The Systems View of Human Performance

By Geary A. Rummel and Alan P. Brache

Most attempts to improve human performance in organizations are doomed to failure from the start. Training initiatives aimed at getting workers to turn out higher quality products? Doomed. Motivational schemes to boost productivity? Doomed. Programs intended to improve customer service, to cure production problems, to introduce more efficient sales methods? Doomed.

Sorry to be so gloomy. But most of these efforts fail, and they'll go on failing because they proceed from the fundamentally false assumption that people perform in a vacuum. Any time we try to improve an individual's output solely by changing the input of knowledge or information or skills to that individual, we are making the naive assumption that the person exists in a performance vacuum, isolated from and immune to the rest of the organization. We are ignoring the performance environment. That environment—that "system"—has an enormous impact on the way people do their jobs and on the results the organization achieves.

Take a typical improvement initiative—a request for training. The senior vice president of insurance operations for a large casualty-property insurance company sends a memo to the training director. What the VP wants is "a one-week refresher course for 500 claim representatives on handling claims, with special emphasis on scoping damage." By "scoping damage," the VP means figuring out the nature and extent of the loss a policyholder has suffered, and estimating what it will take to fix it. A claim rep is "scoping damage" when she looks at a half-burned house and says, "The foundation is probably OK, but it will need a new roof."

A typical response to the vice president's request is: "Fine. Now let's see, shall we develop this course ourselves or shop for a packaged program on the market?"

If the training department does respond that way, it has fallen victim to the fallacy of the performance vacuum: It's assuming that a training input will automatically lead to a valuable performance output. So what? Well...

- We don't know what, if anything, is broken, so how will we know if we've fixed it? How can we know unless we ask what shortfall in the organization's performance has prompted this request for training?
- Assuming there is some particular shortfall, we don't know its extent. So how can we estimate the value we'd gain by fixing the problem? Maybe investing the same dollars in some other area would give the company a bigger payoff?
- Again, assuming there is some organizational shortfall, we don't know that it's caused by a human performance problem. And if it is, we don't know whose performance is deficient, so how do we know if we're trying to "fix" the right people? Is the claim rep the critical performer here?
- We don't know what, if any, duties the claim reps are failing to perform, so how do we know we should focus on scoping damage?
- If there is a deficiency in that particular activity, we don't know what's causing it. So how do we know that training is the right cure? What about all the other factors that affect the claim reps' performance—and the "scoping damage process" itself?

No, if training is to make a real difference in the organization, we need an alternative to the vacuum view of performance. There is such an alternative view. It springs from two fundamental premises. First, every individual operates within the context of a performance system. Second, improvements in individual and organizational performance will happen only if we understand and manage the variables in that system. With those thoughts in mind, let's begin at the beginning.

Performance, Part I

Every person in an organization has a job. The point of the job is to produce various outputs that the or-
organization values for some reason. For instance, a correctly settled claim is an important output for an insurance company.

But every performer exists within a particular human performance system. Will we get the output we desire from a performer? That's determined by the five components of the performance system (see Figure 1).

The performer (1) is required to process a variety of inputs (2), such as a form, a sales lead or a phone call. For each input, there is a desired output (3)—inquiry answered, form processed correctly, etc. For every output produced (and for each action required to produce an output) there is a resultant consequence (4)—some event occurs that affects the performer. This event is interpreted by the performer (often uniquely) as either positive or negative. A basic behavioral law holds that behavior is influenced by its consequences; people ultimately will do things that lead to positive consequences and avoid things that result in negative consequences.

The final element in the system is feedback (5). The performer must receive information about the outputs he or she is producing. Are they satisfactory or deficient in some way? How do they help or harm the organization as a whole?

As Figure 1 suggests, individual performance will be a function of several factors relating to the components of the performance system:

- **Performance specifications**: Have we adequately specified and communicated the performance we want?
- **Task interference**: Have we removed barriers to effective performance by good job design and by providing any necessary resources?
- **Consequences**: Do the things we do to the performer support the desired output?
- **Feedback**: Does the performer know if his output is on target and, if not, how to get it on target?
- **Knowledge/skill**: Does the performer know how to produce the output we want? And even if she knows the procedure or the formula, does she have the expertise to do it effectively?
- **Individual capacity**: Assuming that the other five factors are adequate, does the performer have the basic physical, mental and emotional capacity to produce the output we're after?

It's critical to understand that consistent performance is a function of all six of these variables, not five out of six. For instance, you can have a group of capable, well-trained workers who know exactly what is expected, face minimal interference and get regular feedback. But if they receive (or perceive) negative consequences when they perform as desired, we will not continue to get the outcomes we want. A classic example is the outstanding worker who, precisely because he is outstanding, keeps getting loaded up with extra work by his supervisor. If the only noticeable consequence of being outstanding is that you get saddled with more burdens than your comparably paid peers, you'll probably stop performing so well.

