

Second Edition

Performance- Based Learning

**Aligning Experiential Tasks and
Assessment to Increase Learning**

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Second Edition of
Performance Based Learning for the Multiple Intelligences Classroom



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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 a concert on television and playing an instrument as part of a band or an orchestra. The television viewer does not feel the vibration of the stage, the concussion from the percussion, or the movement necessary to play the instrument with expert skill. The novice musician feels all those things plus the internal twinge that comes from playing a wrong note or playing a note at the wrong time. Focusing on the skill keeps novices producing the notes in the correct order. As they practice and their proficiency improves, their attention shifts to the phrasing of the music and its implied emotion. They may be in the company of others each time they practice the skill. If they share the practice room with other musicians, the others may notice the novices' ongoing improvement and comment about it. The novices and the more experienced musicians share a common, informal set of standards by which they evaluate the performance. Many people who have learned to play an instrument remember the benchmarks that indicate each increase in skill development. Everyone on the stage shares a common vision of the expert playing with deep feeling during a concert with an internationally famous ensemble.

Learning to play an instrument may be linked to other, broader concepts such as the recognition that music seems to be hard wired into the human genetic code (Jensen, 2002). Novice musicians may have decided that they want to do more with music than

sing in the shower or play a kazoo. A music teacher from a novice's school or a professional musician who is part of a school outreach program may have suggested that the novice learn to play an instrument, and he or she has decided to give it a try. The novices' commitment to learning to play demonstrates their understanding of the importance of music in cognitive development. By choosing to learn a new skill to apply these ideas, novices are demonstrating understanding as Gardner (1991) defines it. They are applying their 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. Caine and Caine (1991) state that the brain remembers best what it learns in the context of ordinary, everyday experiences. The novice musician remembers the feelings of creativity or relaxation or alertness that were experienced in the context of listening to music and recognizes some of these same feelings when he or she produces the music. A science student who manages a compost pile with expert results learns how to manage the speed of chemical reactions. For the novice musician or scientist or learner of any other content, process, or skill, research shows that the ideas and concepts that are embedded in this kind of natural, spatial learning experience are the ones that stick to the brain.

The brain processes parts and wholes simultaneously. Too often, classroom instruction focuses on the parts and ignores the whole, and removing wholeness also removes meaning (Caine, Caine, McClintic, & Klimek, 2005). The compost-making science student's brain remembers facts about factors that affect the speed of a reaction 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 will 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 a number of Web sites, including (at the time of this writing) <http://www.mcrel.org/standards/benchmarks> (a site maintained by the Mid-continent Research for Education and Learning organization) and <http://www.education-world.com/standards> (the Web site of Education World).

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. These standards and benchmarks often specify that students will demonstrate their learning by doing a performance assessment. Performance learning provides students with the skills they will be asked to demonstrate on performance assessments by providing students with explicit instruction in strategies

and skills (McTighe, 1996–97). When students are engaged in performance learning, learning strategies align with assessment techniques, students know how they will be expected to demonstrate learning, they frequently self-assess progress toward their goals, and they learn more (Caine et al., 2005).

WHY IS PERFORMANCE LEARNING EFFECTIVE? HOW DOES PERFORMANCE LEARNING HELP STUDENTS BECOME QUALITY LEARNERS?

As teacher and student assess performance, they begin by focusing on what the student can do and how his performance has improved since the previous assessment. The student experiences positive emotions about his task or skill development, and this enhances further learning and improvement in important ways. Ornstein and Sobel (1987) say that people want to repeat pleasant experiences and avoid unpleasant ones. O’Keefe and Nadel (1978) conclude that positive emotions create the conditions for the brain to form better cognitive maps. Caine et al. (2005) say that students who experience “relaxed alertness” are more likely to take charge of their own learning and to grow a brain that can learn more successfully. The student will be able to remember his performance more clearly, repeat it more effortlessly, and remember associated ideas and concepts more accurately when he remembers learning as a pleasant experience.

At the beginning of the task, the teacher, as a performance learning coach, and the student will look at the stages of skill development and the vision of the final level of achievement. The teacher will encourage the learner to focus on improvement and step-by-step skill development. This focus on gradual improvement is especially important for young children who often are not aware of the natural stages of skill development (Tomlinson, 1999). Depending on the children’s ages, the teacher can help them understand the concept of developmental stages by asking if they remember learning another skill, for example, fastening shoes or coloring inside the lines, and the teacher and students can discuss the development stages of that performance.

To guide learners through development of the new performance, the teacher will give them a rubric that details the performance criteria for each developmental level. The coach—who can be either the teacher or a fellow student—will encourage the learner to continuously self-evaluate personal performance, determine personal developmental level, and look for improvement by asking these questions:

- What developmental criteria does my performance meet?
- What’s the developmental level of my performance?
- What am I doing well?
- What’s the next developmental stage?
- How can I get there?
- What do I need to improve?
- Who can help me?

