# [Best Practices In Undergraduate Teaching and Learning](http://prtl.uhcl.edu/elearning/thecb.php)

<http://prtl.uhcl.edu/elearning/thecb>

10. Rubrics <http://prtl.uhcl.edu/elearning/thecb/rubrics>

11. Assessment and Evaluation <http://prtl.uhcl.edu/elearning/thecb/assessment-evaluation>

Rubrics are methods for communicating expectation to students. Research shows a correlation between use of rubrics and evidence of effectiveness in K-12, undergraduate and graduate course assignments. Rubrics can be used as guidelines for research papers, group projects, completing and evaluating assignments, effective participation in a discussion and so on.

### Objectives

* At the end of this module, you will be able to do the following;
* Identify the essential components of rubric
* List the value of rubric for instructors and students
* Identify different types of rubrics with their characteristics
* Apply steps to create a rubric from scratch or use the existing rubrics for modification Understand rubrics from the K-12 perspective

### Introduction to the Concept of a Rubric

A rubric for chocolate chip cookies? Examine the concept of a rubric through this interesting video which was posted on YouTube and created by Creative Commons (Attribution-Noncommercial-Share Alike.)

A commonly accepted definition of a rubric is a document that articulates the expectations for an assignment by listing the criteria and laying out the relative levels for performance evaluation (Andrade & Du, 2005).
Most rubrics are composed of three essential components: evaluation criteria, scoring strategy, and quality definitions (Figure 1.) (Reddy, 2007).

* **Evaluation Criteria**: A breakdown of the skills/knowledge that the students must try to achieve (dimensions) through the completion of the assignment. For example, the criteria for an oral presentation could be include “Organization,” “Communication,” “Use of visual”and“ Presentation skills.”
* **Scoring Strategy:** Various scale levels of performance evaluation based solely on the quality definitions. Some instructors use the labels to describe the scale level of performance, such as “Excellent,” ”Competent,” and “Needs Work.” Others use numbers (1, 2, 3) or grades (A, B, C).
* **Quality Definitions**: A detailed explanation of what a student must do to demonstrate an evaluation criterion for specific level of performance. These definitions are also called “descriptors.”



Figure1. The framework of a generic rubric with the three essential components

### Value of Rubrics

Some instructors wonder if they need a rubric for grading assignments. If you have experienced at least one of the following signs, as noted in “Introduction to Rubrics” by Steven and Levi (2005), the use of rubric is suitable for you.

* You feel you take much too long to grade all your students’ assignments.
* You have graded all your papers and worry that the scores from the last ones are slightly different from those from the first.
* You work with colleagues and collaborate on designing the same assignments for program courses, yet you wonder if your grading scales are different.
* You’ve sometimes been disappointed by whole assignments because all or most of your class turned out to be unaware of academic expectations so basic that you neglected to mention them (such as the need for citations or page numbers).

Rubrics are popular with both students and instructors because they are a means of communicating expectations for an assignment, providing focused feedback on works in progress, and grading final products. They are an effective tool in the teaching and learning process.

Both students and instructors can benefit from using rubrics. Not only will rubrics enhance the learning experience for both, but also it makes the entire process more efficient, thereby allowing for more time for learning inside and outside the classroom. The bullet points below features the advantages of rubrics for students and instructors in more detail, and the possible synergies that may develop if implemented.

### How Do Rubrics Facilitate Student Learning?

* Increase and enhance the learning experience through better and more timely feedback
* Increase motivation to reach those higher standards because of clear expectations
* Provide an easier way to monitor own work, which in turn increases metacognition
* Enables the practice of organizational skills
* Improves communication with tutors, writing center, peers when additional help is needed

### How Do Rubrics Improve Instructor Teaching?

* Provide more consistency and efficiency in grading since ambiguity is mitigated through clearly defined quality definitions
* Decreases the number of student questions because of the greater clarity in the assignments
* Enables instructors to quickly and accurately pinpoint students when they are troubled with an assignment and refine instructors’ teaching skills (Stevens and Levi, 2005)

### How Should Rubrics Be Used?

* Either include the rubric as a part of assignment information or hand it out with the assignment itself.
* Return the graded rubric with the student’s assignment as constructive feedback.
* Use the results of the graded rubric to improve your instruction.

