Four Principles of Training

Incorporate these four principles into a training activity to guarantee a positive impact on organizational productivity.

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Training was once thought of as simply applying scientific management or as a quasi-employee benefit. But it is now recognized as one of the more significant variables in the organizational productivity equation.

Training mainly affects organizational productivity in four ways.

■ It increases worker congruence with established production standards for speed and quality. Training to increase worker production speed while maintaining or increasing product quality can significantly decrease production costs. Human factors-oriented training specialists have promoted interest in this skill-task performance enhancement now commonplace in business and industry.

■ It leads to more flexible worker use through cross-training in multiple job tasks. Training to increase workers' flexibility can also increase productivity. Cross-training enables managers to manage production better by allowing for immediate switching of workers to different job tasks.

This practice can reduce costs of absentee employee coverage, increase speed of production changes, and increase productivity per worker. Workers' motivation increases through opportunities to work at varied tasks and to develop a sense

of broader competence. Similarly, rotation through different job tasks and locations can increase productivity by reducing worker boredom. Individuals' sense of security improves from the knowledge that they can fit more than one employment configuration if there's restructuring of job tasks or layoffs.

■ It increases worker-applied creativity relative to production variables. Studies have shown that training to increase workers' creative problem solving—quality circles, productivity groups, and so on—

increases productivity. Companies have realized major cost savings through workers' suggestions for more efficient production methods and their solutions for correcting production problems.

Further, this training uses worker input, increasing workers' sense of organizational membership and self-esteem, both of which increase job satisfaction and, in turn, productivity. In product development and marketing too, creative problem-solving training—such as synectics and brainstorming methodologies—has lead to increases in productivity and profitability.

■ It increases worker satisfaction and, therefore, motivation. Training directed toward "humanizing" personnel, increasing their "personal growth" or providing "enriching personal experiences" increases employee satisfaction and motivation. The results are higher levels of worker produc-

tivity through reduced sick time, fewer job-related injuries, lower incidence of worker sabotage, fewer union complaints, and less employee turnover.

Accountability for training

Since training interventions have proven capable of increasing worker and organizational productivity, training professionals have found themselves held much more accountable for their efforts. One aspect of accountability has been a demand for trainers to find ways of increasing training's

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effectiveness while finding delivery methods that cost less. Another has been a call for accurate prediction of training effects on the organization. Increased accountability also means that training professionals are being involved in ever higher levels of organizational decision making.

Segmenting training into the four areas described earlier allows you, the trainer, to focus on one impact area at a time and helps you accurately measure training's effects. While this segmentation is common, and growing more so, it's important to remember that the segments are interrelated, and that the most effective and efficient forms of training actually address them all.

Indeed, education and training research has consistently shown that not only *can* you address all these outcome areas in a single training experience, you *must* do

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so—no matter which outcome your company desires. Because for training to be truly effective, it must incorporate human- and task-oriented processes and outcomes. So whether you need to increase employee skill performance on the line, increase supervisory motivation, train managers how to think more creatively, or even cross-train word processing specialists and data analysts, you must consider the issues of employee flexibility, personal growth, creativity, and job-task skill performance.

Four principles

Functionally integrating training in a comprehensive manner might seem impossible at first. But by applying four basic principles to training event design or by using the principles to evaluate packaged training, you can achieve this functional integration fairly efficiently. Translating the principles into a technology may involve considerable detail and effort, but that effort needn't be overwhelming.

The four principles on which I base my metaprogram for training derive from earlier work by Gagne, Ausubel, Gilbert, Bruner, Lippitt and Lippitt, Rogers, and Carkhuff and Berenson. When examining these principles, keep in mind the ideal set of functions training is supposed to achieve. For training to be effective, you must construct it so it teaches people a new set of skills. Those people then must apply the new skills to accomplish a task, and the accomplished task must meet an agreed-on standard. Further, you should administer the training so it increases trainees' desire and capacity to learn.

The principles I describe below are elaborations of a functionally integrated approach to training.

Principle 1

Make the training content relevant to the trainee.

For any training to be effective, trainees must perceive its content as relevant to themselves. Trainees will see relevance if training content responds to their perception of their work task needs. Or training can respond to trainees' self-perception by addressing their personal values or by increasing their personal capacity to live. Of course, training content that addresses both has the greatest likelihood of truly involving trainees in the training's substance.

