

The Missing Link: One Elementary School's Journey with Assessment

Originally published *School Library Media Activities Monthly* 14, no. 7 (March 1998). Copyright © 1998 School Library Media Activities Monthly. Reprinted with permission.

Joan Yoshina and Violet H. Harada

Classrooms are alive with projects, activities, conversations, and all of the other components of a rich interdisciplinary curriculum at Mililani Mauka Elementary School. Kindergarten through sixth-grade children are actively engaged in the business of learning how to read, write, research, and create original products. Even the youngest students use a wide variety of resources, both print and electronic, in their pursuit of knowledge. Classroom instruction is supported by a library media center collection that reflects the themes being studied. The result is a school-wide curriculum designed around thematic units that integrate various content areas and critical thinking skills at each grade level.

For the staff at Mililani Mauka, curriculum planning is a collaborative effort that involves grade-level teachers and the library media specialist. To focus the discussion, we have found it helpful to begin the planning process with five familiar questions:

- What do we want students to know, be able to do, and care about?
- How can we help students to achieve these goals or objectives?
- How will we know if students have achieved the objectives?
- What resources are needed to accomplish our goals?
- How will we report progress to students and parents?

The casual observer might think that our school has come up with a formula for resolving all the nagging questions facing educators in the last decade of the twentieth century. Students are engaged and motivated. Teachers are focused. Everyone is collaborating to build an educational environment that is both productive and nurturing. Could there possibly be a fly in this ointment?

Occasionally we are reminded that nothing in education is ever perfect. Although teachers enthusiastically support the school's commitment to thematic instruction, they have uncovered some problems that seem to go hand-in-hand with this approach to teaching and learning. As one teacher put it, "The theme provides a focus for making connections across the curriculum, but everything is so integrated that it's difficult to measure progress in specific areas." Concerns like this have prompted us to focus school renewal efforts on assessment.

Study sessions made possible through a Goals 2000 grant have targeted the basic principles of assessment. Critical questions raised during these study sessions have included:

- What do we want to assess? Is it knowledge or skills, process or product?
- Why do we need to assess?

- When and how do we assess?
- Who should do the assessing? Is it the role of the teacher to be judge and jury?
- What do we want to assess?

We realized that to better understand what was happening on a daily basis in our classrooms and library media center, we needed to define our learning expectations clearly. When we re-examined our unit plans in this light, we discovered that our objectives were often vague and frequently teacher- rather than student-centered. We also came to see that many of our objectives focused on activities rather than learning. The Goals 2000 grant made in-service activities available that introduced us to the idea that a well-designed thematic unit targeted a variety of learning outcomes including knowledge, skills, thinking, products, and attitudes (Stiggins 1997). We found that a typical unit required students to:

- use the information search process to collect, organize, and present information;
- master critical facts and ideas related to the unit of study;
- use the communication skills of reading, writing, listening, speaking, and viewing;
- create products that represent the integration of skills and knowledge;
- present the acquired knowledge to an identified audience; and
- work with peers in various configurations throughout the learning process.

Although the staff-development sessions gave us a fairly good idea of what we wanted our students to learn and how to structure the learning, we recognized that as a staff we needed a more thorough understanding of the role of assessment in the learning process before we could select the assessment methods most appropriate for the tasks at hand.

Why Do We Assess?

Our teachers also came to realize that their own past teaching behaviors emphasized instruct, instruct, instruct with reporting time an event separate from instruction (Checkley 1987). The message that students received, therefore, was that teachers valued grades and test scores more than improvement in performance. Through intensive professional development work, our faculty began to realize that assessment has to be interwoven with instruction and that students need to comprehend how they are learning as well as what they are learning. We learned that the real purpose of assessment was not to assign grades, but to see how well students were progressing so that intervention could occur in a timely manner.

Looking at assessment also forced us to re-think our instructional practices and deepen our content. In previous years, for example, the first grade chose adaptation as its theme for the year. One teacher had her children build models of animals inhabiting a desert habitat. Reflecting upon this activity during a grade-level session this year, she commented, "I'm not sure why I had them do this. It really doesn't have anything to do with adaptation." Instead, she decided to use How do animals adapt to living in the desert? as an overarching question.

This focus on adaptation took typical first graders to a new level of thinking. One of the major objectives for students was to demonstrate an understanding of the factors that influenced an

animal's ability to adapt to its environment. In order to do this, each student selected an animal to investigate.

The research went beyond finding facts about the animal. Instead, the class created a web to guide their search for information about animal adaptation. They decided that for most animals the questions fell into three categories:

- Description-What special body parts help an animal to adapt to its surroundings?
- Food-What food does it eat and how does it get its food?
- Protection-From whom or what does it need protection? How does it protect itself?

