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Introduction

For the past several years, classroom teachers and assessment authorities have extolled the benefits of performance assessment. As students show what they know by doing a performance or task, teachers see more clearly what students have mastered and what learning has eluded them. Good teachers use the results of performance assessments to improve the learning experiences that students encounter in their classrooms. Caring teachers say, "If we expect students to do a task or performance to demonstrate their learning, we need to make learning contextual. We want the learning experiences to align with the assessment techniques."

These teachers construct communities of active learners in their classrooms. They invite students to become partners in improving learning by explaining the learning standards that students are expected to meet, giving students rubrics that describe developmental levels of performance, and showing students how to use the rubrics to evaluate the strengths of their present performances, decide how to improve those performances, and work toward that improvement. In these classrooms, students learn the lifelong skill of kaizen, the use of continual self-assessment, adjustment, and stepwise improvement to achieve high quality learning.

In 1988, Dr. Marian Diamond said that experiential learning is the key to growing the axon-dendrite connections that brains use to process cognitive information. Her studies suggest that student involvement and interaction with materials in the classroom build better brains for learning. In 1991, Renate Nummela Caine and Geoffrey Caine stated that the brain remembers best what it learns in context. Both sets of research point to performance learning as a tool for developing deeper understanding and for enhancing ability to apply knowledge of facts appropriately in a new situation (Gardner 1991).

Performance learning is a curriculum model that produces deep, long-lasting learning and develops expertise in procedural skills.

As You Read This Book

Read the first chapter carefully. It contains the research base for this curriculum model, and it references the work done by many educational and brain physiology experts. The bibliography lists these references and materials as well as others. Readers are encouraged to obtain and read some of

these resource materials if they want to acquire useful tips and background for the performance tasks described in chapters 2 through 12.

Browse through the rest of the chapters. Each chapter details a performance learning task that the reader may choose to do as presented or use as a model for performance learning applications of his or her own. Notice that they all use the same basic outline—performance, prompt, vision, standards, coaching context, presentation, and reflection.

Each chapter begins with a brief description of the performance learning task and reasons why the task fits the performance learning model (The Performance). The chapter goes on to describe how the teacher might present the task and provide examples of excellent performance presentations to the students (The Prompt).

In The Vision, each chapter describes how the teacher and students can inspect examples of learning and presentation excellence. These examples of expert practices in learning and presenting will help students self-evaluate and improve the quality of their learning as they work their way through the performance task and the final presentation.

In the section titled The Standards, look at the task development chart. It contains the steps in the performance task, the curriculum standards that align with the task, and a description of the performance development levels from novice to expert.

The Standards also contains the rubric for the performance learning task. This rubric can be used as a final assessment tool. Its more powerful use is for ongoing self-evaluation and performance improvement by students as they work toward the final presentation. Students who know the assessment standards, or criteria, and who have seen examples of excellent performances will demonstrate deeper understanding and more proficient learning.

The section titled The Coaching Context details the actions of students and teacher in the performance learning task. Each chapter concludes with a description of the presentation performance (The Presentation) and suggestions for individual or group reflection (The Reflection).

Readers may use this book to jump-start their imaginations as they decide how students can best learn specific content. Each reader may pick one learning standard that students are expected to meet and ask, "To show that they have learned this, what will I ask students to do? What performance or task will I ask students to demonstrate?" The answer to that question can guide the reader in structuring the classroom experience into a performance learning task. Find applications. Design performance learning tasks that will help students grow better brains for lifelong learning.

Chapter 1

Introduction to Performance Learning

What Is Performance Learning?

Performance learning immerses students in learning facts, skills, and concepts by doing tasks or performances. A teacher or mentor guides the learner as he or she practices and refines a skill. The learner demonstrates proficiency by doing the skill, first in familiar settings and ultimately in new situations. To celebrate success, the student displays skill development in a public performance.

Performance learning is the difference between watching cross-country ski races on television and doing cross-country skiing. The television viewer does not feel the slipperiness of the snow, the glide of the skis, or the interplay among thigh, torso, and arm muscles needed to maintain balance on the trail. The novice skier experiences all of those feelings plus the softness of the snow when he falls and the cold tingling as snowmelt runs down his neck inside his jacket. Focusing on the skill keeps the novice upright on his skis. As he practices and his proficiency improves, his attention shifts to the terrain, the views from the trail, and the birds and other wildlife sharing the territory with him. This performance learner may be on view each time he practices the skill. If he shares the trail with other skiers, they may notice his ongoing improvement and comment about it. The novice and the more experienced skiers share a common, informal set of standards by which they evaluate his performance. Many people who have learned to ski remember the benchmarks that indicate each increase in skill development. Everyone on the trail shares a common vision of the expert churning across the finish line to win the Olympic gold medal.

Learning to ski may be linked to other, broader concepts such as lifelong fitness. The novice skier may prefer exercising in fresh air to working out in a gym, and winter snow or ice may make walking or biking difficult. When faced with these weather realities, the novice may decide to learn to ski to expand his repertoire of outdoor activities. His commitment to learn-

ing to ski demonstrates his understanding of the impact of exercise on aerobic fitness, cholesterol levels, and overall strength and agility. By choosing to learn a new skill to apply these ideas, the novice is demonstrating *understanding* as Gardner (1991) defines it. He is applying his knowledge of the facts appropriately in a new situation.

When Is Performance Learning the Most Appropriate Model for the Learning Task?

Sometimes, the most effective learning results from doing a task or practicing a performance that applies important facts or concepts. Renate Nummela Caine and Geoffrey Caine (1991) state that the brain remembers best what it learns in the context of ordinary, everyday experiences. The novice skier remembers the fitness concepts that he has learned in the context of physical exercise. To learn and remember how to change the speed of a chemical reaction, a science student could manage a compost pile. Ideas and concepts that are embedded in this kind of natural, spatial learning experience are the ones that stick to the brain.

Caine and Caine also state that the brain processes parts and wholes simultaneously. The science student's brain remembers facts about factors that affect reaction speed because the brain is focused on the details of temperature, moisture, added ingredients, scrap size, and the whole picture of turning food scraps and lawn clippings into compost. The compost pile provides a context within which the details and concepts are more lastingly remembered.

In deciding when to use performance learning, teachers may want to ask themselves these questions:

- Are these ideas or concepts embedded in a particular task or performance?
- What skills are associated with learning these ideas or concepts?
- What learning do my students need to be able to demonstrate to graduate to the next level of education?

Inspecting school district or state standards will help teachers answer the last question. Information about standards can be found on the Internet at <http://www.putwest.boces.org/Standards.html>. This site, maintained by the Putnam Valley Central Schools, is an electronic repository of information about national, state, and local standards as well as those of other countries and standards by subject area.

Most states have published criteria for graduation: standards and benchmarks that describe and define the learning that students must exhibit in order to graduate to the next learning level (i.e., elementary school, middle school, high school, post high school, or lifelong learner). These standards and benchmarks often specify that students will demonstrate their learning