A Difference in Perspectives: Subject Matter vs. Performance-based Training

Karen L. McGraw, Ed.D. and Dennis Mankin

Introduction

Performance is defined as the behaviors (both physical and mental activities) that a performer does in support of achieving valuable results for the organization. We typically think of training and instruction as the process of preparing learners to produce job outcomes and perform job functions to standard. However, not all training is equal. In this short overview paper we describe the primary differences in subject matter training and performance-based training and explain why performance-based training is more effective.

Performance-based training differs in several ways from subject matter training. However, the biggest difference is one of perspective. Performance-based training is both outcome/organization centered and learner centered. In other words, it improves the performance of individuals, which in turn adds value to *both* the skill set of the performer *and* the business results of the organization. In the process, performance-based training uses:

- Processes and procedures directly relevant to the job

- Materials similar to those used on the job, and

- Practice that 'feels like' on-the-job application.

Subject Matter Training

Subject matter training is training that is focused on topics and principles. This type of training typically clusters "things you need to know" into logical conceptual groups and labels the course with a topic-like title. College courses represent a perfect example of subject matter training. For example:

- Principles of Accounting

- Introduction to Electricity

- Communications Theory

These represent groupings of knowledge-type chunks, each of which could be decomposed into increasingly detailed rules, heuristics, definitions, and other basic knowledge.

Subject-matter training is not *bad*—but it is not the most effective way to train for *performance*. Nor is there a direct correlation between knowledge or subject matter expertise and high levels of performance (as measured by business results.) This is not to say that subject matter isn't necessary, but rather that subject matter presented out of context [the work of the role] and *not* tied to performance simply doesn't transfer well to the job.

According to experts such as Joe Harless, the basic weakness of subject matter training—***transfer to the job***—exists because:

1. *Humans vary widely in the ability to generalize from concepts and rules presented in a class to specific cases they confront on the job.* This means that even participants who 'aced' the knowledge-based practices and tests in the course may not be able to select and apply critical knowledge in a work setting.

2. *Humans often vary widely in discriminating "nice to know" vs. "need to know".* Consequently, when SMEs create courses there is often a dump of information—some of which is relevant to performance and some not. So the focus often becomes storing and regurgitating bits of knowledge that is foundational in nature…key terms, basic facts, interesting pieces of data about a topic, etc. Worse yet, learners typically cannot discriminate which knowledge is interesting and "nice to know" vs. which is critical to performance.

3. *Subject matter is likely to be forgotten because of poor retention.* Retention is driven by meaningfulness of the content, the amount and quality of practice while in training, etc. We lose what we don't use. In subject matter training performers have to both recall *and* generalize from the idea or concept to the task required for performance. Many just cannot do either one or the other. And the further [in time] from training when we are called on to use the data, the harder it is to recall and use.

4. *The brain seeks to structure meaning from what it sees, perceives, and takes in.* Memory is very contextual. That is, the brain converts information to meaning like it was taught, in the context provided by the "learning event." Yet the job may provide a different context and trigger. The learner may not even recognize how what they know applies because they may have learned it as a definition when application is called for in the work place.

Performance-Based Training

Performance-based training is training that is focused on enabling learners to produce the valuable outcomes associated with a job. Performance-based training has the following characteristics:

- The focus is on outcomes of value to the job, not fuzzy objectives

- Practice exercises call for simulation of job tasks

- Teaching tactics are selected based on characteristics of the tasks

- Content is selected based on its relevance to tasks that must be performed

- The best methods for doing the task are taught and applied throughout the organization

- Users rely on training tools to help them **perform** their jobs more effectively and efficiently.

Performance-based training has a narrowly defined purpose: *reducing the gap between novice or standard performers and exemplary or key performers.* Performance-based training is designed to enable people to bridge the gap between their initial knowledge, skills, and attitudes and those needed to perform well on the job. This type of training makes explicit use of Gagne's cognitive strategies to encourage the conditions of learning:

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- *Input cognitive strategies*—Performance-based training builds toward actual job activities and makes that linkage obvious, resulting in higher internal stimulation, which motivates learners to attend and positively impacts attention span.

