Chapter 5

SELF-ASSESSMENT AND LEARNING TO WRITE

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ABSTRACT

This chapter reviews several recent studies of the relationships between rubric-referenced self-assessment and the quality of elementary and middle school students' writing and self-efficacy for writing. The self-assessment process employed in each study emphasized the articulation of criteria and a carefully scaffolded process of review by students, followed by revision. Taken together, the studies show that rubric-referenced self-assessment is associated with more effective writing, as evidenced by higher total scores for essays written by students in the treatment condition, as well as higher scores for each of the criteria on the scoring rubric. The reviewed research also reveals an association between the treatment and the self-efficacy of girls for writing. The chapter includes a review of relevant literature, a detailed description of the process of self-assessment, a report on the studies, and a discussion of the implications for teaching and research.

INTRODUCTION

Self-assessment is a process during which students reflect on the quality of their work, compare it to explicitly stated criteria, judge how well their work reflects the criteria, and make appropriate revisions (Andrade, 2010). Rather than being used to determine a grade, as in self-evaluation, self-assessment is a formative process during which students recognize the strengths and weaknesses in their work and take steps to improve upon it (Andrade & Valtcheva, 2009). This chapter will introduce a theoretical framework for self-assessment, including its formative nature, its relationship to self-regulated learning and self-efficacy, and its application to the writing process. Three studies of rubric-referenced self-assessment recently conducted by the first author will be reviewed, followed by a discussion of the results and implications for practice and research.

THEORETICAL FRAMEWORK

Black and his colleagues (Black, Harrison, Lee, Marshall, & Wiliam, 2004) have pointed out that "students can achieve a learning goal only if they understand that goal and can assess what they need to do to reach it. So self-assessment is essential to learning" (p. 14). A body of research covering a wide range of content areas, including social studies, science, math, and writing provides support for the claim that there is an important relationship between student self-assessment and improved student learning and performance, assuming a formative approach (Andrade, 2010).

Self-Assessment as Formative Assessment

One common misconception about self-assessment is that students will inflate their assessments to obtain a better grade. If students are permitted to self-evaluate their work and if their evaluations count toward final grades, they will, in fact, tend to overestimate their grades (Boud & Falchikov, 1989). Therefore, it is important to emphasize the formative nature of self-assessment as a process of reflection and revision, not a matter of summative assessment in which students determine their own final grades. Like any type of formative assessment, true self-assessment is not used to determine a grade but rather is an ongoing process that informs teachers and students about how to adjust their performance to meet an established target (Popham, 2009).

This formative conception of self-assessment honors the critical role of feedback in learning (Andrade & Valtcheva, 2009). Research has clearly shown that feedback promotes learning and achievement (Bangert-Drowns, Kulik, Kulik, & Morgan, 1991; Brinko, 1993; Butler & Winne, 1995; Crooks, 1988). A model of feedback proposed by Hattie and Timperley (2007) involves providing feedback to students and teachers about the targets for learning, where students are in relation to those targets, and what can be done to fill in the gaps. According to Hattie and Timperley, in order for feedback to help close the gap between current states and target states, learners must ask themselves "Where am I going?", "How am I going (or doing)?", and "What's next?" These three questions feature in the approach to self-assessment discussed in this chapter.

Although few teachers have the privilege of responding to all of their students' work on a regular, individual basis, research has shown that students themselves can be a valuable source of feedback via self-assessment (Andrade & Boulay, 2003; Andrade, Du, & Mycek, in press; Andrade, Du, & Wang, 2008; Ross, Rolheiser, & Hogaboam-Gray, 1999). There is also some research that suggests that, with training and practice, students will embrace self-assessment as a formative process of checking their work, revising, and reflecting (Andrade & Du, 2007), especially when the expectations for performance are clear.

Under supportive conditions, self-assessment can promote learning by helping students become more accurate judges of the quality of their work (Schunk, 2003). According to Goodrich (1996) the conditions that must be in place in order for students to receive the full benefits of self-assessment include:

1. An understanding of the value of self-assessment,
2. Access to explicit criteria on which to base the assessment,
3. A particular task or performance to assess,
4. Models of good self-assessment,
5. Direct instruction in and assistance with self-assessment,
6. Cues for appropriate times to self-assess,
7. Opportunities to revise and improve the task or performance, and
8. Practice

Several of the key conditions for effective self-assessment are commonly used classroom practices including the use of models, direct instruction, cueing, and practice. Introducing a rubric can give students access to the second condition—the need for explicit criteria.

