

## Assessment Guidance for Academic Programs Selecting Measures

A measure refers to the assessment method that will be used to collect and analyze data to determine to what degree students are achieving a learning outcome (LO). It is a descriptive statement that specifies: (1) what data will be collected; (2) how it will be collected; (3) when it will be collected; and, (4) how success (achievement of the LO) will be determined.

There are two basic types of assessment measures:

- Direct – based on an analysis of student work or behaviors in which students demonstrate how well they have mastered learning outcomes.
- Indirect – examines student perceptions of mastery of student learning outcomes and their learning experiences.

**Table 1: Examples of Direct and Indirect Measures**

Direct		Indirect
• Assignment	• Performance	• Completion Rates
• Capstone	• Presentation	• Course Evaluations
• Certification/Licensure	• Project	• Focus Group/Interview
• Exam	• Quiz	• Grade
• Field Assessment		• Survey

While both types of measures can provide useful information, **effective assessment of LOs requires a DIRECT measure of student performance.**

A direct measure of assessment includes two elements – a student artifact and an assessment tool. A student artifact is a sample of student work that demonstrates a student’s knowledge, skills, and abilities. The above examples of direct measures can also be thought of as a student artifact.

An assessment tool is an instrument for evaluating a student artifact. It yields information on the strengths and weaknesses of student work that can be used to identify areas of student learning in need of improvement.

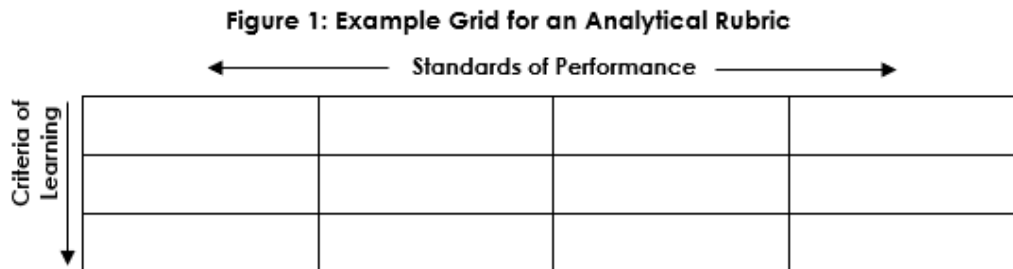
For exams with multiple choice or other closed-ended questions, the assessment tool is the exam key. Other student artifacts, however, may require an evaluation that is more than a simple correct/incorrect. In these instances, one of the most effective tools for evaluating student artifacts is the rubric.

Rubrics are comprised of two elements – criteria of learning and standards of performance. Although rubrics can take many forms, the most useful one for assessment purposes in the analytical rubric.

### A Note about Grades

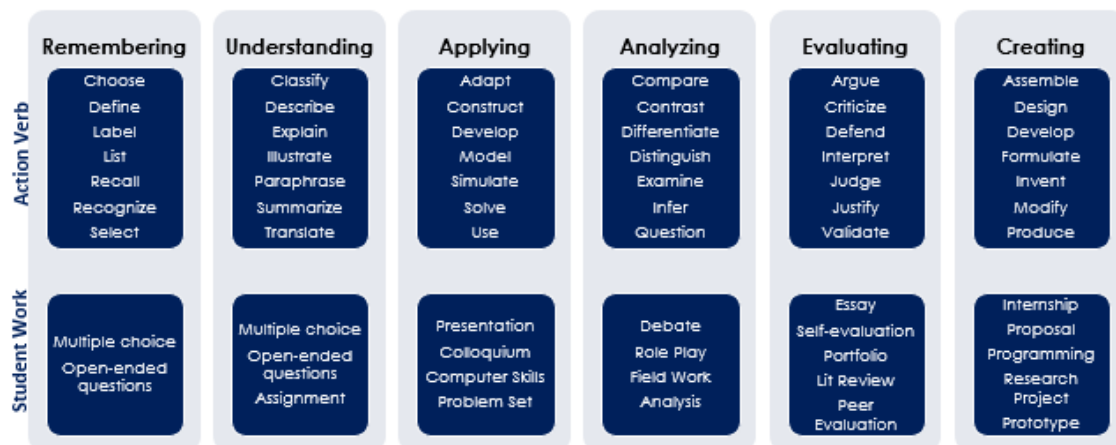
Although grades are an assessment of student performance, they have limited use when it comes to assessing program level LOs. Knowing the average grade in a course was 85% doesn't reveal anything about where students are excelling and where they could be performing better. The same holds true for Pass/Fail grades often used at the graduate level. More specific, diagnostic information is needed for programs to determine where improvement is needed.

Analytical rubrics disaggregate student performance by learning criteria, thus providing more diagnostic information that helps programs to determine where students may need additional support. They are typically formatted as a grid with the rows representing the criteria of learning and the columns representing the standards of performance. Each cell contains a description of the criterion at that level of performance. Resources for developing rubrics can be found in Appendix B.



When selecting a direct measure, it is important that it be aligned with the LO. As it is when selecting an action verb for a learning outcome, Bloom's Revised Taxonomy is also a useful resource for ensuring a measure is aligned with the LO. Figure 1 provides examples of some action verbs and an appropriate student work product. A more comprehensive table can be found in Appendix C.

