

In Praise of the Dependent Variable

The most popular human resource development (HRD) practices and theories are highly questionable. And as the line from a classic musical concerning the present state of affairs puts it, they've gone about as far as they can go. The role of both the *Human Resource Development Quarterly* and the Academy of Human Resource Development is to challenge and advance the profession through sound theory and research. Sound HRD practice makes for sound HRD theory, and sound HRD theory makes for sound HRD practice.

I recently reviewed a book by twelve prominent psychologists, titled *Learning, Remembering, Believing: Enhancing Human Performance* (Druckman, 1994). This 395-page book on the topic of enhancing human performance does not even contain a definition of performance, let alone human performance. The word "performance" does not appear at all in the 9-page index. The word "task" appears only twice in the index and is discussed in the text only briefly. Remember, this is a book about human performance. These blatant examples of ignoring HRD's full theoretical foundations help illustrate the inadequacy of HRD theories and tools that come *only* from psychological theory.

I have regularly made the case that HRD's theoretical foundation must include economic, system, and psychological theories (Swanson, 1994, 1995), in contrast to HRD's current dominant reliance on psychological theory. As much as any field of study that I am aware of, psychology is naïve about performance outcomes—in other words, the *dependent variable*. Thus, as a result of the inordinate influence psychology has had on HRD, the profession has come to an unfortunate and impotent state. It is common to read of change, employee satisfaction, intent to transfer training, and learning as dependent variables of HRD. Although these are important and may be useful process measures, they are not substantial dependent variables of HRD. The reality is that good HRD ought to, at times, resist change, accept dissatisfaction as appropriate, and take the position that knowledge without expertise could be a waste of money.

As far back as 1962, Gagne challenged those in the psychology profession interested in personnel training to stop studying what happens inside the learner and to start studying the organizational tasks to be learned. Twenty years *prior* to Gagne's "revelation," the need to study organizational tasks and the context surrounding them was already well known in the HRD profession and was profoundly evident during World War II (see Dooley, 1945). Following WWII, however, psychological theory pushed aside the then-dominant

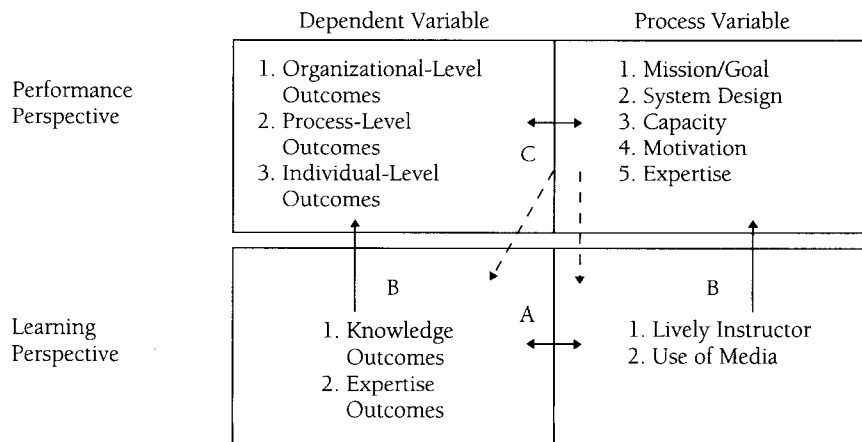
industry training and development logic that was based on economic, system, and psychological assumptions.

This editorial, then, is about the dependent variable. The dependent variable—the *outcome*—is the ultimate reason for human resource development. The trouble is that most HRD practitioners and researchers are either ignorant of, indifferent to, or annoyed by the dependent variable. Their passion is for the independent variable—the innovative process or tool they have invented or nurtured—not the outcome.

In HRD, ignorance of the dependent variable is paralyzing. The people who own and run organizations are most concerned about the dependent variable—in the form of survival, return-on-investment, effectiveness and efficiency of goods and services production, quality of goods and services produced, customer requirements, and customer satisfaction. Furthermore, these decision makers will do what needs to be done to enhance the dependent variables—with or without HRD. That is why management *bought into* reengineering and *mostly talks* about the learning organization.

