

How to write a great rubric

We must distinguish 'deficit' as opposed to 'developmental' thinking



Introduction

In educational assessment, we've seen a recent push to use rubrics. However, most rubrics repeat the problems of previous assessment methods and don't help teachers improve student learning. This article discusses the benefits of using rubrics, a better way to structure and write those rubrics, and examines typical challenges with their use and how these can be minimised.

Why use rubrics?

We must distinguish 'deficit' as opposed to 'developmental' thinking. Deficit model thinking compares a learner against age-based or normative standards, to see what gaps exist between their current level and an expected level. Assessment in this model is

designed to find out what a student doesn't know, or can't do, in order to try and remedy it.

The developmental model sees all learners simply on a path of development. It sees assessment as a tool to aid teaching (Griffin, Care, 2009). Rubrics can determine where a student is in their development of a skill. Once this is known, instruction can be targeted at this level. Thus, rubrics help determine the 'zone of proximal development' (Vygotsky, 1965), or the 'goldilocks zone' – where instruction is most effective.

Rubrics also make it clear to the learner what is required of them and what to focus on next. Once assessed, a learner can easily see what they're capable of, and what the next step in their learning should be.

- **e-Shortcuts** – Wisdom for successful school leadership and management
- **e-Leading** – Management strategies for school leaders
- **e-Technology** – Technology in the classroom
- **e-Early Learning** – Thinking on early learning

Figure 1: Rubric template

↑	Highest criterion	Highest criterion	Highest criterion	Highest criterion
	Lowest criterion	Lowest criterion	Lowest criterion	Lowest criterion
	Skill 1	Skill 2	Skill 3	Skill 4

How to interpret: The highlighted box shows your current skill or understanding. You have also shown everything in the boxes below the highlighted box. To improve, try and show the skill or understanding in the next box up

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They also show parents and other stakeholders what a student can *do*, rather than how they compare to other students. This kind of information has proved invaluable in countries where standards-based assessment is used (NZQA, 2001).

Finally, teachers benefit from productive conversations about learning that stem from writing and using rubrics. Without rubrics, teachers can be unsure if others are interpreting the curriculum in the same way. It also makes moderating (or cross-marking) student work easier. By clarifying the meaning of each criterion on a rubric, teachers can come to a shared understanding of the domain of knowledge of a particular skill.

Rubric structure

In this template (Figure 1), each skill has its own column, and each criterion (what is written in each box) describes levels of higher quality or difficulty. The template just uses an arrow showing increasing quality because labelling the levels is counterproductive.

The description of the skills along the bottom row should be written in active language. So, for example, write “has content knowledge” instead of “content”; write “produces bibliography” instead of “bibliography”. This helps the learner know what they have to *do* to achieve.

The included interpretation statement helps people understand what it means when boxes are highlighted.

Ideally, there should only be three or four levels. Any more makes it too difficult to assess, as the levels can end up being too finely nuanced to make effective judgements straightforward.

The lowest quality criteria should be something that every student in the class can do. The top quality criteria should be something that is difficult even for the strongest student in the class. It can be considered a ‘stretch target’. The middle two criteria should describe progressively more difficult performances – it isn’t a problem if some of the leaps

Figure 2: Rubric with examples for geography assignment

<p>Develops new ideas about threats to rainforests EXAMPLE: The Amazon is being cut down because South American governments have relied for too long on primary production. If these governments had developed industry and service sector employment for their population, there would be less people seeking out new land by cutting down the rainforest.</p>
<p>Analyses the threats to rainforests EXAMPLE: The deforestation in the Amazon is a problem because the soil in the Amazon is low quality. This means that once the trees are cut down, it is hard to grow other things. This results in farmers having to cut down even more rainforest to get more farmland.</p>
<p>Describes facts about and threats to rainforests EXAMPLE: The Amazon rainforest is threatened by deforestation from slash and burn farming practices by Brazilian and other South American people.</p>
<p>Lists information about rainforests EXAMPLE: The Amazon rainforest is being cut down.</p>
<p>Knows content</p>

between the criteria seem large.

It is best to write rubrics in teams of experienced teachers. It is beneficial to have a set of student work so you can see what the different levels might look like. It is also useful to have some learning taxonomies accessible when trying to write the quality criteria. You could use Bloom’s or SOLO for knowledge based rubrics, Dreyfus for skill or Krathwohl for attitude.

It is a good idea to write a rubric before you write the assessment task. That way you know what you want students to achieve and can design appropriate ways of checking how they’re progressing, in line with ‘backwards design’ principles (Wiggins, McTighe, 2005). It is helpful to show students the rubric at the start of the unit, so they can begin teaching the skills. It can also be a good idea to develop a ‘rubric with examples’, where actual examples of what it might look like in a student’s work are shown within the rubric itself, as in Figure 2.

