Design of Rubrics

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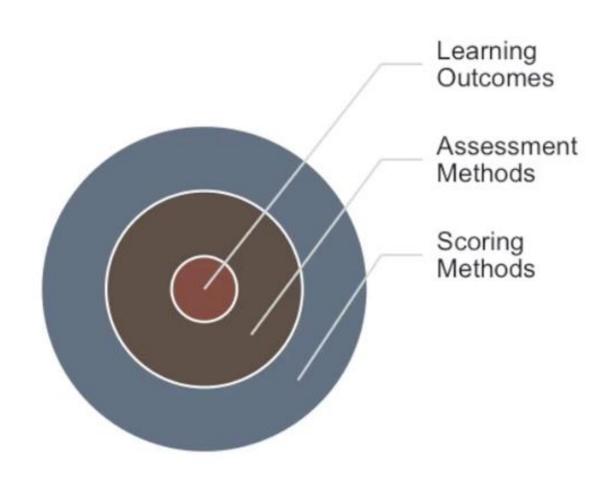
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Assessment Methods

Major Categories

- Selection and Supply
  - MCQ, Fill in the Blanks, Short Answer
  - Assign points based on correct answers
- Product
  - Essay, Paper, Report, Thesis
- Performance
  - Experiment, Presentation, Debate, Behaviours, Musical Performance
- Assign points based on a **Rubric** for performance and/or Product based testing

Learning Outcomes and Rubrics

What is a rubric ?

- Flexible tool used by an instructor to assess student work

- Systematic scoring guidelines to evaluate students' performance through the use of a detailed description of performance levels

- Outline some type of criteria for grading and describe how a student might meet that criteria

What can be assessed with Rubrics ?

Main purpose of rubrics is to assess the

- Learning outcomes that are skill-based

- Process of doing something in realistic settings
  - Physical skills, Use of equipment, Oral communication, Work habits

- Product that is the result of the student's work
  - Constructed projects, Written essays, themes, reports, term papers

- Teamwork and individual contribution to group tasks

Analytic Rubrics

- Most of the time, when instructors envision a rubric, this is probably what they're thinking of.
- An analytic **(descriptive)** rubric resembles a grid
- **three key features:** Criteria, Performance rating, Performance descriptions

	Excellent (10-8 points)	Good (7-4 points)	Needs Improvement (3-2 points)	Unsatisfactory (1-0 points)
Criteria #1				
Criteria #2		Performance Descriptions		
Criteria #3				
Criteria #4				

Analytic Rubrics

- **Criteria:**
  - actual expectations for the assignment, or
  - Standards intended to grade the assignment
  - Each of these items listed in the criteria portion of the Rubric
  - Each of the criteria is scored individually
- **Performance rating:**
  - how did the student perform for each criteria ?
  - a points value (OPTIONAL)
  - uses language like "excellent," "good," and "poor."
- **Performance descriptions:**
  - the bulkiest part of the rubric.
  - describe the traits corresponding with each criteria and performance rating
  - spell out how a student earns a particular performance rating for each criteria.

Example Analytic Rubric

Articulating Thoughts Through Written Communication—Final Paper

	Needs Improvement (1)	Developing (2)	Sufficient (3)	Above Average (4)
Clarity (Thesis supported by relevant information and ideas.)				
Organization (Sequencing of elements/ideas)				
Mechanics (Correctness of grammar and spelling)				

Example Analytic Rubric

Articulating Thoughts Through Written Communication—Final Paper

	Needs Improvement (1)	Developing (2)	Sufficient (3)	Above Average (4)
Clarity (Thesis supported by relevant information and ideas.)	The purpose of the student work is not well-defined. Central ideas are not focused to support the thesis. Thoughts appear disconnected.	The central purpose of the student work is identified. Ideas are generally focused in a way that supports the thesis.	The central purpose of the student work is clear and ideas are almost always focused in a way that supports the thesis. Relevant details illustrate the author's ideas.	The central purpose of the student work is clear and supporting ideas are always well-focused. Details are relevant, enrich the work.