This "systems" view gives us a useful framework for troubleshooting performance problems. Instead of saying, "Let's train them," we ask, "Where has the performance system broken down? Which components are inadequate? What do we need to 'fix' in order to fix this problem?"

The systems view also helps us design new jobs, new responsibilities and new organizations by urging us to ask, "What components do we need to put in place to support the new output we want?"

**Performance, Part II**

We have now placed the individual in a "loop" of inputs, outputs, consequences and feedback. But the performance environment is not that simple. Each performer most likely is
part of a hierarchy of performers, and that hierarchy is part of a function.

For example, a claims representative in our insurance company is part of a hierarchy consisting of a claims supervisor and a claims office manager. This hierarchy is part of the field-claims function.

Each function is expected to produce certain outputs. These are determined by the larger organization, based on its customers' needs. The function's outputs are the results of key business processes to which the function contributes.

For instance, the claims office (field-claims function) must produce a number of outputs, not least of which is "claims settled." This output results primarily from the "claims-handling process." Other business processes that operate within the field-claims function include the "policyholder-inquiry process" and the "claim-filing process." Several jobs might be required to support each process.

The business processes dictate the performance of outputs required of all people in a hierarchy. This is a key point, and not necessarily an intuitive one, so we'll illustrate it.

In our view, the first performer in the hierarchy, the claims rep, exists to work with the claims-handling process to produce that process's desired output: "claims settled." The specific outputs of the claim rep's job are determined by the requirements of the steps in the claims-handling process.

At the next level of performer, the claims supervisor exists to ensure that the claims rep works effectively with the claims process to produce the same desired output: claims settled. The specific outputs required of the claims supervisor are determined by the interaction of the claims reps and the claims process.

And so it continues. At the third level, the claims office manager exists to ensure that the supervisors provide the support that enable the claims reps and the claims process to be effective. At this level, the manager may be concerned with several hierarchies and a number of major business processes, but the principle is the same: The function manager's core responsibilities are determined by the requirements of the function and the business processes therein.

We have now formed a performance "linkage" for the claims function (see Figure 2). It starts with the requirement for a specific output (claim settled) and links to the requirements of a specific process (claim handling). One step in that process is "loss scoped," which dictates what is required of the claims rep (the first-level performer) and of performers on all higher levels. In other words, our expectations of performers must be linked to the business process that underlies the work they do and to the requirements of that process.

Performance, Part III
Now we come to the broadest view

![Figure 2: Claims Function](image)

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FIGURE 3

ORGANIZATIONS BEHAVE AS ADAPTIVE SYSTEMS

- Organizations provide a product or service—an output—for a market or receiving system.
- Organizations function in some fundamental way as processing systems, converting inputs (sales orders, technology, capital, human resources) into outputs of value to the market.
- Organizations are adaptive systems. Either they adapt to the feedback from the market (sales, customer complaints, market trends), or they cease to exist.
- The functions or departments in the organization either act as subsystems that support the basic organizational process of converting inputs into outputs, or they cease to exist.
- Organizations exist in a larger environment (or systems) consisting of, among other things:
  - competitors, who are competing for both the organization's markets and its resources;
  - the general economy;
  - legislation;
  - government policy;
  - culture.

A project intended to improve the performance of an individual or group must start with the question, "What outputs do we want from the job?" To answer, we have to identify the key processes served by the job and understand the demands placed on those processes by the organization. Because we're aware of the components of the basic human performance system, we are interested not just in training solutions but in the feedback and consequences the performers are getting. We're also interested in the feedback the process itself is getting. What consequences does the organization experience as a result of this process being conducted this way? In short, even in a project focusing on the job level, we must consider the larger performance context.

What outputs do we want from the job?

Toward Better Performance
The idea of those three distinct yet interdependent levels is useful when we try to analyze and improve performance in an organization.

A. Claims: Calculates the dollar amount of payout based on the specifics of the policy and the actual loss.
B. Product development: Specifies the characteristics of products, including the types of risks covered and under what conditions, the claim-handling process and, in some cases, required minimum payout levels.
C. Underwriting: Evaluates application information (risk) and determines policy price based on coverage requirements and estimated company "exposure" to claim. Underwriting can also reject business that carries excessive risk.

all the way down to the job level probably will give us no appreciable increase in quality.

For a project intended to improve a process (filling customer orders, for instance), we would have to determine the organization’s demands upon the process, then specify what we’d require of individual performers and what they would require of us. Again, we’d need to operate on all three levels.