With the assistance of an older student, known as a research buddy, each first grader then located the specific information that was needed to answer the questions. Using inventive spelling, students wrote out the answers to their questions in their own words. The final product was a book that used words and pictures to show how the animal adapted to its environment.

When and How Do We Assess?

As we realized that assessment was an integral part of our daily instruction, we also discovered the importance of doing it in tandem with our teaching. It was no longer an activity to be done at the end of a unit. Instead, it was a seamless part of the teaching-learning cycle.

Given the complexity of thematic instruction, we also agreed that no single assessment tool could measure every fact of learning in a unit. The first task, according to Heidi Goodrich (1997), is to decide what counts. At Mililani Mauka, we experimented with various tools. In the first-grade class working on adaptation, for example, a performance checklist was devised to measure student achievement at various steps of the information search process. (See Figure 1.) As they completed each phase of the work, students placed stickers in the rubric boxes that best described their performances. Teachers used the same instrument to record how they viewed each child's progress. These assessments were used to adjust the overall instructional plan with the goal of having each child achieve the desired outcomes.

Figure 1. Assessment of the Research Process

Grade One: Animals in their Habitats

My topic is:

Put an animal sticker in the box that tells how well you did each task.

This is what I did...

- I did it by myself.
- I did it with help.

- I cannot do it yet.

I chose as my topic an animal that is interesting to me.

I made a web to show what I wanted to find out about my topic.

I found information about my topic in at least two kinds of resources.

I took notes to answer my questions. My notes gave important and complete information.

I used my notes to write sentences about my topic.

I prepared my presentation.

I shared my knowledge in at least two different ways.

Teachers of older students combined rubrics with paper-and-pencil tests to measure mastery of facts and information. Both upper- and lower-grade students kept reflection logs in which they recorded their thoughts about what they were learning and made connections between disparate ideas. Students in every grade maintained process folios that contained their logs, webs, notes, and assessments. The folios became a valuable way to communicate with parents.

When it came to assessing a complex process or a student's product, however, we found rubrics to be the most effective tools to gauge performance (Harada and Yoshina 1997). The staff had already been introduced to the idea of using rubrics to assess students' growth in thinking and writing. We felt that the same process could be used to target specific aspects of a piece of work or parts of a learning process.

In creating a rubric, we began with a careful consideration of expectations for the particular assignment. We asked ourselves: Are we looking at the knowledge we expect the student to master? Or do we want to focus on skill development or thinking? Can a rubric used to assess writing also be used for an oral presentation? As we struggled with questions like these, we developed new insights into how assessment affected learning. We began to see that no single instrument could assess all the dimensions of learning. We recognized the need to tailor our assessment methods to our instructional objectives. We realized that rubrics were important to our assessment strategy because they allowed us to list all of the conditions for success and to describe the different levels of performance.

Who Should Do the Assessing?

Since one of our school-wide learning outcomes is to help students become self-assessors, we had been exploring different ways of involving students in the assessment process. Teachers worked on strategies that allowed students to assume increasing responsibility for their own learning as they progressed through the grade levels.

Older students in the school helped to set the criteria for their projects. To cite an example, when a sixth-grade class studied ancient civilizations, they were asked what the criteria should be for their topic selections. They all agreed that a good topic should be important to the civilization, be neither too broad nor too narrow, and have information available either in the school library media center or on the Internet. As students explored the library media center collection and browsed the World Wide Web in search of a topic, these criteria were used to focus their thinking.

When students took notes, a similar discussion revolved around the characteristics of effective notes. One student stated that the notes should answer the questions. Another thought that the notes should include details and examples. Everyone agreed that the notes should be in your own words. Someone asked whether you could just write one-word answers or if you should write in sentences. After a discussion, it was decided that notes could be in words, phrases, or sentences, depending on the idea you needed to put down. After each of these group discussions, the class identified the criteria for measuring success at each phase of the process. Students were given copies of the agreed-upon criteria. Teachers and the library media specialist collaborated to draft a rubric that included both the criteria and a description of different levels of quality. Students were then given the opportunity to discuss and suggest modifications to the draft.

The completed rubric was distributed and used by teachers and the library media specialist as they conferenced with students throughout the unit. Finally, students as well as teachers used the rubric to assess completed products. (See Figure 2.)

Figure 2. Rubric Scoring Guide

Ancient Civilizations: A Mililani Mauka Sixth Grade Thematic Unit

CRITERIA

Topic selection

In Progress

- Topic selected is not important to learn about.
- The topic is not interesting.
- The topic is too broad or too narrow.
- No information is available on this topic.