Example Analytic Rubric

Articulating Thoughts Through Written Communication—Final Paper

	Needs Improvement (1)	Developing (2)	Sufficient (3)	Above Average (4)
Organization (Sequencing of elements/ideas)	Information and ideas are poorly sequenced (the author jumps around). The audience has difficulty following the thread of thought.	Information and ideas are presented in an order that the audience can follow with minimum difficulty.	Information and ideas are presented in a logical sequence which is followed by the reader with little or no difficulty.	Information and ideas are presented in a logical sequence which flows naturally and is engaging to the audience.

Example Analytic Rubric

Articulating Thoughts Through Written Communication—Final Paper

	Needs Improvement (1)	Developing (2)	Sufficient (3)	Above Average (4)
Mechanics (Correctness of grammar and spelling)	There are five or more misspellings and/or systematic grammatical errors per page or 8 or more in the entire document. The readability of the work is seriously hampered by errors.	There are no more than four misspellings and/or systematic grammatical errors per page or six or more in the entire document. Errors distract from the work.	There are no more than three misspellings and/or grammatical errors per page and no more than five in the entire document. The readability of the work is minimally interrupted by errors.	There are no more than two misspelled words or grammatical errors in the document.

Advantages of Analytic Rubrics

- Provide useful feedback on areas of strength and weakness.
- Provides judgment on each criterion
- Criterion can be weighted to reflect the relative importance of each dimension
- provide the instructor with the ability to grade objectively and consistently
- gives students clear ideas about how an assignment will be graded
- More useable data than holistic rubrics providing more information on what is lacking in the poorer performance

Disadvantages of Analytic Rubrics

- Takes more time to create and use than a holistic rubric.

- Unless each point for each criterion is well-defined evaluators may not arrive at the same score

- Because they are so detailed, it is possible that students may not take the time to read them

Case Study

- Design a Rubric to evaluate M Tech Seminar Presentation
- Link

Types of Rubrics

- Categorized by **two different aspects** of their composition
- whether the rubric treats the criteria one at a time or together.
  - Analytic Rubrics
  - Holistic Rubrics
- 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
  - Generic
  - Task Specific

Holistic Rubric

Grade	Description of expectations for that grade
A	
B	
C	
D	
E	

- A holistic rubric gives a "whole" picture description of what is expected for an assignment

- Matching an entire piece of student work to a single description on the scale

- what would an assignment that earned an A look like, versus one that earned a B? and so on

- a fairly general rubric, easy to use and create.

Example Holistic Rubric

Articulating thoughts through written communication

Grade	Description of expectation for that grade
Above Average	The audience is able to easily identify the focus of the work and is engaged by its clear focus and relevant details. Information is presented logically and naturally. There are no more than two mechanical errors or misspelled words to distract the reader.
Sufficient	The audience is easily able to identify the focus of the student work which is supported by relevant ideas and supporting details. Information is presented in a logical manner that is easily followed. There is minimal interruption to the work due to misspellings and/or mechanical errors.
Developing	The audience can identify the central purpose of the student work without little difficulty and supporting ideas are present and clear. The information is presented in an orderly fashion that can be followed with little difficulty. There are some misspellings and/or mechanical errors, but they do not seriously distract from the work.
Needs Improvement	The audience cannot clearly or easily identify the central ideas or purpose of the student work. Information is presented in a disorganized fashion causing the audience to have difficulty following the author's ideas. There are many misspellings and/or mechanical errors that negatively affect the audience's ability to read the work.

Example Holistic Rubric

A **Outstanding** (90-100)	Student created an original post that was highly <u>insightful</u> and which responded thoroughly to all parts of the prompt. The response effectively utilized a variety of evidence from the literary readings for the week, directly referencing the texts at least three times. Additionally, the student responded to peers' posts with a high degree of professionalism in interaction, grammar/mechanics, and spelling.
B **Very Good** (81-99)	Student created an original post that was insightful and responded to all or most parts of the prompt. The response utilized a variety of evidence from the text as well, though there may have been room for more and/or further explanation. Additionally, the student responded to peers' posts with a good degree of professionalism in interaction, grammar/mechanics, and spelling.
C **Average** 71-79	Student created an original post that was at times insightful, though lacking in substantial well-explained evidence and/or which was at times off-topic from the prompt. Responses to peers were attempted, though these responses were lacking in insightful observation and/or had errors/lapses in professional interactions, grammar/mechanics, and spelling.
D **Needs** **Improvement** 60-69	Student created an original post which did not effectively address the prompt and/or which was lacking in substantial evidence from the text. Responses to peers was incomplete or insubstantial with numerous errors/lapses in professional interaction, grammar/mechanics, and spelling.
F **Does Not Meet** **Expectations** 59 and below	Student created an original post which was too brief, did not respond to the prompt, and was lacking in substantial evidence from the text. Missing or overly brief responses to peers with errors/lapses in professionalism interaction, grammar/mechanics, and spelling.