- *Process cognitive strategies*—Performance-based training helps learners make sense of what they learn by using techniques such as concept elaboration (associating something new with something previously learned), early opportunities to respond and receive feedback, and rehearsal (trying out something new with various levels of support, cues, and feedback)

- *Output cognitive strategies*—Learners acquire new knowledge or skills in performance-based training by applying what they learn using techniques such as isolated and integrated practice and simulated cases that get them continually closer to the actual behaviors they must perform on the job, which helps them to 'make meaning' of their experiences.

The primary benefits that result from using performance-based training rather than subject matter training include:

- *Minimizing learning time*--performance-based training links the acquisition of knowledge to its utilization. This is more efficient because it prevents any slippage of knowledge between "storage" and "practice" since concrete examples and application and practice are woven throughout the training.

- *Higher levels of performance*--performance-based training enables learners to achieve high levels of performance quickly because their energies are channeled into learning just what they need to perform the job well.

How to Accomplish Performance-Based Training

To help us achieve the outcomes we (as analysts) desire, we recommend *Performance DNA Analysis* as the front end analysis methodology. *Performance DNA Analysis* tells us "what"—i.e., which work processes and tasks are critical to improved performance and whether or not these are amenable to improvement by training. Once this is known, we scrutinize the problematic work processes and tasks to determine how to combine them into a performance-based curriculum. During this process we examine their complexity and difficulty and the way they are used to achieve desired performance. This enables us to make effective decisions concerning the best interventions (training, job aids), the courses required in the curriculum, and how to sequence courses for optimal results.

From this information we build the curriculum plan. We use additional techniques like content analysis and a more in-depth task analysis to help us define and design the content, modules, and sequence of activities within each course. In doing so we pay particular attention to the definition and sequencing of modules and the activities within each module, because the structure of the module activities are critical to the success of performance-based training.

We use the 7-phase **PERFORM** model to guide performance-based design and development of the training modules that comprise a course. This model suggests different types of delivery and practice activities that help designers and instructors ensure that learners are well oriented, apply what they have learned through various

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level of practice activity, and demonstrate the desired level of performance before going back to the job.

While not *every* step or concept in PERFORM need be in every module, following this guide will help designers ensure that each module sets a good foundation and builds for performance. The table that follows presents an overview of PERFORM.

The PERFORM Model

Step	Guidance
Preview	Provide the learner with a contextual overview-- a 'big picture' contextual organizer
Enable	Provide the learner with key terminology, prerequisite skills, facilitating skills, or basic subject matter needed to be able to work through the lesson presented. This basic subject matter is presented in the context of the job and behaviors or outcomes to be produced.
Respond	Provide the learner with a clear presentation of the performance to be learned, engage the learner in the new behavior, and provide initial feedback
Facilitate	Provide the learner with cues and support to further engage the learner in the target behaviors
Operate	Provide the learner with an opportunity to demonstrate a target behavior without external assistance
Rehearse	Provide the learner with an opportunity to practice the new behavior in contextually-appropriate situations
Merge	Provide the learner with practice that requires the integration of multiple units of instruction in situations that reflect real world tasks and behaviors

Closing

The central aim of the field of human performance technology (HPT) is to produce desirable results that are valuable to both the organization and its employees by implementing effective and efficient interventions. This document has contrasted subject matter training and performance-based training. The performance-based training approach fits the HPT model primarily because of the potential for greater impact and cost savings. Focusing exclusively on what the performer must know in order to perform well usually results in less time in the classroom because (1) "nice to know" subject matter has been eliminated and (2) job aids are used to augment or replace certain training. Yet less is usually more because people learn faster by *applying* concepts and when they are able to see where each task being taught fits into the bigger picture.

Practice

Place a checkmark beside the course titles that *appear* to be performance-based.

- □ 1. Plumbing Basics
- □ 2. How to Develop Performance-based Training
- □ 3. Principles of Human Performance Improvement
- □ 4. Managing Teams to Produce Results
- □ 5. Leadership for Dummies
- □ 6. Conducting Triage in Large-Scale Disasters