A rubric is usually a one- or two-page document that lists criteria and gradations of quality, from excellent to poor, for a particular assignment (Andrade, 2000). Rubrics are often used by teachers to determine final grades, but they can serve the dual purposes of evaluation *and* instruction (Andrade & Du, 2005; Arter & McTighe, 2001; Stiggins, 2001). Teachers and their students can work together to co-generate criteria for a particular assignment and then shape the criteria into a rubric. A useful rubric will describe what makes good work shine as well as identify common mistakes students tend to make, taking the guess work out of understanding their learning targets. Rubrics can promote learning when used to scaffold self-assessment by enabling the students to share a concept of quality that is similar to the teacher's, continuously monitor the quality of work they produce, and have access to strategies for improvement any time, anywhere (Andrade & Valtcheva, 2009; Sadler, 1989).

To engage students in effective self-assessment, Andrade and Valtcheva (2009) recommend three steps: the articulation of expectations, self-assessment, and revision.

1. *Articulate expectations.* An important first step is to clearly articulate the expectations for the task or performance. The expectations can be determined by the teacher, the students, or, preferably, the teacher and students together. This can be done by co-creating part or all of a rubric in class, often through critiquing models of strong and perhaps weak student work.

2. *Self-assessment.* Students create a rough draft of their assignment. They monitor their progress by comparing their work-in-progress to the articulated expectations. For example, if the students are writing, they can use colored pencils to circle a key phrase in the rubric and, using the same color, circle in their drafts evidence of having met the standards articulated in the key phrase. If students have found they have not met a specific criterion in their draft, they give themselves feedback by writing a reminder to make improvements in their final drafts. This process can be completed for each criterion on the rubric, with various colored pencils, and can be completed in one or two class periods (Andrade, Du, & Wang, 2008).

3. *Revision.* Students use their self-generated feedback from their self-assessments to guide revision. This step is crucial: Self-assessment without an opportunity to revise and improve one's work is a largely pointless exercise, and students know it.

Although the process described above may be supplemented with teacher and peer assessment, these three steps have been associated with significant improvements in the effectiveness of students' writing (Andrade, Du, & Mycek, in press; Andrade, Du, & Wang, 2008).

Self-Assessment and Self-Regulated Learning

Self-regulated learning is the process by which learners set goals and attempt to monitor, regulate, and control their cognition, motivation, and behavior in the service of reaching those goals (Pintrich, 2000). Self-regulated learning and self-assessment share the central purpose of providing learners with self-generated feedback about their learning and their approaches to it in order to deepen their understandings and improve their performances (Andrade, 2010).

A clear illustration of the commonalities between self-regulation and self-assessment can be seen by comparing Zimmerman's (2000) commonly cited model of self-regulated learning to the process of self-assessment described by Andrade and Valtcheva (2009). In Zimmerman's model of self-regulated learning, three main phases function cyclically: 1) *forethought* is when learners set goals and make plans to reach them; 2) *performance* or *volitional control* occurs during learning and involves the use of learning strategies and self-monitoring; and 3) *self-reflection* is when learners evaluate and reflect on their work. These phases have considerable overlap with the three steps of self-assessment described above: (1) articulating expectations or targets, which is an example of self-regulated *forethought*, (2) self-assessment of one's work in relation to those expectations or targets, which involves self-monitoring of *performance* as well as *reflection*, and (3) revision in order to fill in any gaps between the work and the expectations, which is a form of *reflection*.

In many ways, theories of self-regulated learning and formative self-assessment use different terms to talk about the same processes and skills. One notable difference between the two areas of inquiry is the focus of the feedback: Simply stated, self-regulated learning tends to involve the management of the learning *process* while self-assessment is more focused on the *products* of learning (Andrade, 2010). Nonetheless, the shared goal of providing feedback that promotes learning suggests that research and practice in each field can inform the other. For example, it is conceivable that regular self-assessment could lead to improved self-regulated learning. This claim is largely untested but rapidly gaining in popularity (Wiliam, 2010).