## Types of Rubrics

In general, two types of rubrics are used by instructors: holistic and analytic.  With the holistic rubric, the instructors assess the student’s work as a whole (support broader judgments). With the analytic rubric, the instructors assess students work based on the components of a finish product (similar to a checklist).

## Holistic Rubric

A holistic rubric assigns a level of performance by assessing the assignment as a whole and often returns only one grade. Although the various evaluation criteria could be listed, the quality definitions are often brief, if there at all. Holistic rubrics are often used when the number of evaluation criteria is not relatively large and when quick judgments are needed. Also, there may be assignments where a certain evaluation criterion is dependent upon another criterion. For example, a person’s communication often can be heavily influenced by the use of visual aids. Figure 1 displays the generic framework of a holistic rubric for the fiction writing content. More examples of holistic rubrics for various disciplines can be found under the [Examples of Rubrics](http://prtl.uhcl.edu/elearning/thecb/rubrics/example-rubrics.cshtml).

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| **Points** | **If . . . .**  |
| **5** | The plot, setting, and characters are developed fully and organized well. The who, what, where, when, and why are explained using interesting language and sufficient detail.  |
| **4** | Most parts of the story mentioned in a score of 5 above are developed and organized well. A couple of aspects may need to be more fully or more interestingly developed  |
| **3** | Some aspects of the story are developed and organized well, but not as much detail or organization is expressed as in a score of 4.  |
| **2** | A few parts of the story are developed somewhat. Organization and language usage need improvement.  |
| **1** | Parts of the story are addressed without attention to detail or organization. |

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| Figure 1. Holistic Rubric adapted from sample rubric in the TeacherVision website. |

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Holistic rubrics are good for instructors that want to make a quick judgment that carries little weight in evaluation and/or for evaluating performance based on independent criterion. Types of assignments that are good for this are journal entries and simple homework problems.

## Analytic Rubric

An analytic rubric assigns a level of performance by assessing the assignment using segmentation, often returning one grade for each of the segments. Each evaluation criterion has various levels of performance evaluations that are then detailed with the quality definitions that much be accomplished to obtain that specific level. The structure of an analytic rubric consists of a grid with the criterion for a student product listed in the leftmost column and with levels of performance listed across the top row. The cells within the center of the rubric may or may not contain the quality descriptions for a specific level of performance in that evaluation criterion. When scoring with an analytic rubric, each of the evaluation criteria is scored individually.  Figure 2 displays a generic layout of an analytic rubric for the fiction writing content. More examples of holistic rubrics for various disciplines can be found under the: [Examples of Rubrics](http://prtl.uhcl.edu/elearning/thecb/rubrics/example-rubrics.cshtml).

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| **Criteria** | **4** | **3** | **2** | **1** |
| PLOT: "What" and "Why" | Both plot parts are fully developed.  | One of the plot parts is fully developed and the less developed part is at least addressed.  | Both plot parts are addressed but not fully developed.  | Neither plot parts are fully developed.  |
| SETTING: "When" and "Where" | Both setting parts are fully developed.  | One of the setting parts is fully developed and the less developed part is at least addressed.  | Both setting parts of the story are addressed but not fully developed.  | Neither setting parts are developed.  |
| CHARACTERS: "Who" described by behavior, appearance, personality, and character traits | The main characters are fully developed with much descriptive detail. The reader has a vivid image of the characters.  | The main characters are developed with some descriptive detail. The reader has a vague idea of the characters.  | The main characters are identified by name only.  | None of the characters are developed or named.  |

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Figure 2.: Analytic Rubric adapted from sample rubric in the TeacherVision website

Question: What type of assignments would be a good fit for analytic rubrics? (Mueller, 2002)

Answer: Analytic rubrics are good for instructors who want to make a detailed judgment that carries a significant weight in evaluation and for evaluating performance based on many criteria, many of which can be dependent on one another. Types of assignments that are good for this are essays and presentations.

## Creating Rubrics

Although creating a rubric may seem like a daunting task at first, knowing the right procedures will ease your frustration and hasten the process. At the end, you will be able to produce a final product that is both effective and concise.

You can create rubrics in many different ways: starting from scratch, adapting existing rubrics, and online rubric generators. When you plan to create rubrics from the scratch, apply the following general structure.

