It Only Counts if You Can Do the Job!

by Peter R. Hybert and Kelly R. Smith

This is a test!

Question 1. *Who would you rather have performing a heart bypass operation?*

(a) A doctor who has been well-trained
(b) A doctor who has successfully performed 100 operations on patients of all ages and conditions

For most of us, the answer is clear: we'd choose a doctor who has a proven track record of performing the surgery on hundreds of patients. It's also clear that training alone doesn't ensure the ability to perform. That requires verification—objective measurement that the performer can do the task effectively in "real-world conditions."

So, why is it that many companies and training professionals avoid using performance-based testing? It's due, in our opinion, to three common misconceptions about how to verify or test an individual's capability to perform.

• Testing knowledge confirms a person's capability to perform tasks.
• It is too difficult to certify performance.
• Different tests are required for qualification, training, and coaching/structured on-the-job training applications.

The facts about performance testing dispute these misconceptions. Performance-based testing actually improves on-the-job performance, helps manage individual capability, results in better training, and is not prohibitively difficult or complex to implement.

It's Just Good Business

Performance-based testing offers clear advantages to the savvy businessperson. For example, performance-based testing can

• Eliminate excess training by letting skilled participants "test out" of training they don't need.

• Support structured on-the-job training (S-OJT) delivered by a coach by describing performance expectations and criteria to guide coaches and learners.

• Be used to standardize performance and to qualify employees (or *an* employee) in specific tasks by providing standard "checkpoints" to be tracked.

• Permit learners to choose the way they develop a skill, as long as they can pass the performance test.

• Provide the basis for an employee "capability inventory" by tracking and managing information on who is qualified to perform specific tasks (if this is designed into the overall system).

The bottom line? Performance testing can actually reduce training costs and improve quality.

What Is a Performance Test?

A performance test is a demonstration (or hands-on proof) that someone can actually perform a task in the real world. It's not just *knowledge* that there are square pegs and square holes, but proof that the participant can actually *perform the work* of putting the square peg in the correct hole. Put another way, it's not just recalling knowledge or performing artificial enabling tasks such as labeling equipment components on a drawing. This is a paradigm shift for many training practitioners and the line managers who are our internal/external clients.

There are four key principles for performance tests.

- A performance test is based on observing a performance or evaluating an output using standard objective criteria.

- A performance test should be reliable and fair with little variability from one evaluator to the next.

- Performance tests need to verify only actual work or a simulation of it and not enabling knowledge or skills, for if someone can perform the work, then they must by definition also possess any necessary enabling knowledge or skills.

- Performance tests should replicate real-world conditions, including the use of typical job tools and resources in the typical work environment.

Designing performance tests is similar to conducting a task analysis. At the simplest level there are two key design choices.

- *What* will be assessed—will it be *real work* or a *simulation* of real work
- *How* it will be assessed—will *actual* work be observed or will the *output* of the work be reviewed

What Will Be Assessed	Description	An Everyday Example	A Project Example
Real work	Observing a candidate perform the task and/or produce the output in a real situation	Watching your teenager fill the car's gas tank and check the oil	Program and start up a piece of equipment in the field
Simulated work	Observing a candidate perform an approximation of the task or produce a limited output in a situation similar to the real job	Watching your teenager change a tire in the driveway instead of waiting until he or she has a flat tire on the road (this would include safely jacking the car up and loosening the lug nuts, etc.)	Creating *part* of a software control program for a typical system to run on a *stand-alone computer* instead of a *complete* program that would run on *actual equipment*

How It Will Be Assessed	Description	An Everyday Example	A Project Example
Reviewing the output	Evaluating the result or product of a work process or task based on defined criteria	Deciding if a turkey is cooked based on a temperature reading, the color of the skin, etc.	Reviewing a printout of a computer program
Observing the process	Observing the work as it occurs and evaluating the process steps according to defined criteria	Watching someone stuffing a turkey to ensure that they are using safe food-handling techniques	Observing the technician starting up a piece of equipment in the field

While it is preferable to observe real work being done, sometimes it is more practical to use a simulation. For example, if doing the real work could result in injury or some other unsafe condition, it may be necessary to simulate the work. Or, if you plan to include the test inside of a training program, you will almost certainly need to simulate the work.

The choice between evaluating the output of the process or observing the process itself depends on the type of performance. For example, if a participant is required to use a specific soldering technique properly while assembling a component, it may be necessary to observe the technique rather than just the final soldered joint. On the other hand, reviewing a printout of computer software code (an output) is preferable to standing over a learner and watching him or her type the code into a computer.

But She Passed the Bar Exam!…or…Why Knowledge Tests Fail

During a speech at the Training '99 Conference held in Chicago, Elizabeth Dole, former president of the Red Cross, told the story of her first case as an attorney. She had passed the bar exam with flying colors but had never conducted a trial. Knowing her obvious deficiency in real-time court experience, she observed night court to get an idea of how trials are conducted and how lawyers and judges conduct themselves.

Dole's experience shows the difference between *knowing* and *doing.* The bar exam, for example, tested enabling knowledge but not the skill of applying it. Dole was smart enough to know that knowledge of law was not enough to win her client's case. The proof would be in the performance.