Self-Assessment and Self-Efficacy

Self-efficacy is commonly considered a component of self-regulated learning (Pintrich, 2000). Self-efficacy is one's belief in one's capability to achieve a specific goal (Bandura, 2003). Noting that "it's not just a matter of how capable you are, it's also a matter of how capable you think you are" (Pajares, 2000, p. 13), Pajares cites extensive research that has shown that students' self-efficacy exerts a powerful influence on their academic achievement, including in writing (Pajares, 2003; Pajares & Johnson, 1996; Pajares & Valiante, 1997), and at the elementary and middle school levels (Pajares, Miller, & Johnson, 1999; Pajares &

Valiante, 1999). Highly efficacious students tend to see difficult tasks as challenges to be met. Their efficacious outlook fosters intrinsic interest in activities and prompts them to work harder, persist longer, adopt what they believe are better strategies, and/or seek help from teachers and peers. Students with low self-efficacy, in contrast, tend to avoid challenging tasks and give up quickly (Bandura, 2003; Schunk, 2003).

There is limited evidence that self-assessment or self-evaluation can promote self-efficacy. For example, Paris and Paris (2001) reviewed research that suggests that self-assessment is likely to promote monitoring of progress, stimulate revision strategies, and promote feelings of self-efficacy. In a linear structural model, Wagner (1991, cited in Ross, Rolheiser, & Hogaboam-Gray, 1999) found positive path coefficients from self-evaluation to self-efficacy. Schunk and Ertmer (1999) have shown that "the opportunity for self-evaluation promoted self-efficacy" (p. 257). Schunk (2003) recommends giving students practice with criterion-referenced self-evaluation in order to develop and sustain self-efficacy for learning. Results from Kitsantas, Reiser, and Doster's (2004) study of ninth and tenth grade students learning to use presentation software showed that, "among students who received organizational signals, those in the self-evaluation condition reported significantly higher levels of self-efficacy than did those in the no self-evaluation condition" (p. 284). Finally, a qualitative study of undergraduates (Andrade & Du, 2005) suggested that criteria-referenced self-assessment made them feel more motivated and confident about their work.

In summary, there is compelling but limited evidence that student self-assessment—and even self-evaluation—is associated with self-regulated learning, self-efficacy, and more effective writing. The following section of this chapter introduces three studies recently conducted by the first author in order to test the latter two claims: that self-assessment is related to increases in elementary and middle school students' self-efficacy and in the quality of their writing.

THREE STUDIES OF RUBRIC-REFERENCED SELF-ASSESSMENT OF WRITING

This section of the chapter will summarize and discuss three studies of rubric-referenced self-assessment conducted by the first author and her colleagues. In two studies we examined the effects of rubric-referenced self-assessment on the quality of students' writing in grades three through seven (Andrade, Du, & Wang, 2008; Andrade, Du, & Mycek, in press). In a third, we studied the relationship between self-assessment and students' self-efficacy for writing (Andrade, Wang, Du & Akawi, 2009).

Studies of Rubric-Referenced Self-Assessment and Writing

In the two studies of the quality of student writing, we looked for a main effect of rubric-referenced self-assessment on scores assigned to students' writing. We also asked whether that effect was mediated by gender, grade level, time spent on writing, prior exposure to rubrics, and/or previous achievement in English.

Sample, procedures and instruments

   Both studies—one conducted in grades three and four and one in grades five, six and seven—employed purposive samples of over 100 students ($N = 116$ *and* $N = 162$, respectively) from public and private schools in the Northeastern United States. Each sample consisted of intact classes matched by grade level and subject matter; half of the classes were in the treatment group ($n = 9$), half were in the comparison group ($n = 9$).

   Each class was asked to do a writing assignment. The writing process resembled a Writers' Workshop: Students engaged in prewriting, wrote rough drafts, received feedback from their classroom teachers, and then wrote final drafts. As a teacher-imposed condition of participation in the study, topics were related to the curricula and included the impact of European settlers on Native Americans, year-round schools, child labor laws, and the bombing of Japan during World War II. The majority of the classes ($n = 11$; 65%) wrote about year-round schools. All students wrote persuasive essays, except for one third-grade treatment class which wrote stories about their families.

   Models. The treatment classes were given model essays or stories. The essay or story was read aloud to the class and students were asked to critique it in terms of strengths and weaknesses. Once students had soundly critiqued the model, they were asked to list the criteria for their own written assignments. Their brainstormed list of criteria was tracked on a chalkboard. Students were told that their list of criteria would be included in the rubric they received during the next class. Although the rubrics given to each class were identical, the students' lists of criteria were in fact included, since students always identified the major characteristics of effective writing. The students in the comparison groups did not read a model essay or story, but they did generate a list of qualities of an effective essay or story.

