

Source: How to Use and Create Rubrics
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What Are Rubrics and Why Are They Important?

The word *rubric* comes from the Latin word for *red*. The online Merriam-Webster dictionary lists the first meaning of *rubric* as “an authoritative rule” and the fourth meaning as “a guide listing specific criteria for grading or scoring academic papers, projects, or tests.” How did the name for a color come to mean a rule or guide? At least as far back as the Middle Ages, the rules for the conduct of liturgical services—as opposed to the actual spoken words of the liturgy—were often printed in red, so the rules were “the red things” on the page.

In this book, I will show that rubrics for classroom use are both *more* and *less* than the dictionary definition suggests. They are more because rubrics are good for much more than just grading or scoring. They are less because not just any set of rules or guides for student work are rubrics. This first chapter lays out some basic concepts about rubrics. Chapter 2 illustrates common misconceptions about rubrics, and Chapter 3 describes how to write or select effective rubrics.



SELF-REFLECTION

What is your current view of rubrics? Write down what you know about them and what experiences you have had using them. Save this reflection to compare with a similar reflection after you have read this book.

What is a rubric?

A rubric is a coherent set of criteria for students' work that includes descriptions of levels of performance quality on the criteria. Sounds simple enough, right? Unfortunately, this definition of *rubric* is rarely demonstrated in practice. The Internet, for example, offers many rubrics that do not, in fact, describe performance. I think I know why that might be and will explain that in Chapter 2, but for now let's start with the positive. It should be clear from the definition that rubrics have two major aspects: *coherent sets of criteria* and *descriptions of levels of performance* for these criteria.

The genius of rubrics is that they are descriptive and not evaluative. Of course, rubrics can be used to evaluate, but the operating principle is you match the performance to the description rather than “judge” it. Thus rubrics are as good or bad as the criteria selected and the descriptions of the levels of performance under each. Effective rubrics have appropriate criteria and well-written descriptions of performance.

What is the purpose of rubrics?

Like any other evaluation tool, rubrics are useful for certain purposes and not for others. *The main purpose of rubrics is to assess performances.* For some performances, you observe the student in the process of doing something, like using an electric drill or discussing an issue. For other performances, you observe the product that is the result of the student's work, like a finished bookshelf or a written report. Figure 1.1 lists some common kinds of school performances that can be assessed with rubrics. This list by no means covers every possible school performance. It is just meant to help you think of the types of performances you might assess with rubrics.

This list is not meant to suggest what your students *should* perform. State standards, curriculum goals, and instructional goals and objectives are the sources for what types of performances your students should be able to do. When the intended learning outcomes are best indicated by performances—things students would do, make, say, or write—then rubrics are the best way to assess them. Notice that the performances themselves are not learning outcomes. They are *indicators* of learning outcomes. Except in unusual cases, any one performance is just a sample of all the possible performances that would indicate an intended learning outcome. Chapters 2 and 3 cover this point in greater detail. For now, know that the purpose of the list in Figure 1.1 is to describe some of these performances, so you can recognize them as performances and as

suitable for using rubrics, when they are appropriate indicators of your goals for student learning.

About the only kinds of schoolwork that do not function well with rubrics are questions with right or wrong answers. Test items or oral questions in class that have one clear correct answer are best assessed as right or wrong. However, even test items that have degrees of quality of performance, where you want to observe how appropriately, how completely, or how well a question was answered, can be assessed with rubrics.

Rubrics give structure to observations. Matching your observations of a student's work to the descriptions in the rubric averts the rush to judgment that can occur in classroom evaluation situations. Instead of *judging* the performance, the rubric *describes* the performance. The resulting judgment of quality based on a rubric therefore also contains within it a description of performance that can be used for feedback and teaching. This is different from a judgment of quality from a score or a grade arrived at without a rubric. Judgments without descriptions stop the action in a classroom.

Figure 1.1 Types of Performances That Can Be Assessed with Rubrics

Type of Performance	Examples
Processes <ul style="list-style-type: none">• Physical skills• Use of equipment• Oral communication• Work habits	<ul style="list-style-type: none">• Playing a musical instrument• Doing a forward roll• Preparing a slide for the microscope• Making a speech to the class• Reading aloud• Conversing in a foreign language• Working independently
Products <ul style="list-style-type: none">• Constructed objects• Written essays, themes, reports, term papers• Other academic products that demonstrate understanding of concepts	<ul style="list-style-type: none">• Wooden bookshelf• Set of welds• Handmade apron• Watercolor painting• Laboratory report• Term paper on theatrical conventions in Shakespeare's day• Written analysis of the effects of the Marshall Plan• Model or diagram of a structure (atom, flower, planetary system, etc.)• Concept map

What are the advantages and disadvantages of different types of rubrics?