There are, however, some situations where knowledge/skill tests are appropriate. One appropriate use is as a diagnostic to determine *why* a person is unable to perform a task. Within a training event, enabling knowledge/skill tests can help trainers monitor learning. Another use is to screen out or qualify candidates for performance testing. And finally, on the practical side, sometimes knowledge/skill tests are a necessity—most regulatory requirements are built around knowledge tests.
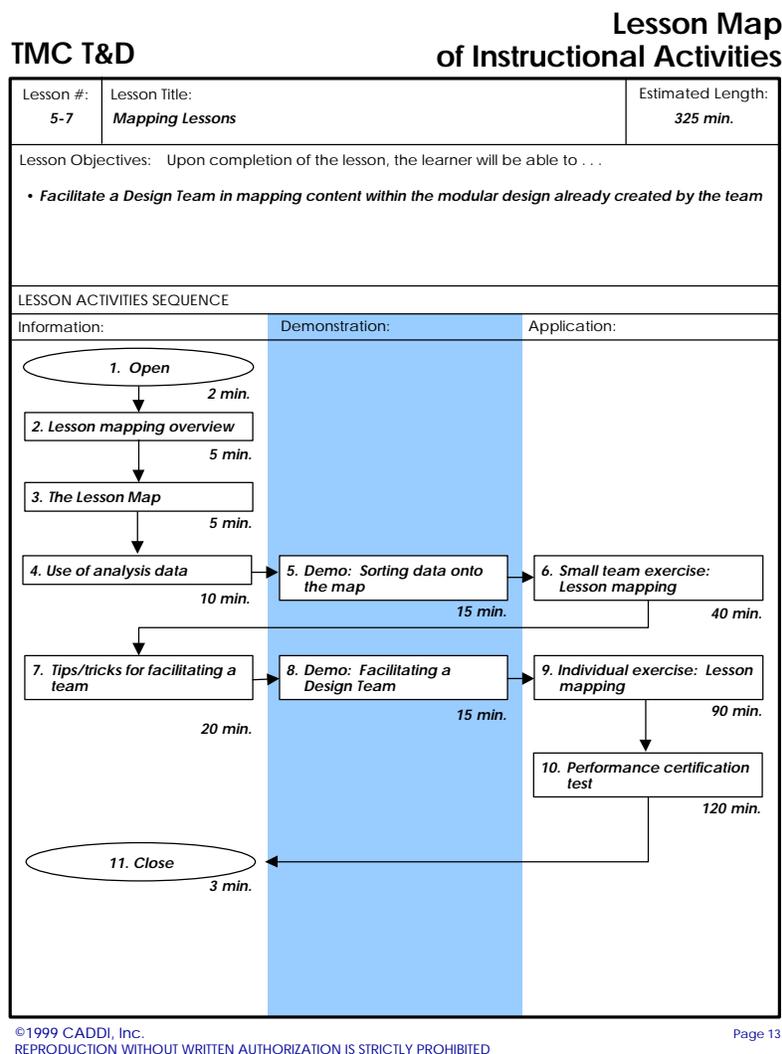
But remember, a knowledge/skill test does not ensure that someone can actually perform a task. You have to verify the real thing!

Performance Tests Have a Variety of Uses

If performance tests are designed as part of a system, they should lend themselves to reuse. For example, suppose you had a performance test that required the participant to develop a short computer program from a specification. The test tool, for use when reviewing the output, would consist of the criteria for the finished program (e.g., syntax, structure, comments, etc.).

Performance tests can appear within training (as pre- or posttests) or on the job (as an S-OJT checklist, job aids, or qualification instruments). The biggest differences in these settings is the user and the amount of infrastructure and administrative support needed to publish the performance test instruments, train the evaluators, and track completion by participants.

(The Lesson Map[1] below illustrates how performance tests can be used for different purposes in the learning process.)

Lesson Map of Instructional Activities

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Lesson #:	Lesson Title:	Estimated Length:
5-7	*Mapping Lessons*	*325 min.*

Lesson Objectives: Upon completion of the lesson, the learner will be able to . . .

• *Facilitate a Design Team in mapping content within the modular design already created by the team*

LESSON ACTIVITIES SEQUENCE

Information:	Demonstration:	Application:
1. Open — *2 min.*		
2. Lesson mapping overview — *5 min.*		
3. The Lesson Map — *5 min.*		
4. Use of analysis data — *10 min.*	5. Demo: Sorting data onto the map — *15 min.*	6. Small team exercise: Lesson mapping — *40 min.*
7. Tips/tricks for facilitating a team — *20 min.*	8. Demo: Facilitating a Design Team — *15 min.*	9. Individual exercise: Lesson mapping — *90 min.*
		10. Performance certification test — *120 min.*
11. Close — *3 min.*		

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[1] The Lesson Map is part of the PACT Process for Training and Development developed and marketed by CADDI, Inc. in the late 90's. For more detail, see "lean-ISD," by Guy Wallace.

Performance Testing Is not Difficult to Implement

Performance tests are best developed and used within an integrated approach to human performance and training. An integrated model allows you to analyze the performance and enabling knowledge and skills and then to design the systems that support it. The systems can include training, selection, feedback, and other human performance support systems in addition to performance-based testing and qualification.

We have found that most candidates actually like performance tests. Once they get over their initial resistance to the idea of "testing" and realize they will be evaluated against standard criteria, they see the potential benefits. For the employee, this often means avoiding training they don't need (because they can "test-out" through a performance test). Equally important, subjective evaluations (a common source of workplace friction) are eliminated because the tests are standardized for all. From a manager's standpoint, performance-based testing helps identify employees who need additional coaching to meet quality standards.

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