   Rubrics. The rubrics given to the students in the treatment conditions referred to six commonly assessed criteria for writing (e.g., the 6+1 Trait® Writing Method; see Spandel & Stiggins, 1997): ideas and content, organization, voice and tone, word choice, sentence fluency, and conventions. Four gradations of quality for each criterion were written at a vocabulary level appropriate for the student participants, and in language generic enough to be applied to different topics (see Appendix A for one such rubric). The comparison classes did not receive a rubric.

   Self-assessment. Students in the treatment classes were guided through a highly structured process of self-assessment of their drafts. They were asked to underline key phrases in the rubric with colored pencils (e.g. "clearly states an opinion"), then underline or circle in their drafts the evidence of having met the standard articulated by the phrase (i.e., his or her opinion). If students found they had not met the standard, they were asked to write themselves a reminder to make improvements when they wrote their final drafts. This process was repeated for each criterion on the rubric using a different colored pencil, except for the conventions criterion, which was not formally self-assessed. Students in the comparison groups did not use rubrics to self-assess their first drafts but were asked to review their drafts and note possibilities for improvement in the final draft.

Time to write. Students were given time in class to complete each step of the writing process, at the discretion of the classroom teacher. Time spent on writing—not instruction or the treatment—was recorded.

Results

Analyses of the data from both the third and fourth grade sample and the fifth, sixth and seventh grade sample indicated a main effect of treatment, even controlling for previous achievement and time spent writing. On average, the essay scores for the students in the treatment classes were higher than the scores for the students in the comparison classes and the differences were statistically significant ($M = 28.5$, $SD = 4.9$ and $M = 30.4$, $SD = 4.7$ for essays written by the elementary and middle school students in the treatment group; $M = 24.3$, $SD = 4.7$ and $M = 27.4$, $SD = 4.3$, for essays written by the elementary and middle school students in the comparison group). The differences were also practically significant; roughly translated into typical classroom grades (an admittedly subjective process that can be undertaken in a variety of ways) by equating a score of six on each criterion with 100%, a five on each criterion with 90%, a four with 80% and so on, the average grade for the elementary and middle school treatment groups would be a low B, compared to the average comparison groups' grade of a high C. Girls in grades 3 through 7 tended to have higher essay scores than boys (elementary girls $M = 27.7$, $SD = 5.1$ vs. boys $M = 25.8$, $SD = 5.2$; middle school girls $M = 29.3$, 4.7 vs. boys $M = 28.3$, $SD = 5.9$), but the difference was not statistically significant.

Multivariate tests were run to examine the relationship between the treatment and the particular criteria for writing included in the rubrics—ideas and content, organization, paragraph formatting, voice and tone, word choice, sentence fluency, and conventions. The results showed that the treatment had a statistically significant relationship with each criterion for both middle and elementary students, except sentence fluency and conventions for elementary students (see Table 1).

Table 1. Relationships Between Treatment and Criteria

Elementary School				Middle School		
Criteria	F	p	Partial η2	F	p	Partial η2
Ideas	20.7	.00	.13	16.2	<.0001	.10
Organization	15.9	.00	.13	5.2	.02	.03
Paragraphs	6.7	.01	.06	28.7	<.0001	.16
Voice	11.2	.001	.09	5.6	.02	.04
Word Choice	11.4	.001	.09	26.1	<.001	.15
Sentences	2.9	.09		9.1	.003	.06
Conventions	.48	.49		8.4	.004	.05

Study of Rubric-Referenced Self-Assessment and Self-Efficacy

In a third study (Andrade, Wang, Du, & Akawi, 2009) we sought to test claims about the potential of rubric-referenced self-assessment to promote self-efficacy (e.g. Arter & McTighe,

2001; Quinlan, 2006; Stiggins, 2001) by examining the effects of the treatment described above on students' self-efficacy for the writing assignment.

Sample, procedures and instruments

A purposive sample of 268 students in grades three through seven from public and private schools in the Northeastern United States was utilized. The treatment and comparison conditions each included nine intact language arts or social studies classes.