Rubrics are usually categorized by two different aspects of their composition. One is whether the rubric treats the criteria one at a time or together. The other is whether the rubric is general and could be used with a family of similar tasks or is task-specific and only applicable to one assessment. Figure 1.2 describes the different types of rubrics and the advantages and disadvantages of each.

Analytic and holistic rubrics

Analytic rubrics describe work on each criterion separately. *Holistic rubrics* describe the work by applying all the criteria at the same time and enabling an overall judgment about the quality of the work. The top panel of Figure 1.2 defines analytic and holistic rubrics and lists advantages and disadvantages for each.

For most classroom purposes, analytic rubrics are best. Focusing on the criteria one at a time is better for instruction and better for formative assessment because students can see what aspects of their work need what kind of attention. Focusing on the criteria one at a time is good for any summative assessment (grading) that will also be used to make decisions about the future—for example, decisions about how to follow up on a unit or decisions about how to teach something next year.

One classroom purpose for which holistic rubrics are better than analytic rubrics is the situation in which students will not see the results of a final summative assessment and you will not really use the information for anything except a grade. Some high school final examinations fall into this category. Grading with rubrics is faster when there is only one decision to make, rather than a separate decision for each criterion.

On balance, for most classroom purposes I recommend analytic rubrics. Therefore, most of the examples in this book will be analytic rubrics. Before we leave holistic rubrics, however, I want to reemphasize the important point that *all the criteria* are used in holistic rubrics. You consider them together, but you don't boil down the evaluation to the old "excellent-good-fair-poor" kind of thinking along one general "judgment" dimension. True holistic rubrics are still rubrics; that is, they are based on criteria for good work and on observation of how the work meets those criteria.

Figure 1.2 Advantages and Disadvantages of Different Types of Rubrics

Type of Rubric	Definition	Advantages	Disadvantages
Holistic or Analytic: One or Several Judgments?			
Analytic	<ul style="list-style-type: none"> Each criterion (dimension, trait) is evaluated separately. 	<ul style="list-style-type: none"> Gives diagnostic information to teacher. Gives formative feedback to students. Easier to link to instruction than holistic rubrics. Good for formative assessment; adaptable for summative assessment; if you need an overall score for grading, you can combine the scores. 	<ul style="list-style-type: none"> Takes more time to score than holistic rubrics. Takes more time to achieve inter-rater reliability than with holistic rubrics.
Holistic	<ul style="list-style-type: none"> All criteria (dimensions, traits) are evaluated simultaneously. 	<ul style="list-style-type: none"> Scoring is faster than with analytic rubrics. Requires less time to achieve inter-rater reliability. Good for summative assessment. 	<ul style="list-style-type: none"> Single overall score does not communicate information about what to do to improve. Not good for formative assessment.

continued

Figure 1.2 Advantages and Disadvantages of Different Types of Rubrics (*continued*)

Type of Rubric	Definition	Advantages	Disadvantages
Description of Performance: General or Task-Specific?			
General	<ul style="list-style-type: none"> Description of work gives characteristics that apply to a whole family of tasks (e.g., writing, problem solving). 	<ul style="list-style-type: none"> Can share with students, explicitly linking assessment and instruction. Reuse same rubrics with several tasks or assignments. Supports learning by helping students see "good work" as bigger than one task. Supports student self-evaluation. Students can help construct general rubrics. 	<ul style="list-style-type: none"> Lower reliability at first than with task-specific rubrics. Requires practice to apply well.
Task-Specific	<ul style="list-style-type: none"> Description of work refers to the specific content of a particular task (e.g., gives an answer, specifies a conclusion). 	<ul style="list-style-type: none"> Teachers sometimes say using these makes scoring "easier." Requires less time to achieve inter-rater reliability. 	<ul style="list-style-type: none"> Cannot share with students (would give away answers). Need to write new rubrics for each task. For open-ended tasks, good answers not listed in rubrics may be evaluated poorly.

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General and task-specific rubrics

General rubrics use criteria and descriptions of performance that *generalize* across (hence the name *general rubrics*), or can be used with, different tasks. The tasks all have to be instances of the same learning outcome—for example, writing or mathematics problem solving. The criteria point to aspects of the learning outcome and not to features of any one specific task (for example, criteria list characteristics of good problem solving and not features of the solution to a specific problem). The descriptions of performance are general, so students learn general qualities and not isolated, task-specific features (for example, the description might say all relevant information was used to solve the problem, not that the numbers of knives, forks, spoons, and guests were used to solve the problem). *Task-specific rubrics* are pretty well described by their name: They are rubrics that are specific to the performance task with which they are used. Task-specific rubrics contain the answers to a problem, or explain the reasoning students are supposed to use, or list facts and concepts students are supposed to mention. The bottom panel of Figure 1.2 defines general and task-specific rubrics and lists advantages and disadvantages for each.