Figure 3: Artefact study rubric

↑	Asks specific questions	Gives more than one explanation for origin and purpose of artefact	Events listed on timeline are all relevant to artefact	Uses independent research to back up evidence from artefact
	Asks open-ended questions	Uses evidence from artefact to suggest origin and purpose	Lists events correctly on a timeline, using historical conventions	Uses evidence from artefact to suggest civilisation
	Lists questions	Lists origin and purpose	Lists events on a timeline	Lists civilisation
Skill	Asks historical questions	Analyses origin and purpose of artefact	Arranges events in chronological order	Discusses which civilisation artefact is from

Figure 4: Rubric with conversion to percentage

↑	Highest level "stretch target"													
	High level		High level		High level		High level							
	Medium level		Medium level		Medium level		Medium level							
	Lowest level		Lowest level		Lowest level		Lowest level							
Skill	Skill A		Skill B		Skill C		Skill D							
Rubric count	0-3	4	5	6	7	8	9	10	11	12	13	14	15	16
%	40%	45%	50%	55%	60%	65%	70%	75%	80%	85%	90%	93%	97%	100%

As with the skill descriptions, all criteria should be written in active language, to assist learners to understand what they need to do

Writing quality criteria

Melbourne University's Assessment Research Centre has developed guidelines for writing quality criteria (Griffin, Robertson, 2014). The three most important are explained below. All are significant for writing good rubrics, but due to space constraints these cannot all be discussed at length here. This site shows the full set of guidelines.

As with the skill descriptions, all criteria should be written in active language, to assist learners to understand what they need to do. The three most important guidelines are:

- Criteria should describe developmental learning, not simply count things, or use words that amount to counting (such as 'some', 'many' or 'most')
- Merely counting things in a rubric promotes compliance rather than progress. For example, if a spelling rubric rewarded students for the number of correctly spelled words, students could simply use less imaginative vocabulary.
- Criteria should avoid ambiguous language like 'adequate', 'sufficient', 'suitable'.
- A major benefit of rubrics is to describe the domain of knowledge or skill in terms everyone can understand. Using ambiguous language allows the assessor to revert back to

subjective decision making which isn't transparent to the learner. It also makes marking more inconsistent between teachers.

- Criteria should describe higher and higher levels of performance of a skill, not describe steps in a process (Griffin, Robertson, 2014).
- It isn't true that a learner who has completed more steps has necessarily done those tasks *better*. Each step in a process can be done to differing skills levels, so each step should have its own skill column.

Other guidelines state that quality criteria should:

- Describe higher and higher levels of performance
 - Only have one idea per column
 - Describe things that are observable
 - Be written in positive not negative language
 - Not carry weightings
 - Be written in language students can understand
- Figure 3 shows an example of a rubric that conforms to the guidelines.

Challenges

A major issue teachers have with rubrics is that it takes too long to write them. To start with, it does take longer to write a good rubric that follows the guidelines and structure discussed here. However, writing rubrics gets a lot quicker the more you write,

and in the end it saves time when marking. Rubrics contain information about what a student can do and what they need to do to improve so teachers don't need to write additional long comments about these things.

Often teachers won't agree about what should go on the rubric. This is a great opportunity for teachers to decide what they want to assess. Without a rubric, individual teachers all use hidden logic to determine what mark to give a student. This way, students are not kept in the dark, and assessment is more consistent.

If you find that students aren't doing things in the order your rubric shows, this means the hierarchy of difficulty is incorrect, and the rubric needs changing. This is common; when a rubric is first written, it is theoretical. Only after using it to assess students and revising it, is it empirically based.

A final issue concerns turning rubrics into percentages or grades, which most schools require. A rubric provides detailed information. To then reduce it to a number or letter seems counterproductive. In the long run, education systems need to think about why they require these summative results so often. In the short term, you could count the number of criteria a student has achieved, and convert this to a percentage. It is not advisable to translate 'rubric count' straight to a percentage, as the grade will come out too low. Figure 4 provides an example of a marked rubric translated to a percentage.

Summary

Rubrics are a great way to determine a student's current level of understanding or skill. This allows the learner to see where they need to go next, a crucial aspect of good feedback (Hattie, 2007). Teachers can use this information to target instruction where a student is ready to learn.

Because most rubrics don't adhere to good rubric writing guidelines, they've simply recreated the mistakes of previous assessment methods. Rubrics make marking quicker, provide direction for learners and let stakeholders (e.g. parents) know what a learner *can* do, not what they can't do or how they compare to others. If we rethink how we write rubrics and what we do with the information they give us, the benefits are substantial.

References

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I am always ready to learn although I do not always like being taught.

Winston Churchill

Change is the end result of all true learning.

Leo Buscaglia

Learning and innovation go hand in hand. The arrogance of success is to think that what you did yesterday will be sufficient for tomorrow.

William Pollard

The noblest pleasure is the joy of understanding.

Leonardo da Vinci

You got to be rigorous in your appraisal system. The biggest cowards are managers who don't let people know where they stand.

Jack Welch

When one cannot appraise out of one's own experience, the temptation to blunder is minimized, but even when one can, appraisal seems chiefly useful as appraisal of the appraiser.

Marianne Moore

I assess the power of a will by how much resistance, pain, torture it endures and knows how to turn to its advantage.

Friedrich Nietzsche

Losers live in the past. Winners learn from the past and enjoy working in the present toward the future.

Denis Waitley