Self-efficacy measure. An adapted version of the Writing Self-Efficacy Scale (Pajares, Hartley, & Valiante, 2001) was used to measure self-efficacy (Appendix B). The 11-item scale measured students' confidence in their writing abilities, including their skill in handling the commonly assessed qualities of writing included in the rubrics discussed above: ideas and content, organization, paragraph formatting, voice and tone, word choice, sentence fluency, and conventions (Spandel & Stiggins, 1997). After a brief practice session that involved rating their self-efficacy for jumping short distances, students were instructed to rate on a scale of 0-100 their confidence levels for the essay they were about to write.

Writing assignments. Each participating class was asked to do a writing assignment; two third-grade classes wrote stories and the remaining 16 classes wrote persuasive essays.

Procedures. The treatment and comparison conditions were identical to those described above. That is, the students in the treatment group read a model story or essay, critiqued it in terms of strengths and weaknesses, and generated a list of qualities of an effective story of essay; received a written rubric; and used the rubric to self-assess their first drafts. The students in the comparison group did not read a model, but did generate a list of qualities of an effective story or essay. The comparison group did not receive a rubric. Students in the comparison group were asked to review their first drafts and note possibilities for improvement but did not self-assess their drafts according to a rubric.

Self-efficacy ratings. All students' were administered the Writing Self-Efficacy Scale three times: (a) during Class Period 1, after the writing assignment was introduced and the students generated a list of criteria for their writing; (b) during Class Period 2, after the rubric was handed out or not; and (c) during Class Period 4, after rubric-referenced self-assessment or review of drafts. In accordance with Bandura's (2006) advice, the first administration of the instrument was preceded by briefly practicing self-efficacy rating: Students were asked to rate their confidence in jumping increasing distances (three, five, and seven floor tiles) on a scale of 0-100, and then actually attempted the jumps.

In-class writing. Students were given class time to complete each phase of the writing process. Teachers determined the amount of time to devote to writing. On average, the treatment and comparison groups had equivalent amounts of class time for writing, and writing time was not significantly correlated with any of the three self-efficacy ratings.

Results

Analysis of the first and second administration of the Writing Self-efficacy Scale revealed no differences in self-efficacy scores between treatment and comparison conditions (time 1: treatment $M = 82.45$, $SD = 18.204$, comparison $M = 82.76$, $SD = 16.032$; $p = .885$; time 2: treatment $M = 83.98$, $SD = 16.905$, comparison $M = 82.94$, $SD = 17.764$; $p = .626$). At the third administration of the instrument, which occurred after rubric-referenced self-assessment or review of the draft, students in the treatment condition had higher scores for writing self-efficacy than the comparison group; this difference approached but did not reach statistical significance (time 3: treatment $M = 89.29$, $SD = 13.078$, comparison $M = 86.20$, $SD = 15.016$; $p = .075$).

Differences by gender. Girls had higher self-efficacy scores than boys at the first administration of the measure ($t(266) = 2.48$, $p < .05$) . At the second administration, the difference in average writing self-efficacy scores for boys and girls were not statistically significant. By the third administration, girls' self-efficacy was again higher than boys', and the difference approached statistical significance ($t(266) = 1.92$, $p = .06$).

Differences by grade level and school type. No significant differences in writing self-efficacy scores were found across grade levels for any of the three administrations of the self-efficacy assessment ($t(266) = -0.46$, $p = .644$; $t(266) = 0.10$, $p = .919$; and $t(266) = 0.20$, $p = .840$, respectively). In addition, no statistically significant differences in writing self-efficacy scores were found between students in public versus private schools ($t(266) = 0.90$, $p = .37$; $t(266) = 0.72$, $p = .47$; and $t(266) = 0.78$, $p = .43$, for the three administrations of the self-efficacy assessment, respectively).

CONCLUSION

The two studies of the relationship between rubric-referenced self-assessment and the quality of student writing reviewed above provide support for the hypothesis that having elementary and middle school students use model papers to generate criteria for a writing assignment and carefully self-assess first drafts according to a rubric is positively associated with the quality of their writing. The treatment had a statistically significant, positive association with essay scores, even controlling for the powerful effect of previous achievement in English/Language Arts. The influence of gender on writing scores was relatively predictable: We found that girls tended to receive higher scores for their writing than boys, but the differences were not statistically significant. In the analysis of the scores received for the individual criteria (ideas and content, organization, paragraph formatting, voice and tone, word choice, sentence structure, and conventions), the treatment had a statistically significant association with every criterion for middle school writers, and every criterion except sentence structure and conventions for elementary school writers. It is important to note that the conventions criterion was not formally self-assessed. It is possible that the older students informally self-assessed and revised the mechanics of their writing but we do not have the data needed to test this claim.