Why use general rubrics? General rubrics have several advantages over task-specific rubrics. General rubrics

- Can be shared with students at the beginning of an assignment, to help them plan and monitor their own work.
- Can be used with many different tasks, focusing the students on the knowledge and skills they are developing over time.
- Describe student performance in terms that allow for many different paths to success.
- Focus the teacher on developing students' learning of skills instead of task completion.
- Do not need to be rewritten for every assignment.

Let's look more closely at the first two advantages.

Can be shared with students at the beginning of an assignment. General rubrics do not “give away answers” to questions. They do not contain any information that the students are supposed to be developing themselves. Instead, they contain descriptions like “Explanation of reasoning is clear and supported with appropriate details.” Descriptions like this focus students on what their learning target is supposed to be (for example, explaining reasoning clearly, with appropriate supporting details). They clarify for

students how to approach the assignment (for example, in solving the problem posed, I should make sure to explicitly focus on why I made the choices I did and be able to explain that). Therefore, over time general rubrics help students build up a concept of what it means to perform a skill well (for example, effective problem solving requires clear reasoning that I can explain and support).

Can be used with many different tasks. Because general rubrics focus students on the knowledge and skills they are learning rather than the particular task they are completing, they offer the best method I know for preventing the problem of “empty rubrics” that will be described in Chapter 2. Good general rubrics will, by definition, not be task directions in disguise, or counts of surface features, or evaluative rating scales.

Because general rubrics focus students on the knowledge and skills they are supposed to be acquiring, they can and should be used with any task that belongs to the whole domain of learning for those learning outcomes. Of course, you never have an opportunity to give students all of the potential tasks in a domain—you can’t ask them to write every possible essay about characterization, solve every possible problem involving slope, design experiments involving every possible chemical solvent, or describe every political takeover that was the result of a power vacuum.

These sets of tasks all indicate important knowledge and skills, however, and they develop over time and with practice. Essay writing, problem solving, experimental design, and the analysis of political systems are each important skills in their respective disciplines. If the rubrics are the same each time a student does the same kind of work, the student will learn general qualities of good essay writing, problem solving, and so on. If the rubrics are different each time the student does the same kind of work, the student will not have an opportunity to see past the specific essay or problem. The general approach encourages students to think about building up general knowledge and skills rather than thinking about school learning in terms of getting individual assignments done.

Why use task-specific rubrics? Task-specific rubrics function as “scoring directions” for the person who is grading the work. Because they detail the elements to look for in a student’s answer to a particular task, scoring students’ responses with task-specific rubrics is lower-inference work than scoring students’ responses with general rubrics. For this reason, it is faster to train raters to reach acceptable levels of scoring reliability using task-specific rubrics for large-scale assessment. Similarly, it is easier for teachers to apply task-specific rubrics consistently with a minimum of practice. General rubrics take longer to learn to apply well.

However, the reliability advantage is temporary (one can learn to apply general rubrics well), and it comes with a big downside. Obviously, task-specific rubrics are useful only for scoring. If students can't see the rubrics ahead of time, you can't share them with students, and therefore task-specific rubrics are not useful for formative assessment. That in itself is one good reason not to use them except for special purposes. Task-specific rubrics do not take advantage of the most powerful aspects of rubrics—their usefulness in helping students to conceptualize their learning targets and to monitor their own progress.

Why are rubrics important?

Rubrics are important because they clarify for students the qualities their work should have. This point is often expressed in terms of students understanding the learning target and criteria for success. For this reason, rubrics help teachers teach, they help coordinate instruction and assessment, and they help students learn.

Rubrics help teachers teach

To write or select rubrics, teachers need to focus on the criteria by which learning will be assessed. This focus on what you intend students to *learn* rather than what you intend to *teach* actually helps improve instruction. The common approach of “teaching things,” as in “I taught the American Revolution” or “I taught factoring quadratic equations,” is clear on content but not so clear on outcomes. Without clarity on outcomes, it's hard to know how much of various aspects of the content to teach. Rubrics help with clarity of both content and outcomes.

Really good rubrics help teachers avoid confusing the task or activity with the learning goal, and therefore confusing completion of the task with learning. Rubrics help keep teachers focused on criteria, not tasks. I have already discussed this point in the section about selecting criteria. Focusing rubrics on *learning* and not on *tasks* is the most important concept in this book. I will return to it over and over. It seems to be a difficult concept—or probably a more accurate statement is that focusing on tasks is so easy and so seductive that it becomes the path many busy teachers take. Penny-wise and pound-foolish, such an approach saves time in the short run by sacrificing learning in the long run.

