Using Rubrics for Grading and Assessment

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What is the purpose of grading?

What is the purpose of assessment?

"Generally, the goal of *grading* is to evaluate individual students' learning and performance. Although grades are sometimes treated as a proxy for student learning, they are not always a reliable measure. Moreover, they may incorporate criteria – such as attendance, participation, and effort – that are not direct measures of learning.
The goal of *assessment* is to improve student learning. Although grading can play a role in assessment, assessment also involves many ungraded measures of student learning. Moreover, assessment goes beyond grading by systematically examining patterns of student learning across courses and programs and using this information to improve educational practices." (https://www.cmu.edu/teaching/assessment/basics/grading-assessment.html)

The Difference Between Grading and Assessment-
Example 1

Course grades combine a variety of performances (e.g., writing, participation, exams) that provide evidence of multiple learning outcomes. Using final grades alone obscures important differences in learning across students. To see the problem with using final grades as an assessment of learning, imagine a course where skill (writing), content knowledge, and class participation are elements of the final course grade:

Student	Writing (out of 100)	Exam (content) score (out of 100)	Participation (out of 100)	Total (out of 300)
X	80	70	100	250
Y	60	95	95	250
Z	90	80	80	250

In this example, all three students have the same course grade points. However, student Y needs to work on writing, and student X is not as strong in content knowledge.

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In this example we see that these 3 students all have the same course grade at the end of the semester. While student Z has relatively consistent performance across the three items, Student Y needs work on writing and Student X is somewhat weak in content knowledge as measured by the exam.

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Another thing you see here is that the course grade may be made up by other items that are not related to a course outcome or a program student learning outcome such as participation. That brings us to the difference between grades and outcomes.

Grades vs. Outcomes

- **A course grade is usually a combination of many factors**
  - **Exams**
  - **Projects**
  - **Assignments**
  - **Attendance**
  - **Participation**

Grades vs. Outcomes

- **Even an exam grade or project grade may be made up of several factors**
  - **Knowledge**
  - **Skills**
  - **Timeliness (was everything turned in on time)**
  - **And so on...**

Grading vs. Outcomes

- **Course student learning outcomes are clear and concise statements that describe what your students are expected to learn by the end of the course.**

- **Program student learning outcomes are clear and concise statements that describe what students are expected to learn in their major by the time they graduate.**

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Course student learning outcomes can be directly related to program student learning outcomes.

Grades vs. Outcomes

A course grade may =
- – **Exams**
- – **Projects**
- – **Assignments**
- – **Attendance**
- – **Participation**

A course outcome may =
- – **Exams**
- – **Projects**
- – **Assignments**
- – **Attendance**
- – **Participation**

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The Difference Between Grading and Assessment- Example 2

Student	Writing	Applied Assignment 1	Applied Assignment 2	Applied Assignment 3	Exam 1	Exam 2	Exam 3	Presentation	Total Points	Grade
Mary	83	87	88	70	65	88	92	69	642	B
John	97	95	97	75	70	92	96	72	694	B
Bob	89	90	92	65	60	75	87	65	623	C
Junior	88	85	95	70	72	85	90	60	645	B
Alfred	92	90	95	80	65	95	95	75	687	B
Betsy	65	60	50	40	55	60	65	58	453	F
Lucy	83	80	89	70	62	80	95	65	624	C
Judy	90	85	96	75	51	93	92	60	642	B
Jerry	85	55	65	35	65	88	88	70	551	D
Jenny	96	95	99	80	70	98	97	90	725	A
Pts	868	822	866	660	635	854	897	684	6286	
% of activity points	87%	82%	87%	66%	64%	85%	90%	68%	79%	

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What we have here is a grading sheet from a class of 10 students. The final grade is comprised of the scores from writing and applied assignments, exams, and presentations. By looking at each of the factors that make up the final grade we can get a fuller picture of our students and of our course.

What does this grade sheet tell us, first about the individual students in the course? E.g., Betsy seems to have struggled with most everything in the course, whereas Jerry mostly struggled with the applied assignments.

What does the grade book tell us about the course?

Applied assignment 3 may have an issue (either with the assignment itself-not a good assignment or students did not grasp the concepts necessary to successfully complete the assignment).
There also appears to be an issue with the first exam (either a bad exam or it may be an indicator of how much students improved over the semester) and with the presentation.

Even though looking at scores on individual assignments and exams gives us more information we can gather even more information about our students and our course by using rubrics.

How many of you use rubrics in your courses?

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We will look more closely at the students skills in this course by looking at a rubric used to obtain the presentation scores.

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Oral Communication Outcomes

Presentation grade is based on the number of points students score on the rubric.

Course Student Learning Outcome-Upon completion of this course, students will be able to demonstrate effective oral communication skills related to the field of Horticulture.

Program Student Learning Outcome-Upon graduation from the Horticulture program, students will be able to demonstrate effective oral communication skills.

Presentation Scoring Rubric Example — Office of Academic Assessment — RADFORD UNIVERSITY

We're not going to spend a lot of time talking about how to create a rubric in this workshop, but you can see from your handout that the score on this presentation activity is made up of several factors. Everything in gray is what is tied directly to the course SLO and the program SLO. You can see that while use of technology and timeliness is a part of the course grade, it is not part of the SLOs.

Here is an example of the rubric used to score Alfred's presentation. You can see his grade is based on his score of 75 points out of 100 and he scored "proficient" on the oral communication learning outcome.

So this gives us some good information on Alfred's skills on this presentation. We can see he was proficient in his organization, vocal delivery and non-verbal delivery. He was highly proficient in communicating the content and his use of visual aids.

We can also combine the results of these rubrics to look at how our students are doing overall.

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This next form is used by the instructor to tally the number of students who scored at each proficiency level for each of the elements. Although "Use of Technology" and "Timeliness" are included on this sheet they won't be used for determining how well students met the learning outcome.

Presentation Scoring Rubric Example

Here is a completed sheet with the scores from all ten student rubrics. What information does this tell us?

- 70% of students were proficient or highly proficient on this learning outcome
- Strengths were seen in students ability to communicate content, in their organization skills and their ability to use visual aids.
- Weaknesses overall were seen in their vocal and non-verbal delivery.

- In terms of non-SLO factors, students also seemed very proficient in their use of technology.

How can the instructor use this information?
- The instructor can spend some time in class (or by other means) instructing students on how to build their vocal and non-verbal delivery skills.

Information from this course SLO can now be used when the program assesses the oral communication skill at the program level.

Some Resources

- Creating and Using Rubrics (U. of Hawaii at Manoa)
https://manoa.hawaii.edu/assessment/howto/rubrics.htm

- AAC&U Value Rubrics - https://www.aacu.org/value-rubrics

- Creating a Rubric (U. of Denver)
http://www.ucdenver.edu/faculty_staff/faculty/center-for-faculty-development/Documents/Tutorials/Rubrics/index.htm

- How is Assessment Different from Grading? (U. of Denver)
http://assessment.arizona.edu/sites/default/files/Assessment%20Matters%20Nov%202016.pdf

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