https://rampages.us/facultyresources/using-rubrics/holistic-rubrics/

Advantages of Holistic Rubrics

- Quick way to provide an overall evaluation
  - Saves time in developing
  - Saves time by minimizing the number of decisions instructor make.

- Can be applied consistently by trained instructors increasing reliability.

Disadvantages of Holistic Rubrics

- Very general

- Does not provide specific feedback for improvement.

- When student work is at varying levels spanning the criteria points it can be difficult to select the single best description.

When to use Holistic Rubrics?

- There is no single correct answer/response to a task (e.g. creative work)
- The focus is on overall quality, proficiency, or understanding of a specific content or skills.
- The assessment is summative (e.g. at the end of the semester or major)
- Assessing significant numbers (e.g. 150 students portfolio)

Generic or Task-Specific Rubrics

- **Generic** –
  - contains criteria that are general across tasks and can be used for similar tasks or performances.
  - used across all communication tasks or problem solving tasks
  - Big picture approach
  - Element of subjectivity

- **Task specific**
  - Assesses a specific task
  - Focused approach
  - want to know whether students know particular facts, equations, methods, or procedures

Why Rubrics for Assessment ?

- **Transparency:** students can understand assignment expectations at a glance

- **Consistency:** same grading process for different sections

- **Establishing objectivity:** create the sense that an instructor is fair and unbiased

- **Efficiency:** streamline the process of grading and make grading more efficient

- **Self-assessment and peer-assessment:** allow students to self-assess / peer-assessment activities.

- **Track student improvement:**
  - use rubrics in conjunction with formative assessments
  - Encourage students to think critically by linking assignments with learning objectives

Rubrics vs. Checklists and Rating Scales

- Checklist or rating scale

- for simple assignments when creating rubric seems a daunting task

- lack the detailed performance descriptions of a rubric

Rubrics vs. Checklists and Rating Scales

- **Checklist**
  - a list of criteria along with a simple designation of yes/no
  - Useful: guidelines about expectations, quick way of providing grades

	Yes	No
Completed an initial post of 200 words. (10 points)		
Responded to at least three classmates. (5 points)		
Utilized at least three quotations from the texts. (15 points)		

Rubrics vs. Checklists and Rating Scales

- Rating Scale:
  - like a less detailed analytic rubric
  - useful for formative assessments but can be tricky for more significant assignments

	Below Expectation	Meets Expectation	Exceeds Expectation
Citations		X	

Rubrics vs. Checklists and Rating Scales

	Below Expectation	Meets Expectation	Exceeds Expectation
Citations	The paper fails to cite sources using a consistent, formal, citation style	Most follow a consistent style, although some contain minor errors or incomplete information	All citations are complete, accurate, and consistently conform to a formal style

How to Create a Rubric ?

- Step 1: Decide the purpose

- Step 2: Choose a format

- Step 3: Look at models

- Step 4: Define your criteria

- Step 5: Define your grading scale and performance rating

- Step 6: Write your rubric

How to Create a Rubric ?

Step 1 Decide the purpose

- ➢ Decide for what purpose you are creating a rubric

- ➢ general rubric or a task-specific rubric

How to Create a Rubric ?

Step 2 Choose a format

➢ Decide which type of rubric is best for your purposes

➢ Advantages and disadvantages to each of the rubrics

How to Create a Rubric ?

