

# Developing Rubrics



From the Desk of Joan Sholars, SLO Coordinator

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## *What's a rubric and why do I need one anyway?*

Heidi Goodrich, a rubrics expert, defines a rubric as "a scoring tool that lists the criteria for a piece of work or 'what counts.'" So a rubric for a multimedia project will list the things the student must have included to receive a certain score or rating. Rubrics help the student figure out how their project will be evaluated. Goodrich quotes a student who said he didn't much care for rubrics because "if you get something wrong, your instructor can prove you knew what you were supposed to do." Clearly, making grading transparent will allow for more constructive dialogue on the teacher's grading. Rubrics can help students and faculty define "quality." Rubrics can also help students judge and revise their own work before handing in their assignments.

A rubric is a matrix with traits along one side, levels of competence along the other, and qualitative observables in each cell. They can be used to classify virtually any product or behavior: essays, research, portfolios, works of art, recitals, oral presentations, performances, group activities, etc.

Generally, rubrics specify the level of performance expected for several levels of quality. These levels of quality may be written as different ratings (e.g., Exceeds Expectations, Meets Expectations, Does Not Meet Expectations) or as numerical scores (e.g., 4, 3, 2, 1), which are then added up to form a total score which then is associated with a grade (e.g., A, B, C, etc.).

The same rubric can be used to evaluate different assignments that measure the same skill. For example, a rubric could be made to evaluate an essay for students' ability to write a coherent thesis statement, but each faculty member does not have to use the same essay for their respective section(s).

Rubric strengths include:

- Complex products or behaviors can be examined more efficiently.
- Developing a rubric helps to precisely define faculty expectations (grading).
- Rubrics are student-to-standard referenced rather than student-to-student referenced.
- When rubrics are shared with students, students understand what is expected of them and learning is improved.

Rubric weaknesses include:

- Developing a useful, effective rubric takes time.
- Developing a useful rubric requires faculty cooperation and faculty agreement, if working across sections or courses.

## *How do I get started developing a rubric that my department can use to assess the SLOs for a course?*

There are websites that are available to help, such as <http://rubistar.4teachers.org/index.php>. There are also many rubrics developed by faculty on campus that you can use for inspiration (*see page 3 for a Mathematics Rubric example*).

Rubrics can be as simple as what Mt. SAC General Education Outcomes (GEO) Coordinator Joe Terreri calls an "holistic" rubric -- a rating of zero for "Did Not Meet Criterion" and a rating of one for "Meets Criterion."

Steps to building a rubric include:

1. Select an SLO or GEO. In the example on page 2, the GEO is "Students completing an assignment in Humanities Area C will be able to identify the influence of culture on human expression."
2. Identify the primary traits. The primary traits identified for this example are "students identifying the culture" and "students identifying the influence of culture on human expression."

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Steps to building a rubric include: *(continued)*

3. Identify the levels of competence. For this example, the levels of competence are “Below Expectations” (0 points), “Meets Expectations” (1 point), and “Exceeds Expectations” (2 points).
4. Identify the characteristics of what you are assessing (e.g., organization, originality, etc.). The characteristics that are being assessed here are identification and seeing a relationship.
5. Create your observables.
  - a. Describe the best work you could expect using these characteristics.
  - b. Describe the least acceptable product using these characteristics. (This still meets your minimum criteria.)
  - c. Describe an unacceptable product. (This does not meet your minimum criteria.)
  - d. Describe any additional intermediate levels as necessary.

This example of a rubric (below) comes from the General Education Outcomes workshops ([http://www.mtsac.edu/instruction/genealed/docs/GEO\\_workshop\\_handouts.pdf](http://www.mtsac.edu/instruction/genealed/docs/GEO_workshop_handouts.pdf)). For Area C (Humanities), the GEO is “Students completing an assignment in Humanities Area C will be able to identify the influence of culture on human expression.”

	0	1	2
	Below Expectations	Meets Expectations	Exceeds Expectations
Identify Culture	Cannot identify a culture; misidentify a culture.	Accurate identification of relevant culture(s).	
Influence on Human Expression	Cannot identify or misidentify a relationship between the culture and the human expression.	Identify a relationship between the culture and the human expression.	Identify additional facets of the relationship (such as sequence of events, depth or magnitude of the influence, and barriers to the influence).