These findings regarding the effect of treatment on criteria such as ideas and voice content—arguably two of the most important qualities of effective writing—stand as a rejoinder to recent critiques of rubrics (Kohn, 2006; Wilson, 2006). Kohn and Wilson argue that rubrics promote weak writing by focusing attention only on the most quantifiable and least important qualities of assignments. The fact that rubric-referenced self-assessment was associated with higher scores on important qualities of writing testifies to the potential of the process to help students master significant, meaningful aspects of writing—at least when the rubrics emphasize those important qualities and when students are actively involved in using them, as in these two studies.

The third study reviewed above, which focused on rubric-reference self-assessment and self-efficacy for writing, provides only partial support for the popular claim that rubric-referenced self-assessment is related to students' self-efficacy for a written assignment: Only girls were more self-efficacious in regard to writing, and only after engaging in the structured process of self-assessment according to a rubric (Andrade, Wang, Du & Akawi, 2009).

Attribution theory may help us understand the gender difference in self-efficacy. Research has shown that, in general, girls tend to hold task, or mastery goals, whereas boys tend to hold performance approach, or ego goals in writing (Pajares, Britner, & Valiante, 2000) and mathematics (Middleton & Midgley, 1997). In other words, girls tend to be more concerned with mastering a task and boys tend to be more concerned with showing someone else that they are capable. Given those tendencies, girls may derive more satisfaction and confidence from self-generated evidence of progress, as was done in our study, and boys may seek confirmation of progress from others, perhaps their teachers and peers. Furthermore, girls' tendency to make effort attributions might have led to increased feelings of self-efficacy. Boys, in contrast, might have been less influenced by the presence of a rubric because they placed less value on self-generated feedback.

Implications for Practice

The three studies reviewed here suggest that elementary and middle school students should be actively engaged in a process of formative assessment that involves critiquing model pieces of writing, generating the criteria contained in the rubrics by which their writing will be evaluated, and carefully scaffolded self-assessment of their works in progress in order to become better writers and, at least for girls, more confident about their writing. By involving students in the assessment process in the ways recommended throughout this chapter, teachers can blur the distinction between assessment and instruction and transform classroom assessment into a moment of learning (Zessoules & Gardner, 1991).

Implications for Future Research

In the three studies reported in this chapter, students experienced rubric-referenced self-assessment only one time: Research is needed on the longitudinal effects of the treatment. Studies of the long-term effects of self-assessment on self-regulated learning would be particularly useful. In addition, studies like this one are needed in other domains, including

and especially science and math, which tend to involve students in qualitatively different kinds of work. We also suggest that research is done on rubric-referenced assessment in secondary schools and higher education, with diverse populations, and with students with learning disabilities.

REFERENCES

Andrade, H. (2000). Using rubrics to promote thinking and learning. *Educational Leadership, 57(5),* 13-18.

Andrade, H. (2010). Students as the definitive source of formative assessment: Academic self-assessment and the self-regulation of learning. In H. Andrade & G. Cizek (Eds.), *Handbook of formative assessment.* New York: Routledge.

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. (2005). Knowing what counts and thinking about quality: students report on how they use rubrics. *Practical Assessment, Research and Evaluation, 10(4).* Available online at: http://PAREonline.net/getvn.asp?v=10&n=3.

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. & Mycek, K. (in press). Rubric-referenced self-assessment and middle school students' writing. *Assessment in Education.*

Andrade, H., Du, Y. & Wang, X. (2008). 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 Practices, 27(2),* 3-13.

Andrade, H. & Valtcheva, A. (2009). Promoting learning and achievement through self-assessment. *Theory Into Practice, 48(1),* 12-19.

Andrade, H., Wang, X., Du, Y. & Akawi, R. (2009). Rubric-referenced self-assessment and self-efficacy for writing. *The Journal of Educational Research, 102(4),* 287-302.

Arter, J. & McTighe, J. (2001). *Scoring rubrics in the classroom: Using performance criteria for assessing and improving student performance*. Thousand Oaks, CA: Corwin Press.

Bangert-Drowns, R. L., Kulik, C. C., Kulik, J. A. & Morgan, M. T. (1991). The instructional effect of feedback in test-like events. *Review of Education Research, 61(2),* 213–238.

