College of Sciences & Arts Assessment: Using Rubrics

- What is a rubric?
- How is it used for assessment?
A few reminders...
What Is Assessment?

Assessment is the ongoing process of:

1. Establishing **clear, measurable expected outcomes of student learning** -- aka **learning goals**

2. Ensuring that students have sufficient opportunities to achieve those outcomes -- **mapping to the curriculum**

3. Systematically gathering, analyzing, and interpreting evidence to determine how well student learning matches our expectations -- **conducting an assessment**

4. Using the resulting information to understand and improve student learning -- **completing the loop**

CSA Assessment Process

1. Develop learning goals for each degree program.
2. Map them onto University Goals using spreadsheet.
3. Map the learning goals onto the curriculum: Identify which courses in the program meet which learning goals. This will help you identify where/how it would be assessed.
4. Assess two learning goals in courses using existing data and rubrics.
5. Close the Loop: Identify gaps/deficiencies → take action → Repeat.
Student Learning Outcomes

What the student will

√  Know

√  Do

….at the end of the course or program

Students will be able to

<<action verb>>  <<something>>
Institutional level: Students will communicate effectively in writing to a variety of audiences.

Program level: Students who complete the business major will communicate effectively to professional and lay audiences using the common business formats.

Course Level: Students who complete this finance course will be able to write xyz financial reports.

Walvoord, Assessment Clear & Simple, Jossey-Bass, 2nd ed. 2010
Assessing Learning
embedded – direct measure

• Test – course or field test
• Project
• Presentation
• Performance
• Case Study
• Exhibit
• Internship or field experience
• Portfolio
• Capstone experience
Language of Assessment

A. General skill or knowledge category / statement

GOAL

B. Specific accomplishments to be achieved

STUDENT LEARNING OUTCOME

C. The key elements related to the accomplishment of the outcome

COMPONENTS –

What are you looking for in student work to be able to tell if they “get it”; aka grading criteria.
Communication

- Write
- Relate
- Speak
- Listen
- Participate

Lab report
- Mechanics
- Style
- Organization
Speaking

teacher4

teacher2

teacher1

teacher3

teacher5

eye contact
gestures
volume
sources
transitions

style
rate
poise
examples
verbal variety

appearance
evidence
conclusion
organization
attention getter
Example #1

GOAL 4. Students will effectively communicate scientific work both orally and in writing.

COMPONENTS:
- Communication Mechanics
- Context, Background, Sources and Citations
- Logic and Clarity
- Critical Thinking
Example #2

GOAL/OUTCOME: Students will apply factual information to a problem

COMPONENTS:
- Relevance
- Clarity
- Comprehensiveness
- Aware of Bias
Rubrics

• Analytical tool
  • Numerous **components** which you want to assess individually
    • Summative
    • Developmental

• [http://www.cmu.edu/teaching/assessment/assesslearning/rubrics.html](http://www.cmu.edu/teaching/assessment/assesslearning/rubrics.html)
• [http://course1.winona.edu/shatfield/air/rubrics.htm](http://course1.winona.edu/shatfield/air/rubrics.htm)
Components

Outcome:

Analytical / Summative Rubric

Exceeds expectations
Analytical / Developmental Rubric

Outcome:

Components

sophistication
# Critical Thinking VALUE Rubric

Critical thinking is a habit of mind characterized by the comprehensive exploration of issues, ideas, artifacts, and events before accepting or formulating an opinion or conclusion.

Evaluators are encouraged to assign a zero to any work sample or collection of work that does not meet benchmark (cell one) level performance.

<table>
<thead>
<tr>
<th></th>
<th>Capstone</th>
<th>3</th>
<th>Milestones</th>
<th>2</th>
<th>Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explaination of issues</strong></td>
<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>
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<td><strong>Evidence</strong></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>
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<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>
<td>Shows an emerging awareness of present assumptions (sometimes labels assertions as assumptions). Begins to identify some contexts when presenting a position.</td>
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<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) acknowledges different sides of an issue.</td>
<td>Specific position (perspective, thesis/hypothesis) is stated, but is simplistic and obvious.</td>
<td></td>
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<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 logically tied to information (because information is chosen to fit the desired conclusion); some 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>
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Rubrics – Creating the Rating Scale

- Create at least 3 levels, but no more than 5
- Label each level with *names*, not just numbers
- Be sure which label represents minimally acceptable performance
- Create brief descriptions for *each component at each performance level* (fill in all the boxes).
- Try out the rubric on a sample of student work – you may need to revise it for clarity and value.

Rubric Selection

In addition to LEAP rubrics, there are many, many more to choose from and adapt to your needs.

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<td>Lists evidence, but it is not organized and/or is unrelated to focus.</td>
<td>Organizes evidence, but the organization is not effective in revealing important patterns, differences, or similarities.</td>
<td>Organizes evidence to reveal important patterns, differences, or similarities related to focus.</td>
<td>Organizes and synthesizes evidence to reveal insightful patterns, differences, or similarities related to focus.</td>
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<td>Statements an ambiguous, illogical, or unsupportable conclusion from inquiry findings.</td>
<td>States a general conclusion that, because it is so general, also applies beyond the scope of the inquiry findings.</td>
<td>States a conclusion focused solely on the inquiry findings. The conclusion arises specifically from and responds specifically to the inquiry findings.</td>
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You have a rubric – Now what?

Calibrate the rubric and raters to improve interrater reliability.

• Review the rubric.
• Select a few samples of student work.
• Each rater reviews work individually using the rubric.
• Raters compare results, and discuss until they feel comfortable with what the components and levels of performance mean in practice.
• Calculate interrater reliability.
Let’s try it now.

- Review the rubric.
- Read the sample of student work.
- Review the sample individually and score it using the rubric.
- Let’s compare results. What components were
  - easy to assess for level of performance?
  - difficult to assess for level of performance?
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Coaching Assessment: Student Learning Outcomes

Avoiding Garbage In / Garbage Out

WEAVE Online Seminar
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Winona State University
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