This continual focus on performance improvement illustrates the Japanese principle of kaizen that is a focus of many quality management programs. Kaizen teaches that waiting until the final performance to do any evaluating of the learner’s progress will not lead to a quality performance. Continual self-assessment, adjustment, and step-wise improvement are needed to build a quality performance.

Performance learning is brain-friendly learning and leads to quality because it

- Focuses on what the student can do.
- Identifies how the student's performance has improved.
- Fosters a positive emotional climate for learning.
- Identifies the next stage in skill development.
- Provides criteria for each stage in skill development.
- Provides a framework for kaizen, or continuous improvement.

WHAT ARE THE DEVELOPMENTAL STAGES IN PERFORMANCES? HOW DO WE EVALUATE PERFORMANCE LEVELS?

Skill growth in all kinds of performances seems to follow a common path. As identified by Posner and Keele (1973), the phases of skill development are novice, advanced beginner, competent user, proficient performer, and expert. When novices begin learning a skill, the coach gives them a rubric that describes the criteria for each stage of skill development. The novices use this rubric to determine their performance level of development. By comparing their performance with the clearly stated criteria, they decide what they are doing well and what steps they can take to improve. They also use the rubric to decide what help they want from the coach.

As they continue to practice and improve, the learners chart their way through the performance levels. By comparing their execution with the indicators in the performance rubric, the learners will continually change their self-evaluation. They will decide when they have moved from novice performer to advanced beginner, from advanced beginner to competent user, and so on.

At the same time that the learners are using the rubric to self-evaluate, the teacher or the learners' peers will observe their work and use the rubric to evaluate the learners' performance level. The teacher, peers, and learners will use frequent conferences to compare their evaluations of the learners' performance, discuss any differences in their evaluations, and identify goals for improvement. The learners will develop a plan for improving their performance and will ask the teacher or their peers for help in carrying out this plan. The learners may, for example, ask for more frequent feedback about what they are doing well and what they can do to improve their performance. This self, peer, and teacher evaluation process works well so long as everyone involved in the process maintains a dual focus: What are the learners doing well already, and what might they want to improve? The final evaluation of the performance learning task does not mean that the learners cannot continue to improve their skills. Growth and improvement stop only when developing the skill is no longer a high priority for the learners.

Novices

The coach introduces the novice musicians to their instruments and to sheet music. The coach helps the novices prepare for playing the instrument by demonstrating fingering, holding the instrument, and reading music. After the novices have had a chance to practice the latter, the coach and the novices read a fairly short piece of music together by having the novices hum the notes. At this point, the novices want to learn how to keep the notes flowing at a reasonable pace. Next, the novices practice using

their instruments to play the notes, and coach and novices have another trial run. At the end of the novices' second test run, the coach and the learners assess progress. They discuss what the novices have learned, how to practice effective skill use, and how to adjust the performance for improvement.

Advanced Beginners

Once novices can coordinate music reading and fingering, they begin to practice playing music pieces in a way that maintains their rhythms. They focus more on the experience of making music than on the individual segments of the performance, although their primary focus is still on the performance. They still attend carefully to the coordination of fingering and notes on the page, but their music begins to flow. They can enjoy themselves during practice. Their mistakes become less frequent, and they begin to notice the emotion in the music. They and their coach discuss their learning and adjust their performance to further their skill development.

Competent Users

Competent musicians begin to think about the entire context of making music. They may begin to explore new and more challenging pieces. These musicians can now focus on the shifting moods and emotions and rhythms of the music. They may want to experiment with different tempos and volumes. As their skill progresses, they and their coach celebrate their success and look for more adjustments that will further develop their performance. Figure 1.1 shows a performance rubric for students who are learning music video design.

Proficient Performers

When proficient musicians are playing their instruments, they may realize that they are not thinking about the skill all of the time. They are enjoying the sound and feeling and are performing their music without conscious attention. As their playing becomes more and more automatic, they may find that they are now coaching novices. They are still very aware, when asked, of what they are doing and how it is working, and this awareness can help them become effective mentors to newcomers, because they can explain what to do and demonstrate how to do it without forgetting any of the elements that a beginner needs to know. Proficient performers often enjoy creating music. They are relaxed, happy, and confident when playing even difficult pieces.