**Figure 2: Bloom's Revised Taxonomy Action Verbs and Student Work**



### A Target

Once assessment data has been collected, faculty need a method for determining if a LO has been achieved or a *target*. A target is a statement identifying the minimum percentage of students that must achieve a minimum acceptable score or result for a specific outcome. Sometimes referred to as a criterion for success, a target provides faculty with a guideline for judging the degree to which students have acquired the necessary knowledge and skills to successfully complete a program of study.

### Additional Assistance

Additional resources can be found on the Office of Institutional Effectiveness website at [https://www.southalabama.edu/departments/institutionaleffectiveness/academic\\_program\\_assessment\\_reporting\\_resources.html](https://www.southalabama.edu/departments/institutionaleffectiveness/academic_program_assessment_reporting_resources.html). You can also contact us at [assessment@southalabama.edu](mailto:assessment@southalabama.edu).

## Appendix A: Resources for Using Rubrics

### *Understanding Rubrics*

Ragupathi, K., Lee, A. (2020). [Beyond Fairness and Consistency in Grading: The Role of Rubrics in Higher Education](#). In: Sanger, C., Gleason, N. (eds) Diversity and Inclusion in Global Higher Education. Palgrave Macmillan, Singapore.

Gonzalez, J. (2014). [Know your terms: Holistic, Analytic, and Single-Point Rubrics](#). Cult of Pedagogy.

### *Creating Rubrics*

[Rubrics](#) (DePaul)

[Rubric Best Practices, Examples, and Templates](#) (NC State University)

[Designing and Using Rubrics](#) (University of Minnesota)

[Rubric Creation and Use](#) (Indiana University Bloomington)

[Using Rubrics](#) (Cornell University)

### *Online Tools*

[iRubric](#) – Free online rubric builder

[RubiStar](#) – Create custom rubrics online for free

[Rubric Maker](#) – Create Custom assessments for student work, includes a free membership option

### *Using Rubrics in Canvas*

Canvas allows instructors to create analytic rubrics to grade assignments, discussions, and quizzes. Student work submitted online can be graded using the rubric in SpeedGrader. Specific traits in the rubric can also be attached to pre-defined learning outcomes (e.g., for reporting data for Gen Ed or department or school level assessment). To learn more about rubrics in Canvas, see the [Canvas Instructor Guide](#).

## Appendix B

<b>Bloom's Revised Taxonomy of Learning Domains and Action Verbs</b>			
Bloom's Revised Taxonomy represents a continuum of increasing cognitive complexity from lower-order thinking skills to higher-order thinking skills. This cognitive development is represented through six domains of learning, from fundamental memorization to advanced critical thinking skills. Bloom's Taxonomy verbs are useful for writing observable and measurable learning outcomes.			
<b>REMEMBERING: Can the student recall or remember the information?</b>			
<b>Action Verb</b>			<b>Product</b>
Arrange	List	Recite	Multiple choice
Define	Match	Recognize	Open-ended questions
Duplicate	Memorize	Reproduce	
Enumerate	Name	Select	
Identify	Recall	State	
Label			
<b>UNDERSTANDING: CAN THE STUDENT EXPLAIN IDEAS OR CONCEPTS?</b>			
<b>Action Verb</b>			<b>Product</b>
Approximate	Generalize	Paraphrase	Multiple choice quiz/exam
Classify	Illustrate	Restate	Open-ended questions
Describe	Infer	Report	Cases
Discuss	Interpret	Summarize	Homework
Explain	Outline	Translate	Class Assignment
Extend			Multiple choice
<b>APPLYING: Can the student use the information in a new way?</b>			
<b>Action Verb</b>			<b>Product</b>
Adapt	Examine	Organize	Practical
Build	Identify	Prepare	Presentation
Compute	Illustrate	Simulate	Colloquium
Construct	Interview	Solve	Computer Skills
Demonstrate	Model	Use	Problem Set
Derive			
<b>ANALYZING: Can the student distinguish between the different parts?</b>			
<b>Action Verb</b>			<b>Product</b>
Analyze	Discover	Infer	Debate
Categorize	Dissect	Investigate	Role play
Classify	Distinguish	Simplify	Field Work
Compare	Examine	Question	Case Studies
Conclusion	Experiment	Test	
Contrast			
<b>EVALUATING: Can the student justify a stand or decision?</b>			
<b>Action Verb</b>			<b>Product</b>
Appraise	Estimate	Opinion	Paper
Argue	Evaluate	Prioritize	Essay
Conclude	Judge	Rate	Report
Critique	Justify	Recommend	Portfolio
Defend	Measure	Support	Literature Review
Determine			
<b>CREATING: Can the student create a new product or point of view?</b>			
<b>Action Verb</b>			<b>Product</b>
Assemble	Design	Modify	Internship
Combine	Develop	Plan	Experimental work
Compile	Formulate	Propose	Prototype
Compose	Improve	Solution	Programming
Construct	Invent	Solve	Research Project
Create			

Adapted from: Anderson, L. W., & Krathwohl, D. R. (2001). A taxonomy for learning, teaching, and assessing Abridged Edition. Boston, MA: Allyn and Bacon.