To make training content relevant to trainees, you need to understand their frames of reference as fully as possible. This understanding can only come through observing, listening, and responding to the potential trainees. You need to have trainees disclose significant accounts of their perceptions of work and life experiences that can or do affect their functioning.

In particular, you should understand four factors regarding trainees' frames of reference.

■ Knowing trainees' attitude toward training is important. The more resistant trainees are, the more experiential you should make the training.
■ Understanding trainees' learning styles is helpful in designing training lesson plans.
■ Knowing trainees' familiarity and competence with the training topic provides a base for organizing content and lesson plans.
■ Understanding the relationship between the trainees and the organization for which they work promotes your awareness of issues that—if addressed correctly—can help trainees develop into a cohesive, participating unit or that can—if addressed inappropriately—polarize them.

If you can develop a clear perception of the trainees' frames of reference, then you can design training that reduces resistance and helps develop trainee trust. Reduced trainee resistance and belief in your sincerity increases participation. Equally important, the information you collect allows you to design training around trainees' knowledge, skills, and experiential base, further increasing the likelihood of achieving training objectives.

Principle 2

Make training objectives congruent with the work tasks you're trying to affect.

As used here, congruence means that changes training is intended to make in trainees' knowledge, attitudes, or skills will maintain or enhance their work functioning. Although this seems an obvious point, it's one that often gets lost in your own frame of reference. This is particularly true when you're using a "canned" package or when you have exposure to only one particular training style.

To achieve congruence you must analyze training relative to an organization's mission, goals, objectives, and tasks. In a large organization congruence between a training strategic plan and the organizational mission is usually not a line trainer's responsibility. Still it *is* that person's responsibility to make sure the training at least doesn't seem incongruent.

In small organizations where there is one trainer, this responsibility is most definitely that trainer's. When an outside training consultant provides training the burden for assuring congruence rests with the consultant. The same is true for the organization's training goals, objectives, and tasks at all levels of functioning: worker, supervision, management, and policy.

Principle 3

Make training event design systematic and be sure it relates directly to training objectives.

Training design involves identifying and organizing content integrated with a plan for delivery. The more specific the content and lesson plans are relative to training objectives, the greater the likelihood that trainees will reach those objectives.

You must organize lesson plans to assure a systematic, comprehensive method that will allow trainees to master the content. This requires building the training in incremental steps. Your design must start with the trainees' levels of functioning and end with their actual performance of tasks or skills defined in the training objectives.

Designing systematic, targeted training takes several steps. First, identify appropriate content detail for the training audience. If, for example, the training is for people having no prior experience with the content, then you must make content quite detailed and explicit. You should describe in detail the tasks, skills, skill steps, and supporting information trainees need to do the skill steps. You should also describe the resources and materials trainees need to perform the tasks. For trainees already competent in the necessary skills, however, you should probably make the content task-application based.

Next, organize the content into a developmental sequence for learning. This usually involves sequencing the content into a step-by-step cumulative model. Appropriate content organization depends on the material trainees must learn. For some content areas this means organizing the content in the same sequence as on-the-job operations occur. For other content areas you can base the sequence on a hierarchy of the operations trainees must learn, such as from simple to complex. Still other content areas require incrementally increasing the number of operations trainees must perform during a particular time period.

Third, design a delivery format for the training. The format needs to cover two levels of detail. For the primary level of detail, explicitly write out five phases of delivery for each set of sequences to be

learned, called the ROPES model of lesson planning:

■ Review of the skills and knowledge trainees must have to learn the new content you'll be presenting;

■ Overview of the sequences trainees must learn and how the sequences fit in with the rest of the training;

■ Presentation of the content trainees must learn;

■ Exercises trainees must practice and master;

■ Summary of what trainees have learned and its relationship to what they've already learned and will learn later.

The second level of detail entails developing a three-part delivery plan within each ROPES area. This plan should include exactly what you'll *tell* trainees, what you'll *show* them, and what you'll have them *do*. You should develop these secondary steps for all five ROPES stages. You can see a sample lesson plan based on the ROPES model in Figure 1.