## Create Your Own

**Step 1:** Map out the learning objectives (criteria) that you want the students to achieve.

* Think about the purposes of the assignment. Let us say a student has to create and present a PowerPoint presentation. Some objectives could be the quality of Power Point, eye contact, gestures, and preparedness.
* Analyze which objectives are directly correlated with one another. Can these objectives be combined into just a generalized one? For example eye contact and gestures can be combined into the objective of nonverbal communication.

**Step 2:** Figure out a scale that you want to use (either numerical or qualitative, or a combination of both) and the range associated with it.

* Make the scale based on the grading scheme for the course. Experts advise to have a strict number or letter at each performance level rather than a range of 90-100 or A- to A+ as the latter could bring about ambiguity when grading.

**Question: How do I know what point values to assign to each performance criteria? (Mueller, 2002)**

Answer: Point values should be assigned based on the importance of the criteria for the assignment - the more important, the higher the point value. Another method could be to assign a uniform point value to each of the performance criteria at the beginning and including a scaling factor at the end. This method would prevent students from only focusing on the more important criterion when completing the assignment and provide a grading scheme that better reflects the expectation of the instructor.

**Step 3:** Construct a table that provides an intersection between the learning objectives and the performance scale.

Put the learning objectives down the left most column and put each level of the performance scale across the topmost row. This table will provide students with a clear and concise structure for each assignment.

**Question: Do I need to have the same number of levels of performance for reach criterion within a rubric? (Mueller, 2002)**

Answer: **No. Each criterion can have its own number of levels. It is encouraged though that if one criterion is heavily dependent on another criteria, that the number of levels of performance of each are the same.**

**Step 4:** Input characteristics (quality definitions) at each intersection to clarify the expectations.

* These quality definitions are similar to a check sheet. For example, the learning objective of preparedness at the performance level of A. Were there fewer than three awkward pauses during the presentation? Were there fewer than 10 filler words?  During the presentation was the student able to answer all the questions from their peers correctly? If the student was able to accomplish all these tasks, he/she gets that performance level for that objective.

**Question: Do I need to add quality definitions to each level of performance? (Mueller, 2002)**

Answer: **No. Quality definitions are recommended but not required. The objective of quality definitions is not to burden the user with more work but to clarify ambiguity between the criterion being evaluated and what is expected to receive a certain performance level**

## Adapt Existing Rubrics

Constructing rubrics from scratch is time consuming so you might prefer to use or adapt an existing rubric. In the next section [Examples of Rubrics](http://prtl.uhcl.edu/elearning/thecb/rubrics/example-rubrics.cshtml), you will find rubric banks that can be accessed online.  The steps for adapting existing rubrics are similar to the creating rubrics.  After listing the learning objectives for the specific assignment and finding a potential rubric, you examine the criteria of existing rubrics to determine if they reflect the skills you want. Then, check the levels of performance as well as the quality of description and make sure that they clearly describe the different levels of ability for each criterion.  You can revise, remove, and add criteria, levels of performance, and description as needed.

## Online Rubric Generator

Rather than using pen and paper to create rubrics, some instructors have used technology to create and share rubrics quickly and easily.  You can use one of the following software to create rubrics from the scratch or from the template provided with the program.

* RubiStar**:** <http://rubistar.4teachers.org/index.php> Registered users can save and edit rubrics online. Registration and use of the tool is free.
* Rubric Builder**:** [http://www.rubricbuilder.on.ca](http://landmark-project.com/classweb/tools/rubric_builder.php3)

For a small annual charge, you can start with a blank rubric, modify an existing one you have previously developed, or start from one of the templates.

Since creating a rubric has quite a bit of flexibility, the most important aspect is not the structure but the quality. As noted on DePaul University’s website, regardless of creating a rubric from scratch or modifying an existing one, you should ask these five questions in order to evaluate the quality of a rubric both before and after using the rubric.

1. Does the rubric relate to the outcome(s) being measured?
2. Does it cover important criteria for student performance?
3. Does the top end of the rubric reflect excellence?
4. Are the criteria and level of performance evaluations well defined?
5. Can the rubric be applied consistently by different scorers?

## Example Rubrics

Drafting a specific rubric for various assignments may be difficult if the criteria are ambiguous or if all the guidelines are not included. Check out these resources to help.

