



Self-Assessment Through Rubrics

Heidi Andrade

Rubrics can be a powerful self-assessment tool—if teachers disconnect them from grades and give students time and support to revise their work.

A key element of formative assessment is feedback. The trouble is, most teachers have difficulty finding time to give all students the feedback they need when they need it. Fortunately, students themselves can be excellent sources of feedback. Under the right conditions, student self-assessment can provide accurate, useful information to promote learning.

Assessment versus Evaluation

During self-assessment, students reflect on the quality of their work, judge the degree to which it reflects explicitly stated goals or criteria, and revise. Self-assessment is formative—students assess works in progress to find ways to improve their performance. Self-evaluation, in contrast, is summative—it involves students giving themselves a grade. Confusion between the two has led to these misconceptions about self-assessment that make many teachers hesitant to try it: (1) Students will just give themselves As, and (2) They won't revise their work anyway, so there's no point in taking time for self-assessment.

Can these misconceptions be true? Yes, sadly true—if the results of a self-assessment are counted toward a grade or students are not given time for and help with revision. If, on the other hand, students understand the value of self-assessment, are taught how to do it, share their teacher's understanding of quality (Sadler, 1989), and have the support needed to improve their work, they can accurately self-assess and effectively revise.

The differences between self-evaluation and self-assessment may seem subtle, but they are powerful in practice. When my colleagues and I asked students about their attitudes toward self-assessments they had done that did not count toward grades, the responses were positive (Andrade & Du, 2007). Students commented that self-assessment helped them feel prepared, improved the quality of their work, and gave them a better understanding of what they had achieved. Specific perceived benefits included improved ability to focus on key elements of an assignment, increased effectiveness in identifying strengths and weaknesses in their work, and higher motivation. Said one student,

Self-assessment ... just eases your mind about doing your papers and stuff; it doesn't make you so anxious, and you can actually work ahead a little bit.

Yet in another study, when the researchers asked students about self-evaluations they had done that counted for 5 percent of their grades, those students' attitudes were somewhat negative: They voiced concerns about fairness and the possibility of cheating by inflating self-evaluations (Ross, Rolheiser, & Hogaboam-Gray, 1998). Other research (Boud & Falchikov, 1989) has shown that students do tend to inflate self-evaluations when they will count toward formal grades. For these reasons, I subscribe to a purely formative notion of self-assessment as feedback *for oneself from oneself*.

Rubrics as Student Self-Assessment Tools

One way to support thoughtful self-assessment is to provide a rubric or create one with students. A rubric is a document that lists criteria and describes varying levels of quality, from excellent to poor, for a specific assignment (Andrade, 2000). Many teachers use rubrics for scoring student work, but rubrics can do much more. In the hands of students, a good rubric can orient learners to the concept of quality as defined by experts in a field, inform self- and peer assessment, and guide revision and improvement. Rubrics can be informative as well as evaluative.

Unfortunately, some rubrics define quality for an assignment too narrowly, leading teachers to worry that rubrics result in cookie-cutter products from students and limited feedback from teachers. If that is the case, the rubric in question is a bad one and should be shredded.

Popham (2006) contrasts a poor rubric description with an effective one. On a rubric to assess students' performance on a writing assignment about donating blood, in which one of the criteria is *organization*, a narrow, overly task-specific description of the highest level of performance might require that the piece "describe the importance of blood

giving, the steps in giving blood, the impact of 'Mad Cow' disease, and the reasons people cannot give blood too frequently." A more effective description of the highest level of organization might state that the piece "contains an introduction, a body, and a conclusion. The structure is appropriate for the task: for instance, an order-of-importance, logical, or chronological structure."

When carefully designed, perhaps collaboratively with students, good rubrics can provide students with important guidelines without constraining creativity and can be a boon to self-assessment. The process of rubric-referenced self-assessment involves three basic steps.

Setting Clear Expectations

The expectations for the task or performance should be clearly articulated by either the teacher, the students, or both. Because students become better acquainted with the task at hand when they are involved in thinking about what counts and how quality is defined, I often create all or part of my rubrics in class with students.

For example, in a recent study in English/language arts and social studies classes in grades 3 through 7 (Andrade, Du, & Wang, in press), I began by asking students to analyze an example of a relatively strong persuasive essay. After the class had thoroughly appraised the sample in terms of its strengths and weaknesses (something students tend to be amazingly good at), I asked them to list the qualities of a really good persuasive essay, drawing on their critique of the sample. If a class overlooked a quality that I thought was important, I added it to the list with an explanation. This activity generated a list of qualities—*clearly states the opinion; supports it with facts; makes sense; is convincing; has a good beginning, middle, and ending*; and so on—that provided the basis for the criteria on our rubric.

With my own classes for undergraduate and graduate students, I go on to ask students to combine related qualities into rubric-sized criteria: For instance, *clearly states opinion, supports it with facts, and is convincing* would become part of an *Ideas and Content* criterion. I create the rest of the rubric outside class, sketching out four levels of quality for each criterion. I show the rubric to the students, ask them for their questions and comments, and revise the rubric for clarity as needed. Only after I am confident that students understand and accept the rubric do I ask them to begin an assignment.

Conducting Self-Assessment

Students create rough or first attempts at their assignment, be it a story, word problem, lab report, baseball bat swing, or speech. They monitor their progress on the assignment by comparing their performances to the rubric. In my research on writing, I have had students in grades 3 through 8 use pencils in various colors to underline key phrases in the rubric, then underline or circle in their drafts the evidence of having met the standard articulated by each phrase. For example, students underlined *clearly states an opinion* in blue on their persuasive essay rubric and then underlined in blue the opinion they had stated in their persuasive essay drafts—if they could find it. If they discovered they had not met the standard, they wrote themselves a reminder to make improvements when they created their final drafts.