Based on the aforementioned creation of a rubric, page 3 provides a copy of the final rubric I developed for use in my math classes, which will work for many different levels of math. This rubric was written for student use so that they can assess their own work. This also allows the students to see how I will assess their work and use this information to decide if they wish to re-work their project or assignment before I grade it.

Ultimately, it is your decision as faculty that will guide you in the development of your rubric—using your expertise from your discipline, your understanding of your students, and what you are trying to have them learn.

Remember, rubrics can provide valuable information about the degree to which a student has achieved a defined learning outcome based on specific criteria that defined the framework for evaluation. Rubrics are a tool to assist faculty.

If you have any questions, please contact me at Extension 4610 or [jsholars@mtsac.edu](mailto:jsholars@mtsac.edu). I would be happy to help you.

**NOTE:** This paper provides a process by which to develop rubrics. The *Guidebook to Student Learning Outcomes and Administrative Learning Objectives* is a good resource for information about other assessment tools and is at: <http://www.mtsac.edu/administration/senates/academic/documents/SLOAUGUIDEBOOK090808FINAL.pdf>.

## A Mathematics Rubric Example

Score Level	Mathematical Understanding	Strategic Knowledge and Planning	Explanation and Justification
(How do you evaluate your	(Do you know it?)	(How did you plan your answer?)	(Can you explain your thinking?)
<b>4</b>	<ul style="list-style-type: none"> <li>• I got the right answer and I identified and labeled the parts correctly.</li> <li>• I used math terms correctly to show I understand how math works.</li> <li>• I computed with no errors.</li> </ul>	<ul style="list-style-type: none"> <li>• I found all the important parts of the problem and I know how they go together.</li> <li>• I showed all the steps and procedures I used to solve the problem.</li> <li>• I explained my mental math or showed my calculations.</li> </ul>	<ul style="list-style-type: none"> <li>• I wrote <b>what</b> I did and <b>why</b> I did it in a clear and concise manner.</li> <li>• If I used a drawing, diagram, or picture, I explained all of it in writing.</li> <li>• I described my logical steps and my critical thinking in a clear and concise manner.</li> </ul>
<b>3</b>	<ul style="list-style-type: none"> <li>• I got the right answer and identified the parts, but I made slight errors.</li> <li>• I made minor errors in computation or steps, but I understand what I did.</li> <li>• I understood my answer and recognized my mistakes.</li> </ul>	<ul style="list-style-type: none"> <li>• I showed detailed pictures, diagrams, models, or computations.</li> <li>• I found most of the important parts of the problem.</li> <li>• I showed a reasonable plan and most of the steps I used to solve the problem.</li> </ul>	<ul style="list-style-type: none"> <li>• I wrote mostly about <b>what</b> I did, not <b>why</b> I did it.</li> <li>• I described my steps, but not clearly.</li> <li>• If I used a drawing, I explained most of it in writing.</li> </ul>
<b>2</b>	<ul style="list-style-type: none"> <li>• I know how to do parts of the problem, but I made noticeable mistakes.</li> <li>• I gave an incorrect answer or only part of the answer.</li> </ul>	<ul style="list-style-type: none"> <li>• I showed some of the steps of parts of the problem, but my plan is not clear.</li> <li>• I found some elements of the problem.</li> </ul>	<ul style="list-style-type: none"> <li>• I wrote some about <b>what</b> I did or <b>why</b> I did it, but not both.</li> <li>• If I used a diagram, drawing, or formula, I explained some of it or it was basic.</li> </ul>
<b>1</b>	<ul style="list-style-type: none"> <li>• I tried to do the problem, but I did not understand it.</li> <li>• My answer is incorrect, but I did not explain why.</li> </ul>	<ul style="list-style-type: none"> <li>• I showed a plan but it was basic.</li> <li>• I showed a limited number of steps I used to solve the problem.</li> <li>• I included unnecessary information.</li> </ul>	<ul style="list-style-type: none"> <li>• I wrote, drew, or created something, but it was not linked to the answer.</li> <li>• I wrote an answer, but it was not clear.</li> </ul>
<b>0</b>	I did not attempt to answer the problem.	I did not show a plan.	<ul style="list-style-type: none"> <li>• I did not explain my answer in writing.</li> </ul>