Bandura, A. (2003). *Self-efficacy: The exercise of control*. New York: W. H. Freeman.

Bandura, A. (2006). Guide for constructing self-efficacy scales. In: F. Pajares & T Urdan (Eds.), *Self-efficacy beliefs of adolescents* (307-377). Greenwich, CT: Information Age.

Black, P., Harrison, C., Lee, C., Marshall, B. & Wiliam, D. (2004). Working inside the black box: Assessment for learning in the classroom. *Phi Delta Kappan, 80(2),* 139-148.

Boud, D. & Falchikov, N. (1989). Quantitative studies of student self-assessment in higher education: A critical analysis of findings. *Higher Education, 18*, 529-549.

Brinko, L. T. (1993). The practice of giving feedback to improve teaching. *Journal of Higher Education, 64(5),* 574-593.

Butler, D. & Winne, P, (1995). Feedback and self-regulated learning: A theoretical synthesis. *Review of Educational Research, 65(3),* 245-281.

Crooks, T. (1988). The impact of classroom evaluation practices on students. *Review of Educational Research, 58(4),* 438-481.

Goodrich, H. (1996). *Student self-assessment: At the intersection of metacognition and authentic assessment.* Unpublished doctoral dissertation. Cambridge, MA: Harvard University.

Hattie, J. & Timperley, J. (2007). The power of feedback. *Review of Educational Research, 77(1),* 81-112.

Kitsantas, A., Reiser, R. & Doster, J. (2004). Developing self-regulated learners: Goal setting, self-evaluation, and organizational signals during acquisition of procedural skills. *The Journal of Experimental Education, 72*, 269-287.

Kohn, A. (2006). The trouble with rubrics. *English Journal, 95*(4), 12-14.

Middleton, M. & Midgley, C. (1997). Avoiding demonstration of lack of ability: An underexplored aspect of goal theory. *Journal of Educational Psychology, 89*, 710-718.

Pajares, F. (2000). Schooling in America: Myths, mixed messages, and good intentions. *Great Teachers Lecture Series*. Atlanta, GA: Emory University. Retrieved November 1, 2009, from http://www.des.emory.edu/mfp/pajaresgtl.html.

Pajares, F. (2003). Self-efficacy beliefs, motivation, and achievement in writing: A review of the literature. *Reading and Writing Quarterly, 19*, 139-159.

Pajares, F., Britner, S. & Valiante, G. (2000). Relations between achievement goals and self-beliefs of middle school students in writing and science. *Contemporary Educational Psychology, 25*, 406-422.

Pajares, F., Hartley, J. & Valiente, G. (2001). Response format in writing self-efficacy assessment: Greater discrimination increases prediction. *Measurement and Evaluation in Counseling and Development, 33*, 214-221.

Pajares, F. & Johnson, M. (1996). Self-efficacy beliefs and the writing performance of entering high school students. *Psychology in the Schools, 33*, 163-175.

Pajares, F., Miller, M. & Johnson, M. (1999). Gender differences in writing self-beliefs of elementary school students. *Journal of Educational Psychology, 91*, 50–61.

Pajares, F. & Valiante, G. (1997). Influence of self-efficacy on elementary students' writing. *The Journal of Educational Research, 90*, 353–360.

Pajares, F. & Valiante, G. (1999). Grade level and gender differences in the writing self-beliefs of middle school students. *Contemporary Educational Psychology, 24*, 390-405.

Paris, S. G. & Paris, A. H. (2001). Classroom applications of research on self-regulated learning. *Educational Psychologist, 36*(2), 89-101.

Pintrich, P. (2000). The role of goal orientation in self-regulated learning. In M. Boekaerts, P. Pintrich, & M. Zeidner (Eds.), *Handbook of self-regulation* (452-502). San Diego: Academic Press.

Popham, J. W. (2009). Assessment literacy for teachers: Faddish or fundamental? *Theory Into Practice, 48(1),* 4-11.

Quinlan, A. (2006). *Assessment made easy: Scoring rubrics for teachers from K-college*. Lanham, MD: Rowman and Littlefield Education.

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.

Schunk, D. (2003). Self-efficacy for reading and writing: Influence of modeling, goal-setting, and self-evaluation. *Reading & Writing Quarterly, 19*(2), 159-172.