## Rubric Sites

**Assessment and Rubrics:** Technology expert, Kathy Schrock has selected a comprehensive list of rubrics for a variety of subject-specific and general areas. [Assessment and Rubrics](http://www.schrockguide.net/assessment-and-rubrics.html)

**Assessment Resources: Sample Rubrics:** This collection from the Association for the Assessment of Learning in Higher Education includes article reviews, case studies, class discussion, class participation, collaboration/teamwork/discussion, critical thinking, debate, lab reports, health care, problems solving/reasoning, etc. [Assessment Resources: Sample Rubrics](http://course1.winona.edu/shatfield/air/rubrics.htm)

**Authentic Tasks and Rubrics:** Dr. Jon Mueller, Professor of Psychology at North Central College, provides examples of rubrics ranging from elementary level to college/university level. [Authentic Tasks and Rubrics](http://jfmueller.faculty.noctrl.edu/toolbox/examples/authentictaskexamples.htm)

**Rubric Bank:** University of Hawaii Manoa has a collection of rubrics.  The collection includes lifelong learning, civic knowledge and engagement, collaboration, Teamwork, participation, critical thinking, integrative learning, etc. [Rubric Bank](http://manoa.hawaii.edu/assessment/resources/rubricbank.htm)

**Rubrics for Assessment:** University of Wisconsin–Stout has prepared a collection of rubrics for assessing cooperative learning, research process/ report, PowerPoint/oral presentation, Podcast, webpage/portfolios, multimedia, web page, game/simulations, and other web 2.0 projects.  [Rubrics for Assessment](http://www.uwstout.edu/soe/profdev/rubrics.cfm)

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| ****Rubric Examples**** |
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| **Holistic Rubrics**  | **Analytic** **Rubrics**  |
| [Creative Problem Solving](http://prtl.uhcl.edu/elearning/thecb/rubrics/files/holistic/creeative-probelm-solving.pdf) | [Art Project](http://www.zimmerworks.com/rubric.htm)  |
| [Critical Thinking](http://prtl.uhcl.edu/elearning/thecb/rubrics/files/holistic/critical-thinking.pdf) | [Biology Term Paper](http://prtl.uhcl.edu/elearning/thecb/rubrics/files/analytic/biology-term-paper.pdf)  |
| [Debate](http://prtl.uhcl.edu/elearning/thecb/rubrics/files/holistic/debate.pdf) | [Blog](http://www2.uwstout.edu/content/profdev/rubrics/blogrubric.html) |
| [Inquiry](http://prtl.uhcl.edu/elearning/thecb/rubrics/files/holistic/Inquiry.pdf) | [Business Strategy Analysis](http://prtl.uhcl.edu/elearning/thecb/rubrics/files/business-strategy-analysiss.pdf)  |
| [Leadership](http://prtl.uhcl.edu/elearning/thecb/rubrics/files/holistic/leadership.pdf) | [Career Portfolios](http://prtl.uhcl.edu/elearning/thecb/rubrics/files/career-form.pdf)  |
| [Oral Assessment](http://prtl.uhcl.edu/elearning/thecb/rubrics/files/holistic/oral-assessment.pdf)  | [Chemistry Project](http://prtl.uhcl.edu/elearning/thecb/rubrics/files/analytic/chemistry-project.pdf)  |
| [Group Participation](http://prtl.uhcl.edu/elearning/thecb/rubrics/files/holistic/participation.pdf) | [Collaboration](http://www.uno.edu/general-education/collaboration-rubric.aspx) |
| [Physics Assignment](http://prtl.uhcl.edu/elearning/thecb/rubrics/files/holistic/physics-assignments.pdf) | [Communication Skills](http://prtl.uhcl.edu/elearning/thecb/rubrics/files/communication-rubric.pdf)  |
| [Memo Assignment](http://prtl.uhcl.edu/elearning/thecb/rubrics/files/holistic/grading-aassignment.pdf)  | [Computer Programming](http://www.csulb.edu/colleges/coe/cecs/views/programs/undergrad/grade_prog.shtml) |
| [Reflection Paper](http://prtl.uhcl.edu/elearning/thecb/rubrics/files/holistic/reflection-paper.pdf)  | [Critical Thinking](http://prtl.uhcl.edu/elearning/thecb/rubrics/files/critical-thinking.pdf) |
| [Role Play](http://prtl.uhcl.edu/elearning/thecb/rubrics/files/holistic/role-play.pdf) | [EPortfolio (Digital Portfolio)](http://www2.uwstout.edu/content/profdev/rubrics/eportfoliorubric.html)  |
| [Scientific Content](http://prtl.uhcl.edu/elearning/thecb/rubrics/files/holistic/sceintific-content.pdf)  | [Group Participation](http://prtl.uhcl.edu/elearning/thecb/rubrics/files/analytic/group-participation-analytic.pdf)  |
| [Sociology Essay](http://prtl.uhcl.edu/elearning/thecb/rubrics/files/holistic/sociology-essay.pdf)  | [Math (NCTM) Standard](http://www.nctm.org/standards/)  |
| [Who Am I? Intermediate](http://prtl.uhcl.edu/elearning/thecb/rubrics/files/holistic/who-amI-holistic.pdf) | [Online Discussion Board](https://www2.uwstout.edu/content/profdev/rubrics/discussionrubric.html) |
| [Writing Portfolio](http://prtl.uhcl.edu/elearning/thecb/rubrics/files/holistic/writingportfolios.pdf)  | [Role Plays and Interviews](http://www.nrcal.org/uploads/4/9/1/6/49166235/analytic_rubric.carla.pdf)  |
| [Hawaii](http://manoa.hawaii.edu/assessment/resources/rubricbank.htm) | [Scientific Report](http://www.readwritethink.org/files/resources/lesson_images/lesson95/coop_rubric.pdf) |
|  | [Team Cooperation](http://academic.scranton.edu/department/assessment/ksom/team-cooperation-rubric.pdf)  |
|  | [Sociology Essay](http://prtl.uhcl.edu/elearning/thecb/rubrics/files/analytic/sociology-assignment-analytic.pdf)  |
|  | [Virtual Simulations and Serious Game](http://www2.uwstout.edu/content/profdev/rubrics/gamerubric.html)s  |
|  | [Who Am I? Intermediate](http://prtl.uhcl.edu/elearning/thecb/rubrics/files/analytic/who-amI-analytic.pdf) |
|  | [Writing Skills Inventory and Scoring Guide](http://prtl.uhcl.edu/elearning/thecb/rubrics/files/writing-skills-diepenbrock.pdf)  |