Basic

- Topic selected is important to learn about but not very interesting.
- The topic is neither too broad nor too narrow.
- Information is available but in only one resource.

Proficient

- The topic is important and interesting,
- The topic is neither too broad or too narrow.
- At least two different kinds of resources are available (e.g., books and Internet).

Advanced

- The topic is important and interesting.
- The topic is something we can explore in depth.
- Three or more different kinds of resources are available (e.g., books, Internet, and CD-ROM)

Questions

In Progress

- All questions can be answered yes, no, or in one word.
- The questions will not lead to basic facts and information.
- There are no How and Why questions.

Basic

- The questions require more than one-word answers.
- The questions will lead to basic facts and information.
- There are questions beginning with Why and How, as well as Who, What, When, and Where.

Proficient

- Some questions will lead to new and interesting information about the topic.
- Some questions begin Why and How, as well as Who, What, When, and Where.
- Some questions will lead to more questions.

Advanced

- Some questions will lead to new and interesting information about the topic.
- Some questions will lead to more questions.
- Some questions will help to make connections or show relationships.

Notes

In Progress

- Information is inaccurate.
- The notes do not answer the questions.

- The notes were copied from the resources.
- No sources are given for information found in notes.

Basic

- The notes answer questions very generally, but some details are given.
- The notes are in your own words.
- Information on sources is not complete.

Proficient

- The notes answer the questions in detail.
- The notes are in the words of the student. Key words and phrases are used.
- Information on sources is complete.

Advanced

- The notes answer the questions in detail.
- Examples, explanations, and quotes are included.
- Information on sources is complete.
- Many sources are used.

Writing

In Progress

- Information is inaccurate and incomplete.
- No details are given to make it interesting.
- Writing is disorganized and hard to follow.
- A poor choice of words is used.

Basic

- Information is accurate and complete.
- Interesting details are given for some main ideas.
- It has a beginning, a middle, and an end.
- The choice of words is appropriate.

Proficient

- Information is accurate, complete, and interesting.
- Details are given for each main idea.
- It is easy to follow with a clear beginning, middle, and end.
- Choice of words is good.

Advanced

- Information is accurate, complete, and interesting.
- It includes examples, explanations, and quotes.
- It is well-organized with a beginning, middle, and end.
- It uses clear, precise language.

Visual presentation

In Progress

- The visual is not original. (We've seen it before.)
- Details are not accurate.
- It uses copies or store-bought materials.

Basic

- The visual is interesting but not original.
- Details are accurate but more are needed.
- Most of it was handmade.

Proficient

- The visual is interesting and original.
- All details are accurate and complete.
- Everything is handmade.

Advanced

- The visual is original and creative. (It catches attention.)
- There is great attention to detail.
- Everything is handmade.

The positive faculty reaction to rubrics as an assessment tool is reflected in this log entry from sixth-grade teacher Wilene Lum:

The real power of the rubric is that it keeps students focused on standards as they work on their projects. When students are involved in setting the criteria for assessment, the quality of work improves. The rubric really becomes a picture of what the completed piece of work should look like. The student knows where he or she is headed even as the work is in progress.

Students and parents at Mililani Mauka have also been overwhelmingly supportive of the use of rubrics. As one parent put it, "I think the rubric is a great idea. It takes the guesswork out of doing a project, and it gives parents a clearer idea of what their children are learning." A similar

comment in a students journal read, "The rubric helped me to keep on track as I was working on my project. I used the criteria to make my project better."

Conclusion

At Mililani Mauka, we have found that when the learning outcomes involve complex reasoning and the application of various skills in the creation of a project, we need many different instruments, including rubrics, to assess performance. As we see the improved quality of work our students are generating as a result of efforts to blend assessment with instruction, we are convinced that encouraging youngsters to reflect upon and improve their own performances is the real key to effective curriculum reform.

References

1. Checkley, Kathy. "Assessment that Serves Instruction." *Education Update* 39 (June 1997): 1, 4-6.
2. Goodrich, Heidi. "Understanding Rubrics." *Educational Leadership* 54, no. 4 (Dec. 1996-Jan. 1997): 14-17.
3. Harada, Violet H., and Joan Yoshina. "Improving Information Search Process Instruction and Assessment through Collaborative Action Research." *School Libraries Worldwide* 3 (July 1997): 41-55.
4. Mitchell, Ruth, Marilyn Willis, and the Chicago Teachers Union Quest Center. *Learning in Overdrive: Designing Curriculum, Instruction, and Assessment from Standards*. Golden, CO: North American Press.
5. Stiggins, R. J. *Student-Centered Classroom Assessment*. Upper Saddle River, NJ: Prentice-Hall, 1997.