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## Increasing transfer of training from learning to human performance in the corporate management work environment

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## Increasing transfer of training from learning to human performance in the corporate management work environment

### Abstract

For corporate organizations to remain competitive in the global marketplace and to develop a highly skilled workforce, improving transfer of training must become corporate organizations' top priority. This literature review will attempt to answer the questions, "How does the transfer of training relate to human performance? Who are the major stakeholders, and what are their roles in ensuring the transfer of training? What are the barriers? And how is human performance in the corporate work environment being measured?"

Increasing Transfer of Training from Learning to Human  
Performance in the Corporate Management Work Environment

A Graduate Review

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## *Abstract*

The effective transfer to the workplace of knowledge and skills learned in training is essential to support and maintain performance. For corporate organizations to remain competitive in the global marketplace and to develop a highly skilled workforce, improving transfer of training and human performance must become corporate organizations' top priority.

There are many factors to be considered when corporate organizations prepare to pursue and implement the transfer of training. This literature review will attempt to answer the questions, "how does the transfer of training relate to human performance; who are the major stakeholders and what are their roles in ensuring the transfer of training; what are the barriers and factors affecting transfer of training and human performance; and how is human performance in the corporate work environment being measured?"

The information included in this review of literature includes the viewpoints of various authors who recognize the challenges encountered when implementing training programs into the workforce. In addition, many authors provide prescriptive methodologies in an effort to guide organizations to the success of transfer. The information included explores each of the identified topics and reinforces the significance transfer of training has to corporate organizations that are seeking to enhance their employee performance.

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## *Introduction*

The field of Instructional Technology is ever changing; as technology changes and continues to evolve the professionals in the field are faced with the challenge of adapting to change. Throughout the years, instructional technologists have enriched the field with innovative ideas and have applied creative strategies to improve the transfer of training to the workplace. As stated by Broad (1997), "training has become the most frequently used method to improve workforce performance; however, it has fallen short of ensuring high performance" (p. 8). Past training efforts have typically focused on ensuring learning by trainees and not on supporting the transfer of that learning to job performance. Today's organizations recognize effective workforce performance as a strategic asset in the global competitive economy but face problems in attaining high performance.

This review of literature will be based upon two major premises. First being, U.S. organizations spend billions of dollars each year on training programs for their employees. According to Galvin (2002), U.S. organizations spent 54.2 billion dollars for formal training during the previously reported fiscal year. Second, most of this investment in formal training and development was wasted because most of the knowledge and skills gained in training was not fully applied by employees on the job. A recent Conference Board survey (Csoka, 1994) of major U.S. organizations found that only 2% of responding organizations reported no problems in obtaining high performance from the workforce. A sizeable 55% of the organizations reported a problem, and the remaining 43% reported a serious problem in obtaining that performance.

Furthermore, many experienced professionals have highlighted the widespread lack of transfer of training ever since the earliest years of the training profession. Roughly five decades ago, Mosel (1957) found mounting evidence showing that often the training makes little or no difference in job behavior. Broad and Newstrom (1992) write that 40% of skills learned in training are transferred immediately, 25% remain after six months, and only 15% remain a year later. Baldwin and Ford's literature review (1988) concluded that while American industries annually spend up in the neighborhood of \$100 billion on training and development, not more than 10% of these expenditures actually result in transfer to the job. Robinson (1996) discussed how, research indicates that, on average, less than 30% of what people learn in training actually gets used on the job.

The purpose of this literature review is to examine the factors related to the successful implementation of transfer in training, one that optimizes human performance. This may be especially useful to the corporate organizations that are struggling to ensure transfer of training and improved performance.

### *Methodology*

The methodology used to identify and locate sources of information included using the Internet, searching the Educational Resources Information Center (ERIC) database, referring to the bibliographies of other sources, performing a search of well-known authors within the field, and examining articles from well-established journals. The intent of the search was to identify literature that supported each discussion area to be included in this review.