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* [Civic Engagement Value Rubric](http://prtl.uhcl.edu/elearning/thecb/rubrics/files/civic-engagement-rubric.pdf)
* [Creative Thinking Value Rubric](http://prtl.uhcl.edu/elearning/thecb/rubrics/files/creative-rubric.pdf)
* [Critical Thinking Value Rubric](http://prtl.uhcl.edu/elearning/thecb/rubrics/files/critical-thinking.pdf)
* [Ethical Reasoning Value Rubric](http://prtl.uhcl.edu/elearning/thecb/rubrics/files/ethical-ubric.pdf)
* [Information Literacy Value Rubric](http://prtl.uhcl.edu/elearning/thecb/rubrics/files/information-rubric.pdf)
* [Inquiry and Analysis Value Rubric](http://prtl.uhcl.edu/elearning/thecb/rubrics/files/inquiry-rubric.pdf)
* [Integrative Learning Value Rubric](http://prtl.uhcl.edu/elearning/thecb/rubrics/files/integrative-rubric.pdf)
* [Intercultural Knowledge and Competence Value Rubric](http://prtl.uhcl.edu/elearning/thecb/rubrics/files/intercultural-ubric.pdf)
* [Foundations and Skills for Lifelong Learning Value Rubric](http://prtl.uhcl.edu/elearning/thecb/rubrics/files/foundations-rubric.pdf)
* [Oral Communication Value Rubric](http://prtl.uhcl.edu/elearning/thecb/rubrics/files/oral-rubric.pdf)
* [Problem Solving Value Rubric](http://prtl.uhcl.edu/elearning/thecb/rubrics/files/problem-rubric.pdf)
* [Quantitative Literacy Value Rubric](http://prtl.uhcl.edu/elearning/thecb/rubrics/files/quantitative-rubric.pdf)
* [Reading Value Rubric](http://prtl.uhcl.edu/elearning/thecb/rubrics/files/reading-rubric.pdf)
* [Teamwork Value Rubric](http://prtl.uhcl.edu/elearning/thecb/rubrics/files/teamwork-rubric.pdf)
* [Written Communication Value Rubric](http://prtl.uhcl.edu/elearning/thecb/rubrics/files/written-rubric.pdf)