Experts

Other musicians hear the expert play and say, "He's a natural." Experts are often so unaware of what they are doing that they cannot explain it to someone else. Their unconscious, effortless use of their skills ensures flawless performance. Because experts may forget about, or lose awareness of, key steps in skill development, they may not be effective as coaches. Their explanation or demonstration of a skill may omit details that novices need to be aware of in order to improve. Experts could be concert soloists with a major orchestra. Their performance abilities are so deeply embedded that they cannot imagine not knowing how to do the performance unconsciously and flawlessly.

Sometimes, novices do not have a clear picture of an expert performing the skill that the novices are learning. The coach and the novices can study models of excellence and use the rubric to assess the expert performance. A novice musician, for example, may watch video clips of artists in concert to see how experts make beautiful

Performance Rubric: Learning Brains and Music Strains					
Developmental Level	Novice	Advanced Beginner	Competent User	Proficient Performer	Expert
Performance	Nothing matches! Does not synchronize words, music, and movements. Uses jerky movements and less than 50 percent of space. Speaks with inaudible voice. Mumbles and stumbles.	Fits words and movements to music 50 percent of time. Uses jerky movements and 75 percent of space. Speaks with audible voice. Speaks incomprehensibly.	Fits words and movements to music at least 80 percent of time. Uses smooth movements and 75 percent or more of space. Uses audible voice and understandable diction.	Synchronizes words, movements, and music. Moves smoothly, filling almost all of the space. Uses clear diction, good volume, and expression.	Composer's sister wrote the lyrics! Uses movements that are a natural fit! These kids belong in the Bolshoi Ballet company! Packs lyrics with expression and meaning!
Choreograph and Write Lyrics	Gives correct name and close dates. Describes music vaguely. Provides no sponsor information. Provides no information on early influences. This could be any one of a dozen composers!	Gives correct name, dates, and family information. Omits composer's sponsor. Omits early influences. Gives one or two tidbits about composer's style.	Gives correct name, dates, and family information. Names sponsor; provides no details of relationship. Cites one or two early influences. Describes style effectively.	Gives name, dates, family, friends, and details well. Tells good story of relationship with sponsor. Identifies and details early influences. Describes style and importance to composer's period well.	Provides wonderfully complete and accurate information. Writes thumbnail sketch of composer's life and loves that could be included in a published collection. Bravo!
Know the Composer	Performs in school clothes in someone's bedroom! Wears regular clothes, not costumes. Works in insufficient space for moves.	Attempts to disguise clothes. Uses period-looking shirts. Uses some makeup (e.g., hair powder). Films in school cafeteria. Does not give attention to backgrounds. Works in adequate space.	Uses period shirts, knee pants. Uses hair powder and feather quill pens. Films in school auditorium in front of stage curtain; uses neutral background. Works in adequate space.	Uses period shirts, knee pants, brocade vests. Uses hair powder, quill pens. Creates parchment roll music. Performs on stage using backdrop curtain. Works in generous space.	Uses period shirts, knee pants, brocade vests; loafers with buckles. Uses hair powder and quill pens. Creates parchment roll music. Works in generous space.
Make Costumes and Set					

Figure 1.1

<p>Produce Biography</p>	<p>Provides no cover. Creates no illustrations. Leaves four or more typos in work. Uses unclear focus. Omits chronology. Does not use musical terms to describe composer's work.</p>	<p>Uses paper cover. Uses one or two illustrations. Leaves two or three typos in work. Provides most details in chronological order; adds one or two at the end. Focuses on composer. Describes work using musical terms.</p>	<p>Provides cardboard cover. Creates three or four illustrations including cover. Leaves only one typo in work. Focuses on composer and sponsor. Lists all life details in order. Describes music precisely.</p>	<p>Provides hard, illustrated cover. Creates four or five illustrations. Leaves no errors; uses clean copy. Focuses on composer, sponsor, and colleagues. Provides good chronology and use of musical terms. Nice job!</p>	<p>Uses hard, illustrated cover. Illustrates every page. Uses copy-quality printing. Tells engaging, interesting story. Awesome!</p>
<p>Create the Poster</p>	<p>Small, 18 by 24 inches. Leaves many smudges and finger marks. Leaves evidence of lots of corrections. Writes in small, faint letters. Includes small, colorless pictures.</p>	<p>24 by 24 inches. Leaves 2 or 3 smudges. Colors over white-out corrections. Writes large, but faint (or small and dark). Includes large illustrations, arranged poorly.</p>	<p>24 by 36 inches. Leaves no smudges or evidence of corrections. Writes legibly with large and dark characters. Includes large, interesting, colored illustrations, arranged well.</p>	<p>24 by 36 inches or larger. Very neat. Writes boldly and dramatically. Includes illustrations with good elements of composition and perspective.</p>	<p>24 by 36 inches or larger. Includes crisp illustrations. Writes dramatically and with emotional hook. Uses good composition, line, and perspective.</p>

Figure 1.1