Principle 4
Make training delivery respond to trainees' frames of reference.

Whatever the desired outcome, if your training is to be effective it must adequately involve the trainees. The greater their involvement, the greater the likelihood of training success. Further, you must consistently calibrate your training delivery to match trainees' levels of ability and performance. Your training's responsiveness to individuals is reflected in the content and your effective use of interpersonal and problem-solving skills throughout training delivery. Attending, responding, personalizing, and initiating are your most important interpersonal communication skills.

There are two sets of attending skills. Physical attending skills involve physically presenting yourself in a way that communicates interest and openness to trainees. These skills include posturing in an open manner, leaning or standing toward

trainees, making comfortable eye contact, and having a barrier-free environment. Psychological attending skills involve listening nonjudgmentally for main or repeating themes as well as for the "who, what, when, where, how, and why" trainees express. Psychological attending skills also involve making observations from which you can draw inferences about trainees' moods, tensions, energy, health, comfort, and congruence between verbal and nonverbal expressions.

Responding skills involve being able to paraphrase and respond emphatically to trainee expressions of content and feeling. They also involve being able to help trainees explore more deeply the training content and their feelings, resulting in a connection between content and feelings.

Personalizing is building on the understanding of that connection between content and feelings to help trainees constructively identify problems and goals relative to training content. Initiating is

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Figure 1—Sample lesson plan based on the ROPES model

Skill: Identify Stressors and Coping Mechanisms that Produced a Family Crisis				
	Review	Overview	Present	Exercise	Summarize
Tell	Describe basic ingredients of the stress model.	Describe need to identify the family's and its members' stressors and coping mechanisms.	Present material on normative and catastrophic stressors for family, primary coping tools for family group, and relevance for individual family members (communication and problem solving.	Remind audience that crisis can be for better or worse.	Review the two major coping mechanisms for a family group: communication skills and problem solving.
Show	Demonstrate individual and group general adaptation syndromes.	Demonstrate the use of such identification in family medicine.	Show types of crises and levels of coping and types of effects.	Do quick stress and coping analysis on actual family (case study).	Review crisis–coping–effects chart.
Do	Identify in own family the different general adaptation syndromes.	Identify the number of families or family members seen in crisis.	Do a crisis–coping–effects analysis on self.	Do a crisis–coping–effects analysis on a family in practice.	Identify own level of desire to be agent of intervention in patient family crisis.

Note: In practice, this skill lesson plan was used as part of a series of plans. It was followed by plans for training family physicians how to identify appropriate methods for family crisis intervention and how to follow up on an intervention.

facilitating the trainees' action-taking to achieve identified goals.

Overlapping interpersonal communication skills are the following problem-solving skills:

- identifying and defining a problem;
- establishing a realistic goal with measurable criteria of its successful, positive achievement;
- generating alternatives;
- selecting one or a combination of alternatives most likely to achieve goal criteria;
- designing a course of action to achieve that outcome;
- implementing that course of action.

You need to do problem solving in an individual context as a comprehensive interpersonal response to each trainee, and in a group context as a way to adapt training "in the moment" to help assure its overall success.

Interpersonal communication skills allow you to engage trainees in the training process, capture their individual and collective frames of reference, and facilitate their individual mastery of the content.

By modeling these skills and implicitly encouraging trainees to use them you will help trainees acquire and apply them. Trainee use of these skills back in the workplace results in higher worker satisfaction and motivation as well as increased worker flexibility and innovation.

These modeling effects have been demonstrated numerous times. But it has also been demonstrated that lack of consistent follow-up and encouragement for workers to use these skills results in rapid skill deterioration. Deterioration will occur regardless of the process through which trainees acquired the skills—that is, whether through direct training interventions or through the indirect effects of modeling. In other words, without a supportive context and consistent reinforcement for their use, modeling effects are temporary.

Not a panacea

Training is only one component in a productivity improvement effort. No matter how effective, training can't make up for poor policy, poor management and supervision, inadequate resources such as antiquated equipment, or poor worker-management relations.

But if you incorporate the four principles outlined above into a training activity, then that training, regardless of its primary goal, will have some degree of positive impact on organizational productivity.