SESSION 3: CREATING & USING RUBRICS TO IMPROVE LEARNING

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University Assessment Services (UAS)

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INTRODUCTIONS

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• Assessment Advisory Council (AAC)
DEFINITIONS

• A rubric is a scoring tool that lays out specific expectations for an assignment or artifact.

• It divides an artifact into its component parts and provides a detailed description of what constitutes acceptable levels of performance.
WHY USE A RUBRIC?

The ultimate goal of a rubric is to improve instruction and learning.

Seven Principles of Effective Practice in Undergraduate Education

- Encourage contact between students and faculty
- Develop reciprocity and cooperation among students
- Encourage active learning
- Give prompt feedback
- Emphasize time on task
- Communicate high expectations
- Respect diverse talents and ways of learning
HOW NOT TO USE RUBRICS

Standardize skills, knowledge, and the curriculum.

Using a rubric for scoring tests and other scored assessments.

Sorting students.

Remove context from learning.

Evaluating tasks instead of knowledge/skills.

Control the curriculum and learning process.

End goal of high inter-rater reliability and providing data.

Substitute for talking with other people.
RUBRICS ARE A PROCESS

• Reflection
• Listing
• Grouping & Categorizing
• Dialog
• Piloting
RUBRIC CONSTRUCTION
GUIDELINES

Should be used with performances or projects (“artifacts”).

Should be designed by a group.

A rubric is a guide and created by people – it is not a universal statement of truth.

Should be used for cognitive tasks, not basic knowledge.

Creating a rubric is like stuffing a phone booth – some things have to be left out.

Don’t reinvent the wheel.

Decide between a task-specific or general rubric.

Progress will only result from implementing and using the rubric. There should be room for refinements.
Rubric Creation Process

1. Identify intended outcome.
2. Make sure the skill or knowledge being assessed is significant.
3. Make certain the rubric’s criteria are actually being taught.
4. Establish what student performance would demonstrate achievement.
5. Establish criteria for evaluation.
6. Match the length or size of the rubric to your own tolerance for detail.
7. Pilot the rubric and revise it.

HOLISTIC RUBRIC

Task Description: Each senior will create a research report that communicates complex statistical concepts to a general audience.

Final Projects Satisfy Program Requirements (4-5)
5 – The student demonstrated thorough knowledge of the topic, a firm grasp of research methods, and used appropriate visual aids.
4 – The student demonstrated exemplary performance in two of the three criteria, and competent performance in one.

Final Projects Omit or Are Deficient in Some Criteria (2-3)
3 – Some aspects of the project were developed and organized well, but not as much detail or organization is expressed as in a score of 4.
2 – A few parts of the project were developed somewhat. However, two of the three criteria were lacking.

Final Projects Show No Mastery of Learning Outcomes (1)
1 – The student showed little to no mastery in all three dimensions.
DATA FROM A HOLISTIC RUBRIC

- 4, 5 – Exemplary
- 2, 3 – Competent
- 1 – Developing

n=50 artifacts
**Task Description:** Each senior will create a research report that communicates complex statistical concepts to a general audience.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Present</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topic knowledge</td>
<td>✔️</td>
</tr>
<tr>
<td>Use of research</td>
<td>✔️</td>
</tr>
<tr>
<td>Use of visual aids</td>
<td></td>
</tr>
</tbody>
</table>
**Task Description:** Each senior will create a research report that communicates complex statistical concepts to a general audience.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Not Present</th>
<th>Developing</th>
<th>Established</th>
<th>Advanced</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topic knowledge</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use of research</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use of visual aids</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>
DESCRIPTIVE CHECKLIST

**Task Description:** Each senior will create a research report that communicates complex statistical concepts to a general audience.

Code: + = consistently present, √ = sometimes present/needs mentoring, 0 = not present

**Topic Knowledge**

+_____ Historical understanding
√_____ Accurate detail to support thesis

**Use of Research**

0_____ Thorough use of research that goes beyond text
+_____ Knowledge of research methodologies

**Use of Visual Aids**

0_____ Visual aids appropriate to research methodology
√_____ Use of engaging visual aids
**SCORING GUIDE**

**Task Description:** Each senior will create a research report that communicates complex statistical concepts to a general audience.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Points</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Topic knowledge</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Presentation demonstrates a depth of historical understanding by using relevant and accurate detail to support the thesis.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Use of research</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research is thorough and goes beyond what was assigned in texts.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Use of visual aids</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Includes appropriate and easily understood visual aids, which the presenter refers to at appropriate points.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Task Description:** Each senior will create a research report that communicates complex statistical concepts to a general audience.

<table>
<thead>
<tr>
<th>Dimensions/Outcomes</th>
<th>Exemplary (4-5)</th>
<th>Competent (2-3)</th>
<th>Developing (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Topic Knowledge</strong></td>
<td>Paper demonstrates a depth of historical understanding by using relevant and accurate detail to support the thesis.</td>
<td>Paper uses knowledge that is generally accurate with only minor inaccuracies and is generally relevant to the thesis.</td>
<td>Paper uses little relevant or accurate information.</td>
</tr>
<tr>
<td><strong>Use of Research</strong></td>
<td>Research is thorough and goes beyond what was assigned in texts.</td>
<td>Research is adequate but does not go beyond the assignments.</td>
<td>Little or no research use is apparent.</td>
</tr>
<tr>
<td><strong>Use of Visual Aids</strong></td>
<td>Includes appropriate and easily understood visual aids, which the presenter refers to at appropriate points.</td>
<td>Includes appropriate aids, but they are too few, are not clear, or they are not referred to in the presentation.</td>
<td>No visual aids used or ones that do exist are not referred to in the presentation.</td>
</tr>
</tbody>
</table>
ANALYTIC RUBRIC

4, 5 – Exemplary
2, 3 – Competent
1 – Developing

- Topic Knowledge
- Use of Research
- Visual Aids
**Rubric Example #1**

**Task Description:** Apply relevant tools in the application of problem-solving.

<table>
<thead>
<tr>
<th></th>
<th>Distinguished</th>
<th>Acceptable</th>
<th>Inadequate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Problem-solving skills</strong></td>
<td>The student’s problem solution applies relevant concepts, skills, strategies, and technology with <strong>extreme</strong> efficiency and accuracy.</td>
<td>The student’s problem solution applies relevant concepts, skills, strategies, and technology with <strong>moderate</strong> efficiency and accuracy.</td>
<td>The student’s problem solution applies relevant concepts, skills, strategies, and technology with <strong>little to no</strong> efficiency and accuracy.</td>
</tr>
</tbody>
</table>
**Rubric Example #2**

**Task Description:** Writing an article for a journal.

<table>
<thead>
<tr>
<th>Performance Criteria</th>
<th>Novice</th>
<th>Apprentice</th>
<th>Master</th>
<th>Expert</th>
</tr>
</thead>
<tbody>
<tr>
<td>Science Journal</td>
<td>Writing is messy and entries contain spelling errors. Pages are out of order or missing.</td>
<td>Entries are incomplete. There may be some spelling or grammar errors.</td>
<td>Entries contain most of the required elements and are clearly written.</td>
<td>Entries are creatively written. Procedures and results are clearly explained. Journal entry is well organized.</td>
</tr>
</tbody>
</table>