Rubrics help coordinate instruction and assessment

Most rubrics should be designed for repeated use, over time, on several tasks. Students are given a rubric at the beginning of a unit of instruction or an episode of work. They tackle the work, receive feedback, practice, revise or do another task, continue to practice, and ultimately receive a grade—all using the same rubric as their description of the criteria and the quality levels that will demonstrate learning. This path to learning is much more cohesive than a string of assignments with related but different criteria.

Rubrics help students learn

The criteria and performance-level descriptions in rubrics help students understand what the desired performance is and what it looks like. Effective rubrics show students how they will know to what extent their performance passes muster on each criterion of importance, and if used formatively can also show students what their next steps should be to enhance the quality of their performance. This claim is backed by research at all grade levels and in different disciplines.

Several studies of student-generated criteria demonstrate that students can participate in defining and describing the qualities their work should have. Nancy Harris and Laura Kuehn (Higgins, Harris, & Kuehn, 1994) did research in their own team-taught classroom to see what sorts of criteria primary school students could generate for a “good project.” They found that their students, in grades 1 and 2, were able to define criteria for group projects. At the beginning of the year, most of the criteria were about process (for example, the group members getting along with each other). In December, students were able to view examples of projects, and with continued brainstorming and discussion they began to see the importance of substantive criteria (for example, the information contained in the project). By the end of the year, about half the criteria students chose were about process and half were about product. This study shows us that students need to learn how to focus on learning—and, more important, that they can begin to do this as early as 1st grade.

Andrade, Du, and Wang (2008) investigated the effects of having 3rd and 4th graders read a model written assignment, generate their own list of criteria, and use rubrics to self-assess the quality of the written stories and essays they then produced. A comparison group brainstormed criteria and self-assessed their drafts but did not use the rubric. Controlling for previous writing ability, the group that used the rubrics for self-assessment wrote better overall, and specifically in the areas of ideas, organization, voice, and word choice. There were no differences between the groups in the areas of

sentences and conventions, presumably areas of much previous drill for all young writers. Andrade, Du, and Mycek (2010) replicated these findings with students in 5th, 6th, and 7th grade, except that the rubric group's writing was evaluated as having higher quality on all six criteria.

Ross, Hoagaboam-Gray, and Rolheiser (2002) taught 5th and 6th grade students self-evaluation skills in mathematics, also using a method based on criteria. Their self-evaluation instruction involved four strategies: involving students in defining criteria, teaching them how to apply the criteria, giving them feedback on these self-evaluations against criteria, and helping them develop action plans based on the self-evaluations. Controlling for previous problem-solving ability, students who self-assessed using criteria outscored a comparison group at solving mathematics problems.

Ross and Starling (2008) used the same four-component self-assessment training, based on criteria, with secondary students in a 9th grade geography class. Students were learning to solve geography problems using global information systems (GIS) software, so the learning goals were about both accurate use of the software and applying it to real-world geography problems, including being able to explain their problem-solving strategies. Controlling for pretest computer self-efficacy (known to be important in technology learning), the treatment group outscored a comparison group on three different measures: production of a map using the software, a report explaining their problem-solving strategies, and an exam measuring knowledge of the mapping program. The largest difference was for the problem-solving explanations.

Hafner and Hafner (2003) investigated college biology students' use of rubrics for peer assessment and teacher assessment of a collaborative oral presentation. There were five criteria: organization and research, persuasiveness and logic of argument, collaboration, delivery and grammar, and creativity and originality. Originally the rubric was developed and then modified with discussion and involvement of students. For the study, the same rubric was used for a required course assignment three years in a row. The instructors were interested in finding out whether the information students gained from peer evaluation was accurate, whether it matched teacher input, and whether this accuracy was consistent across different years and classes. The short answer was yes. Students were able to accurately



SELF-REFLECTION

What evidence would it take to convince you that using rubrics with learning-based criteria in your classroom would enhance learning of content outcomes and improve students' learning skills as well? How can you get that evidence in your own classroom?

give feedback to their peers, their information matched that of their instructor, and this was the case for each class.

Summing up

This chapter has defined rubrics in terms of their two main components: criteria and descriptions of levels of performance. The main point about criteria is that they should be about learning outcomes, not aspects of the task itself. The main point about descriptions of levels of performance is that they should be descriptions, not evaluative statements. The “evaluation” aspect of assessment is accomplished by matching student work with the description, not by making immediate judgments. Finally, the chapter has presented some evidence that using this kind of rubric helps teachers teach and students learn, and it has invited you to pursue your own evidence, in your specific classroom and school context.