performance Criteria:

Explanation of issues

Evidence: Selecting and using information to investigate a point of view or conclusion

Influence of context and assumptions

Student's position (perspective, thesis/hypothesis)

Conclusions and related outcomes (implications and consequences)

Fillable PDF sheets provided on AIR website
INTER-RATER RELIABILITY

• Engages faculty

• Promotes discussion/dialogue among faculty

• Creates a common framework of faculty expectations

• Results have ranged from .5 to .9
ACTIVITY – 10 MINUTES

• CONSIDER THE QUESTIONS ON THE FOLLOWING SLIDE

• DISCUSS THE ITEMS WITH YOUR COLLEAGUES

• SELECT ONE INDIVIDUAL TO REPORT-OUT FOR YOUR GROUP
How does your Institution consider any of these three issues in your assessment process?

1. Validity
2. Reliability
3. Fairness

• Are the ways that you consider these issues-
  • Formal or informal?

• How can you maximize opportunities and minimize Barriers to including these 3 principles in the assessment process?
REPORT OUT – 10 MINUTES
PSYCHOMETRICS TOOLS AND ASSESSMENT

- Including Reliability and Validity within the continuous improvement cycle increases faculty Engagement

- Provides greater credibility of the assessment Process

- Enables faculty to view assessment in a similar manner as their research activities
AAC&U COLLABORATIVE MULTI-STATE STUDY
VALUE Initiative To Date:

- **Pilot** (2014–2015)
- **Demonstration** (2015–2016)
VALUE Initiative To Date:

92 institutions submitted
21,189 student work
products for assessment by
288 faculty using VALUE
rubrics.
VALUE Embraces Imperfection as Part of the Learning Process in its three Collaboratives
VALUE embraces the variables that other assessment approaches control or eliminate in their consideration of student learning, including:

- Individual, faculty-designed assignments taken straight off the syllabus and out of the classroom. There are no required common prompts.

- An approach to sampling that is designed to raise up, not wash out, the inherent diversity—from race, ethnicity, and socioeconomic status to the diversity of courses, credit-levels, and disciplinary backgrounds—found on campuses.

- Scorer training sessions that are equal parts calibration to reach a consensus score and a rich faculty development opportunity, and that are open to all faculty whether they are contingent or tenure-track, two-year or four-year, curricular or co-curricular.
In short, VALUE is inviting the higher education community writ large to engage in a nuanced, robust examination of the quality of student learning and to explore measures of success for all students, regardless of what type of institution they attend.
Potential to disaggregate by demographic characteristics
These results are not generalizable across participating states or the nation in any way. Please use appropriately.
Critical Thinking scores by Pell eligibility

These results are not generalizable across participating states or the nation in any way. Please use appropriately.
Faculty & staff saw the VALUE rubrics as valid.

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

- Useful for evaluating student work: 89%
- Scoring levels provided sufficient range: 86%
- Descriptors were understandable: 83%
- Descriptors were relevant: 80%
- Encompassed meaning of outcome: 75%

These results are not generalizable across participating states or the nation in any way. Please use appropriately.
Interrater reliability was moderate to strong.
MSC scores were predicted by the experiences students had on campus instead of their past development, unchangeable demographic characteristics, and precollege learning.
### Assignment Difficulty

<table>
<thead>
<tr>
<th>INTRODUCE</th>
<th>PRACTICE</th>
<th>REINFORCE</th>
<th>MASTERY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignment designed to introduce the outcome</td>
<td>Assignment designed to afford student practice with the outcome</td>
<td>Assignment designed to reinforce previously practiced outcome</td>
<td>Assignment designed for students to demonstrate level of mastery of the outcome</td>
</tr>
</tbody>
</table>

1 2 3 4 5 6 7 8

**Critically Important to Collect**

**LEAP**

**Association of American Colleges and Universities**

1915 to 2015
Significant predictive variables: race/ethnicity, age, gender, program of study

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<tr>
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<th>Beta</th>
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<th>Sig.</th>
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<tbody>
<tr>
<td><strong>Critical Thinking</strong></td>
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<tr>
<td>Higher scores</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health majors</td>
<td>.294</td>
<td>2.283</td>
<td>.025</td>
</tr>
<tr>
<td>Age</td>
<td>.243</td>
<td>2.271</td>
<td>.026</td>
</tr>
<tr>
<td>Lower scores</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Females</td>
<td>-.310</td>
<td>-3.168</td>
<td>.002</td>
</tr>
<tr>
<td>Asian students</td>
<td>-.204</td>
<td>-2.132</td>
<td>.036</td>
</tr>
<tr>
<td><strong>Quantitative Literacy</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Higher scores</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business and math majors</td>
<td>.285</td>
<td>2.298</td>
<td>.024</td>
</tr>
<tr>
<td>African American students</td>
<td>.242</td>
<td>2.092</td>
<td>.039</td>
</tr>
<tr>
<td><strong>Written Communication</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No significant predictive variables</td>
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</tr>
</tbody>
</table>
Implications

Theory
Lack of theories that explain the how and why of student learning

Practice
• Take measures to better understand challenges and barriers females and Asian student experience in Critical Thinking
• Encourage programs like Statway: student-centered approach to math that creates a sense of belonging
• Implementation of essential learning practices, such as active learning
• Use of results to respond to the evidence and engage in collaborative discussions
• Use of rubrics to lead to an equitable and authentic approach to measure student learning

Research
• Pell-eligibility and race/ethnicities should be broken down to provide additional information
• Use of qualitative and quantitative studies

Cheryl Norman, University of Northwestern St. Paul
MSC Contributes to Accreditation

“We are pleased to learn that results gleaned from analyses of student work conducted as part of SCSU’s participation in the Multi-State Collaborative have been used to inform the restructuring of the University’s access programs, developmental math curriculum, liberal education program, and writing across the curriculum program.” NEASC (2017)
Lessons Learned from VALUE/MSC

- Context or landscape is important
  - Local data are critical
- Data need deconstruction/disaggregation at local level
- Interdisciplinary/integrative experience is required to attain high quality levels associated with graduation
- What faculty/educators do is foundational to achieve quality student learning
FUTURE DIRECTIONS IN ASSESSMENT

• **Continued widespread use of assessment and accountability**

• **Increased emphasis on data quality to make decisions about programs**

• **Growth in documentation of assessment (psychometrics) of assessments**
ACTIVITY – ASSESSMENT PLANNING TO INCLUDE CONSIDERATION OF VALIDITY

• WHAT ASSESSMENT INITIATIVES WILL YOU CONSIDER WHEN YOU RETURN TO YOUR CAMPUS THAT INCORPORATES PSYCHOMETRICS AND THE AAC&U MSC BEST PRACTICES?

• CHALLENGES & OPPORTUNITIES?
THANK YOU