This procedure can take one or two class periods. Students working on a persuasive essay can look at global criteria like *ideas and content, organization, and voice* on one day and then self-assess more fine-grained criteria like *word choice, sentence fluency, and conventions* on another day.

Revising

Students use the feedback from their self-assessments to guide revision. For example, in the colored-pencil activity just described, we used orange pencils to look at sentence beginnings, which were part of the *sentence fluency* criterion. Students circled in orange the first word in each sentence in their essay and then counted up the number of times they used the most common sentence starters. If they had a word or phrase that appeared a lot (in the case of the persuasive essays, it was usually "I" as in "I think ... ") they made a note of this problem. In their next draft, they attempted to change the beginnings of some sentences to increase variety.

The revision step is crucial. Students are savvy, and they will not self-assess thoughtfully unless they know that their efforts can lead to opportunities to actually make improvements.

Self-Assessment Works

Although my students have told me that they thought the self-assessment I required was "a big pain" at first, their attitudes have usually become positive after they try it. They *have* to try it: I generally will not review or grade a piece of work that is not accompanied by a self-assessment. After experiencing rubric-referenced self-assessment, they tend to value it. In a study of my former undergraduates (Andrade & Du, 2007), students reported that they could self-assess effectively, that they were more likely to self-assess when they knew what their teachers expected, and that their self-assessments were typically followed by serious attempts to revise and improve their work.

The process of student self-assessment through rubrics can be enhanced with peer assessment and teacher feedback, of course. Just the three steps described here, however, have been associated with improvements in elementary and middle school students' writing (Andrade & Boulay, 2003; Andrade, Du, & Wang, 2007). In these and other studies (Ross, Rolheiser, & Hogaboam-Gray, 1999), students improved not just in mechanics, but also in their

ability to handle such sophisticated qualities as content, organization, and voice. Further, the improvements in the quality of student writing had practical significance. For instance, when the findings of the 2007 study by Andrade, Du, and Wang were translated into typical classroom grades, the average grade for the group that engaged in rubric-referenced self-assessment was a low *B* whereas the average grade for the comparison group was a high *C*.

Similar results have been found in mathematics. After teaching some teachers but not others to implement self-assessment in their 5th and 6th grade math classes, Ross, Hogaboam-Gray, and Rolheiser (2002) found that students in the treatment group outperformed students in the comparison group. Self-assessment has also been shown to be effective in social studies (Lewbel & Hibbard, 2001); science (White & Frederiksen, 1998); and even on external national examinations (MacDonald & Boud, 2003).

Self-assessment can be useful in any subject. If students produce it, they can assess it; and if they can assess it, they can improve it.

References

- Andrade, H. (2000). Using rubrics to promote thinking and learning. *Educational Leadership*, 57(5), 13–18.
- Andrade, H., & Boulay, B. (2003). Gender and the role of rubric-referenced self-assessment in learning to write. *Journal of Educational Research*, 97(1), 21–34.
- Andrade, H., & Du, Y. (2007). Student responses to criteria-referenced self-assessment. *Assessment and Evaluation in Higher Education*, 32(2), 159–181.
- Andrade, H., Du, Y., & Wang, X. (2007, April). *Putting rubrics to the test: A study of the effects of rubric-referenced self-assessment on students' writing*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.
- Andrade, H., Du, Y., & Wang, X. (in press). Putting rubrics to the test: The effect of a model, criteria generation, and rubric-referenced self-assessment on elementary school students' writing. *Educational Measurement: Issues and Practice*.
- Boud, D., & Falchikov, N. (1989). Quantitative studies of student self-assessment in higher education: A critical analysis of findings. *Higher Education*, 18, 529–549.
- Lewbel, S. R., & Hibbard, K. M. (2001). Are standards and true learning compatible? *Principal Leadership (High School Ed.)*, 1(5), 16–20.
- MacDonald, B., & Boud, D. (2003). The impact of self-assessment on achievement: The effects of self-assessment training on performance in external examinations. *Assessment in Education*, 10(2), 209–220.
- Popham, W. J. (2006). *Mastering assessment: A self-service system for educators*. New York: Routledge.
- Ross, J. A., Hogaboam-Gray, A., & Rolheiser, C. (2002). Student self-evaluation in grade 5–6 mathematics: Effects on problem-solving achievement. *Educational Assessment*, 8(1), 43–59.
- Ross, J. A., Rolheiser, C., & Hogaboam-Gray, A. (1998). Skills-training versus action research in-service: Impact on student attitudes to self-evaluation. *Teaching and Teacher Education*, 14(5), 463–477.
- Ross, J. A., Rolheiser, C., & Hogaboam-Gray, A. (1999). Effects of self-evaluation training on narrative writing. *Assessing Writing*, 6(1), 107–132.
- Sadler, D. R. (1989). Formative assessment and the design of instructional systems. *Instructional Science*, 18, 119–144.
- White, B. Y., & Frederiksen, J. R. (1998). Inquiry, modeling, and metacognition: Making science accessible to all students. *Cognition and Instruction*, 16(1), 3–118.

Heidi Andrade is Assistant Professor of Educational and Counseling Psychology at the University at Albany, State University of New York, 1400 Washington Ave., ED 233, Albany, NY 12222; 518-437-4422; handrade@uamail.albany.edu.

Copyright © 2007 by Association for Supervision and Curriculum Development