Figure 1 illustrates the dilemma. The HRD professionals who take the *learning-only* perspective see HRD primarily as illustrated by the interaction (A arrow) between dependent and process variables. A whole cadre of HRD gurus touts fun training or group process techniques on the assumption that enjoyable or fun events automatically result in learning (not true) and that this imagined learning then turns into performance (ridiculous). Next, this mythology is aggressively reinforced by a flawed but widely accepted four-level evaluation model that teaches that participant reactions are a legitimate proxy for learning (not true) and that learning is a proxy for performance (not true). The mythology assures us that participant satisfaction will somehow turn into big

Figure 1. Relationships Between HRD Perspectives and Variables



results (not true). The truth is that although the flawed four-level evaluation model preaches performance results, few cases ever follow through because there is no initial deep understanding of performance (see Holton's critique, 1996, and Kirkpatrick's defense, 1996).

An example of the way the learning-only perspective, the A arrow logic, is often extended is the notion that people are the organization; therefore, the focus should be on people and their learning, and therefore, the only thing better than learning is more learning.

A less visible group in the HRD profession consists of people who know from research that the A arrow relationships lack validity. These people are deeply concerned about performance yet still view the world through the individual. That has been their orientation and training. Industrial psychologists and human performance technologists struggle to connect the individual to *meaningful* performance—a learning to performance perspective that is illustrated by the B arrows in Figure 1. The tenor of much of these individuals' work is demonstrated by their concern about transfer of training and about such after-the-fact artifacts of their interventions as employee satisfaction or perceptions of effects.

An example of the B arrow actions is the HRD professional who makes a sincere effort to determine an important performance issue (such as falling sales of goods or services) and then almost immediately drops back to individual worker behavior and a traditional HRD solution such as sales training. Without a systemic approach to the total sales context and all the factors involved, sales training alone will not likely yield the needed performance outcomes.

In contrast to professionals committed to the A and B perspectives, professionals committed to the dependent variables of performance outcomes start at a very different point, illustrated by the C arrow. They focus on knowing and studying the dependent variable of performance and the process variables that influence the performance. Expertise and the learning elements of expertise make up only one of those variables. Professionals who have the C perspective *may* determine that a HRD intervention is required and that it should be enjoyable. However, as students of performance, they may equally well determine *beforehand* that a HRD intervention will be a waste of resources or that a required intervention will likely not be fun.

In this performance perspective, HRD must be a partner with other responsible agents in the organization throughout the performance improvement process. Systemic analysis, planning, programming, and follow-through on the mission or goal, system design, capacity, motivation, and expertise across all three performance levels (organizational, work process, and individual) are required. Thus, the previous example of falling sales could more realistically require such actions as redefining sales goals, designing systems and capacity to deliver what customers demand, identifying organizational reward

systems that might be working at cross-purposes, and enlisting the expertise of all people working in the process. Without this systemic approach, an organization could end up with many expensive programs that people believe are worthwhile, yet with no evidence of performance.

Calling upon economic, system, and psychological theory provides the HRD professional the opportunity to strategically position HRD actions in relation to the critical dependent variables of organizations. The integrated power of these three theories can elevate and unleash human expertise as a *primary means* of reaching major organizational goals. To tap this power, HRD must address the dependent variable at the three levels of performance outcomes—organization, work process, and individual—and have theories and tools that embrace all three levels (Swanson, 1994). A basic premise must be that economic requirements are the primary explanation of organizational performance, system requirements are primary at the process level, and psychological requirements are primary at the individual level. All three theoretical domains operate within and across all three levels of performance, however, and all three must be focused on the dependent variable of performance outcomes.

My recommendation for dealing with the HRD profession's overreliance on pseudopsychology is that we should:

1. Embrace economic, system, and psychological theories as the basis of HRD.

Economic. What is the financial benefit of the intervention? (The performance value resulting from the intervention minus the cost of the intervention will equal the benefit.)

System. What is the purpose of the larger system, its parts, and the relationships between the parts? Define the particular subsystem being addressed (such as the sales process) and its connection to the larger system.

Psychological. Do people have the capacity, expertise, and motivation to perform in the organization and in the process in which they are expected to function?

2. Focus on the dependent variable(s) for every HRD intervention, process, or model.

Identify. What are the performance outcomes at the organizational, work process, and individual levels?

Analyze. What factors contribute to the performance outcomes? Which are present or missing? How are they interacting?

HRD must get serious about the dependent variable. To accomplish this, HRD practitioners and scholars must learn more about the dependent variable and be willing to let go of their fascination with independent variables. To be taken as a serious organizational partner, HRD must embrace interventions and

tools proven to affect performance positively. This means turning away from a number of the widely held tenets of the profession. The sooner the better.

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