Step 3 Look at models

- ➢ Look at models of the type of rubric you want to create

- ➢ Helpful if you have not created a rubric before or are creating a rubric for a new kind of assignment

- ➢ Ask colleagues if they have developed rubrics for similar assignments or adapt rubrics that are available online.

- ➢ For example, the <u>AACU (American Association of Colleges and Universities)</u> has rubrics for topics such as written and oral communication, critical thinking, Team Work and creative thinking.

How to Create a Rubric ?

Step 4 Define your criteria

- ➢ What is the student expected to produce? What are the common expectations across instructors?
- ➢ Determine the various skills and abilities = key criteria
- ➢ Make a list of criteria. If there is overlap, combine to be more clear and concise
- ➢ Criterion should be measurable
  - ➢ Avoid using subjective or vague criteria such as "interesting" or "creative." Instead, outline objective indicators that would fall under these categories.
- ➢ Consider what student learning outcomes will be assessed
  - ➢ Several of the department/program outcomes
- ➢ The criteria become the leftmost column of the grid

How to Create a Rubric ?

Step 5: Grading Scale and Performance Rating

- ➢ How many levels of achievement possible given the expectations ?

- ➢ Decide what scale you will provide to rate student performance

- ➢ Levels can be numerical categories but more frequently are descriptions

- ➢ number of columns is determined and the levels of achievement are listed across the top row

- ➢ Will you assign points? how do the points values equate to your performance descriptors?

How to Create a Rubric ?

Step 5: Grading Scale and Performance Rating

Common examples of achievement levels include:

➢ Numbers from 1 to 4 through 6.

➢ Short Descriptions:

  ➢ Unacceptable...Marginal...Proficient...Distinguished

  ➢ Beginning...Developing...Competent...Exemplary

  ➢ Novice...Intermediate...Proficient...Distinguished...Master

  ➢ Needs Improvement...Satisfactory...Good...Accomplished

  ➢ Poor...Minimal...Sufficient...Above Average...Excellent

  ➢ Unacceptable...Emerging...Minimally Acceptable...Acceptable...Accomplished...Exemplary

How to Create a Rubric ?

Step 6: Write your rubric

- ➢ Create descriptions for the criteria along each level of achievement

- ➢ Begin by describing the highest level of performance

- ➢ Words that indicate various levels of performance

    - ➢ Concepts: Presence to absence, Complete to incomplete, Many to some to none

- ➢ Using specific language for the descriptors of performance levels

    - ➢ increases the chances that multiple faculty members will apply the rubric in a similar manner

- ➢ Use sample papers of high, mid and low performers to help

- ➢ Discuss with a colleague/student to check for clarity

- ➢ Try out on a few students with several raters

Evaluating Rubrics

- Evaluate the rubric each time it is used to ensure it matches instructional goals and objectives
- Determine if it is the most appropriate tool for the assessment task
- Questions to ask when evaluating
  - Does the rubric relate to the outcome(s) being measured?
  - Does it cover important criteria for student performance?
  - Does the top end of the rubric reflect excellence?
  - Are the criteria and scales well-defined?
  - Can the rubric be applied consistently by different scorers?

Using Rubrics Effectively

- Rubrics are prepared and available for students well **before they begin work** on tasks
  - Contributes to their learning as they complete the work
- **Train students to use** your rubric and solicit feedback
  - This will help you judge whether the rubric is clear to them and will identify any weaknesses.
- Practice **using rubrics in class**. Have **students assess** their own, their peers' and others' work.
- Involve students in developing assessment rubrics.
  - Encourages them to be independent and to manage their own learning.
- Frame your assessment **feedback** to students **in the terms laid out in the rubric**, so that they can clearly **see** where they have **succeeded or performed less** well in the task.

Use Technology

- Learning management systems (e.g. Google Classroom, Moodle) often allow the use of rubrics in assessment, including peer and self-assessment.

- GradeMark (part of the Turnitin suite of tools) provides a rubric function for online marking

- RubiStar helps you to develop your rubric based on templates.

- A free online tool, iRubric, allows you to create, adapt and share rubrics online.

Conclusion

- A Flexible Tool

- Objective and Consistent Assessment

- Clarity of Expectations

- Feedback for Improvement

- Review Rubric Periodically

- Use Technology

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Thank You