Schunk, D. & Ertmer, P. (1999). Self-regulatory processes during computer skill acquisition: Goal and self-evaluative influences. *Journal of Educational Psychology, 91*, 251-261.

Spandel, V. & Stiggins, R. J. (1997). *Creating writers: Linking writing assessment and instruction* (2nd ed.). New York: Longman.

Stiggins, R. J. (2001). *Student-involved classroom assessment* (3rd ed.). Upper Saddle River, NJ: Merrill/Prentice-Hall.

Wagner, M. J. (1991). *Goal setting, self-efficacy, and learning performance: A casual model*. Unpublished doctoral dissertation, University of Arizona, Tucson.

Wiliam, D. (2010). An integrative summary of the research literature and implications for a new theory of formative assessment. In H. Andrade & G. Cizek (Eds.), *Handbook of formative assessment*. New York: Routledge/Taylor & Francis.

Wilson, M. (2006). *Rethinking rubrics in writing assessment*. Portsmouth, NH: Heinemann.

Zimmerman, B. (2000). Self-efficacy: An essential motive to learn. *Contemporary Educational Pscyhology, 25*(1)*,* 82-91.

Zessoules, R. & H. Gardner (1991). Authentic assessment: Beyond the buzzword and into the classroom. In V. Perrone (Ed.), *Expanding student assessment* (47-71). Alexandria, VA: ASCD.

APPENDIX A. PERSUASIVE ESSAY RUBRIC (GRADES 5 AND 6)

	4	3	2	1
Ideas and Content	The paper clearly states an opinion and gives 3 clear, detailed reasons in support of it. Opposing views are addressed.	An opinion is given. One reason may be unclear or lack detail. Opposing views are mentioned.	An opinion is given. The reasons given tend to be weak or inaccurate. May get off topic.	The opinion and support for it is buried, confused and/or unclear.
Organization	The paper has an interesting beginning, developed middle and satisfying conclusion in an order that makes sense. Paragraphs are indented, have topic and closing sentences, and main ideas.	The paper has a beginning, middle and end in an order that makes sense. Paragraphs are indented; some have topic and closing sentences.	The paper has an attempt at a beginning &/or ending. Some ideas may seem out of order. Some problems with paragraphs.	There is no real beginning or ending. The ideas seem loosely strung together. No paragraph formatting.
Voice & tone	The writing shows what the writer thinks and feels. It sounds like the writer cares about the topic.	The writing seems sincere but the writer's voice fades in and out.	The paper could have been written by anyone. It shows very little about what the writer thought and felt.	The writing is bland and sounds like the writer doesn't like the topic. No thoughts or feelings.
Word choice	The words used are descriptive but natural, varied and vivid.	The words used are correct, with a few attempts at vivid language.	The words used are ordinary. Some may sound forced or clichéd.	The same words are used over and over, some incorrectly.
Sentence fluency	Sentences are clear, complete, begin in different ways, and vary in length.	Mostly well-constructed sentences. Some variety in beginnings and length.	Many poorly constructed sentences. Little variety in beginnings or length.	Incomplete, run-on and awkward sentences make the paper hard to read.
Conventions	Spelling, punctuation, capitalization, and grammar are correct. Only minor edits are needed.	Spelling, punctuation and caps are usually correct. Some problems with grammar.	There are enough errors to make the writing hard to read and understand.	The writing is almost impossible to read because of errors.

APPENDIX B. SELF-EFFICACY SCALE

Research ID number: _____   Date: _____

Directions: On a scale from **0** (**cannot do it**) to **100** (**completely sure I can do it**), show how

confident are you that you can perform each of the writing tasks below on this week's essay. You

may use *any* number between 0 and 100.

| 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |

Cannot do it   Medium sure   Completely

                                          I can do it   sure I can do it

_____   1. Write a clear, focused essay that stays on topic.

_____   2. Use details to support my ideas.

_____   3. Write a well-organized essay with an inviting beginning, developed

              middle, and meaningful ending.

_____   4. Correctly use paragraph format in the essay.

_____   5. Write with an engaging voice or tone.

_____   6. Use effective words in the essay.

_____   7. Write well-constructed sentences in the essay.

_____   8. Use correct grammar in the essay.

_____   9. Correctly spell all words in the essay.

_____   10. Correctly use punctuation in the essay.

_____   11. Write an essay good enough to earn a high grade.