Use of rubrics for assessment and student learning

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Learning experience

Teaching Objectives

SYLLABUS

Student Assessment
Student assessment

- **Measurement** = quantification by means of a numerical description

- **Evaluation** = qualitative judgments or value statements used in decision making
What & Why RUBRICS?

- **Rubrics** = criteria that cover the essence of a performance that is judged with them
- **Purposes:**
  - Help define the expected performance
  - Sets standards of quality
  - Shows levels of accomplishment
  - Helpful in diagnostic assessment
  - Provide feedback to students
Types of rubrics

- **Holistic** = gives a single score or rating for an entire product or performance, based on overall impression of a student’s work

- **Analytical** = divides a product into essential dimensions (traits) and each dimension is judged separately
Holistic rubric

- The rater considers all quality judgment in a big component, an overall judgment, and comes up with one single score

**Useful for:**
- Judging simple products or performances
- Getting a quick snapshot of overall quality or achievement
- Judging the impact of a product or performance more than the specific detailed parts of the performance
Disadvantages of holistic rubrics

- There is no detailed analysis of the strengths and weaknesses of the performance/product
- Not useful as diagnostic
- Does not give students detailed feedback on their performance (strengths and weaknesses) and does not help them improve their performance in specific areas
Work example

- What is wrong with this rubric?

<table>
<thead>
<tr>
<th></th>
<th>Frequently (4)</th>
<th>Occasionally (3)</th>
<th>Sometime (2)</th>
<th>Never (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understanding the problem</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Correct use of calculations</td>
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<tr>
<td>Good strategies and reasoning</td>
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<tr>
<td>Effective communication</td>
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</tbody>
</table>
Analytical rubric

- A separate score is given for each dimension/trait considered important for the assessed performance
- **Useful for:**
  - Judging complex performances that involve multiple dimensions
  - Provide more specific information and feedback
  - Can be used to target instruction to specific areas
  - Help students come to a better understanding about the nature and quality of work they must perform
Disadvantage of analytical rubrics

- More time consuming to craft and use in grading
- Lower inter-rater agreement because of the detailed and many traits
- Less desirable in large scale assessment context when many students must be graded and when speed in grading is essential
Work example

- Why this rubric is not good enough?

- Rate each of the following with a check mark as shown: ✓-, ✓, or ✓+
  - speaks loudly and clearly enough to be heard
  - introduces new ideas
  - uses reasoning and evidence to support ideas
  - asks questions to get information
  - summarizes when needed
  - tries to include others in the discussion
  - disagrees tactfully
  - listens to and follows the flow of conversation
General vs. Specific rubrics

- **General (generic) rubrics** = can be used across similar performances
- **Task-specific rubrics** = each rubric can be used only for a particular task/assignment

**Note:**
The best way it is a combination of both
Number of score points

- A good range to evaluate the performance
- Enough points to evaluate different levels of quality
- If you have a standard then it is good to use the same amount of points
- Tracking changes over a longer period of time: use more points
- Have a good reason to pick odd or even number of points
- 1-5 point scale is similar to A-F grading, at times students confuse points with grades
DEVELOPING A RUBRIC

Questions to ask when developing a rubric:

- What criteria must be present in student work to be able to qualify it as high quality?
- How many levels of achievement should be present?
- What is a clear description for each level of quality?
- What are the consequences of performing at each level?
- What grading scheme will be used in the rubric?
- What aspects of the rubric are good and bad; and how to improve the rubric?
- Is the product more important than the process; or are they valued as equal?
How to start building a rubric

- Collect student work and try to score it using your existent rubric
- Collect student work and sort them in different groups based by quality
- List all particular details of a performance that you are interested to know about
- Read what other experts know about the skills and the different levels of performance
- Find multiple examples for each of the different levels of your rubric
METARUBRIC

- **Content** (coverage) – tells students what they need in order to succeed for the respective assignment
- **Clarity** (detail) – a rubric must describe in enough detail the dimensions of performance that two raters understand and rate with the rubric in the same way
- **Usability** – a rubric must be practical
- **Technical quality** – must be fair to all students
**GRADING WITH RUBRICS**

- Used in order to show students what are the criteria & expected standards
- Inform students about different degrees (levels) of performance
- Models of standard for students
- Useful in the process of assessment when using different graders
Use of rubrics in grading

- Decide ahead of time how many scale points for best performance
- Decide how many traits (specific dimensions) you want to measure
- Don’t use strict percentages to convert scores from each particular assessment into letter grades
- Come up with a logic rule to convert scores/points to letter grade
Practice example

- Think about a class assignment in a course you teach
- List the class objectives that the assignment would cover
- Design a detailed rubric
- Explain how would you use the rubric in your grading and how would the rubric assist/improve student performance
Reference

Educational Psychology blog: http://szabo-edpsy.blogspot.com/

Thank you!