This systems view of performance has important implications for the training function. It suggests some things about how we ought to determine training needs, and about how the function in general ought to be managed.

Needed
Let’s take another crack at the vice president’s request for a refresher course on handling claims and coping with damage.

If we believe in the systems view of performance, we are skeptical. Would such a training program make a significant difference? We have no idea. So we ask six questions (Figure 5):

1. What performance output (of the function or the organization) is subpar? In other words, what makes you think you need a need for training?
   Our claim payouts are too high, and it takes too long to settle claims.
2. What process affects this function’s performance? What process outputs are subpar?
   Claim payouts are affected by the product development, underwriting and claims-handling processes. Settlement time depends on the claims-handling process. Let’s focus on claims handling to begin with.
3. What process step is breaking down?
   Through observation and interviews with claims reps and their supervisors, we find that “scoping damage” is not a deficient step in the process. However, the first two steps, “claim qualified” and “claim assigned,” are often not handled properly. This seriously affects claim payouts and settlement times.
4. Which performer in the hierarchy affects the critical process step?
   Through observation of claims reps and their supervisors, we learn that qualifying and assigning claims are duties performed by the claims supervisor, not the rep.
5. What desired output of this key performer is subpar?
   The supervisors are not properly qualifying claims and assigning them to the reps.
6. What is the cause of the subpar output?
   In most cases, the claims supervisors don’t know how to qualify and assign claims properly. And in all cases, they get no feedback on this aspect of their performance and perceive no negative consequences for poor performance.

According to the systems view, we haven’t identified a significant training need until we have answered those six questions—which is to say, until we have examined the perform-

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**FIGURE 5**

**ANALYZING THE PERFORMANCE SYSTEM TO DETERMINE TRAINING NEEDS**

To determine the training (and training support) required to improve organization and individual performance, ask these questions:

1. What organizational or functional performance is subpar? (What makes you think you have a need for training?)
2. What process affects this performance? What process outputs are subpar?
3. What process step is “breaking down”?
4. Which performer in the hierarchy affects the critical process step?
5. What desired output of this key performer is subpar?
6. What is the cause of the subpar output?

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ance system. In this case, we did find a real need for training, but “scoping damage” isn’t the topic and claims reps aren’t the trainees. We also discovered breakdowns in two other components of the performance system—lack of feedback and negative consequences for poor performance—for which training is not the solution.

Managing It

The systems view of performance has two important implications for managing an organization’s training function. The first one dawns on you when you realize that the training function is a subsystem in the larger organizational system, and as such must follow all the system laws. Take another look at Figure 3: The training function exists to meet the needs of its receiving systems or customers (who have to be identified), and it must adapt swiftly to its environment.

The second implication relates to the function’s mission. We have described two views of performance, the vacuum view and the systems view. Organizations can choose one or the other. A company that accepts the vacuum view will have a training department that responds to requests for programs (on scoping damage, for instance) by whipping up programs. Regardless of the language it uses in its formal mission statement, we can argue that this training function really sees its mission as “provide skills and knowledge.” It will see its outputs, therefore, as “employees trained.”

The function will be evaluated along feedback loop I (Figure 6) in terms of “heads trained per budget dollar.” It will get little systematic feedback from its receiving system—the organization’s performance environment.

A company that believes in the systems view, on the other hand, will have a training function that responds to requests for training by asking questions. Its mission will be to “improve the organization’s performance.” Its outputs will be training programs and other performance improvement initiatives (involving feedback, incentives, job design, etc.). It will be evaluated according to its impact on the organization. It will be

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able to link its output to the organization's output—that is, to the quality, quantity, value or cost of the company's products and services, and to the efficiency and effectiveness of the performance system.

The choice of missions also will determine the structure of the training function—the processes that drive it. A vacuum-view training function most likely will have three internal processes: course development, course delivery and course evaluation. A systems-view function will require some additional processes, such as: organizational needs analysis (based on the company's strategic, operating and human resource plans); performance analysis; performance improvement initiatives aside from training (for example, design of measurement, feedback and consequence systems).

These processes in turn dictate the kinds of measures required to manage the training function effectively. A function operating according to the systems view will measure its outputs in terms of actual performance improvements noted in individuals, functions and the organization as a whole. It will not be concerned merely with ratings of its training programs.

The processes that drive the training function also determine the kinds of people needed to manage and staff it. A systems-view function requires "performance analysts" and organization development specialists in addition to instructors and instructional designers.

In a nutshell, an organization's view of performance—whether it adheres to the vacuum view or the systems view—will determine the mission of its training function, how it goes about identifying training needs, the operating components of the training function (its units and processes) and how much impact the function will have on the organization's performance.

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