The majority of the source information was obtained from Human Performance and Training publications and books related to the identified topics. The ERIC and University of Northern Iowa's Rod Library Catalog (UNISTAR) databases proved to be a valuable source for corporate environment based research. The ERIC database was useful in locating full-text articles from well-known research journals and publications. Key descriptors were "transfer of training," "transfer of knowledge and training," "performance and corporate training," and "human performance and training."

An independent review was also conducted of human performance journals related to the corporate training profession beyond the use of any search engines. To check for credibility and validity, the researcher found background information on the authors of the journals, as well as any online sources, and determined if the information was credible. To determine further credibility, the researcher entered the authors' names into the ERIC database and found that many of the authors have several publications in the fields of human performance and training. Additional source information was obtained using books from frequently cited authors within the field, as well as the Internet. The Internet was used primarily as a search engine to identify articles or sources available in a secondary location.

### *Analysis and Discussion*

#### *Definition*

The concept of transfer is intuitively simple, yet highly complex to investigate, demonstrate, and verify. Most modern theorists and researchers say that transfer of training is a complex process requiring attention to many factors such as trainee

characteristics, training design, and work environment (Ford & Weissbein, 1997; Foxon, 1997; Yelon, Reznich, & Sleight, 1997). Busch (1994) states that, "transfer of training is an evaluation of how well knowledge acquired in training is utilized in a work situation" (p. 1). Busch further sees transfer of training as the result of a complex interplay between a set of organizational and personal aspects.

Broad and Newstrom (1992) define transfer of training as, "the effective and continuing application, by trainees to their jobs, of the knowledge and skills gained in training" (p. 6). This means that trainees apply all they learned in training to their jobs, at least as well as they could demonstrate those skills at the end of a specific training program. Full transfer of training also means that with practice on the job, the level of skill with which that learning is applied will increase beyond the level demonstrated at the end of the training period.

Before transfer of training can be fully supported, one still has to make a clear distinction between learning and performance. An objective of training and development programs is to improve individual performance. There is a strong consensus that acquisition of knowledge, skills, behaviors, and attitudes through training is of little value if the new characteristics are not generalized to the job setting and are not maintained over time (Kozlowski & Salas, 1997). In other words, training is useless if it cannot be translated into performance.

Kuchinke (1995) argues that learning is only a means and not a primary organizational outcome. Learning is an internal behavior, whereas performance is an external one. Holton, Bates, Seyler & Carvalho (1997) further point out that learning is

of little value to an organization unless it is transferred in some way to performance. Therefore, training outputs should emphasize performance, and not just learning.

One thing that remains constant throughout all of this is the overall goal of training. Ultimately, the goal of training is transfer. Trainees are to apply on their jobs through performance, what they have learned during instruction. Many researchers firmly believe that transfer is a complex process requiring attention to many more factors.

### *Barriers to Transfer of Training*

Many corporations today are faced with trying to answer difficult questions such as, "Why didn't the training transfer to the workplace?" or "Why hasn't there been a significant change in on-the-job performance?" To begin the search for an answer to these questions one first needs to take a look at what is currently known about actual and potential transfer barriers in corporate organizations.

In one investigation, Newstrom (1985) studied transfer barriers in two stages. First, a group of 24 trainers identified the major impediments to the successful transfer of training in their organizations. Their responses were classified into nine distinct categories. From this a second questionnaire was constructed and administered to a set of 31 trainers from a diverse range of organizations. They were instructed to rank order the nine categories of barriers according to their perception of the relative influence against transfer. Their responses were tabulated, averaged, and used to create an overall rank-ordered list of the highest impediments to transfer of training. The impediments ranked as follows:

- 1) Lack of reinforcement on the job.
- 2) Interference from the immediate work environment.
- 3) Non-supportive organizational culture.

- 4) Trainees' perception of impractical training programs.
- 5) Trainees' perception of irrelevant training content.
- 6) Trainees' discomfort with change and associated effort.
- 7) Lack of support from the trainer.
- 8) Trainees' perception of poorly designed/delivered training.
- 9) Pressure from peers to resist change.

The most significant barrier, in the eyes of the trainers, is the lack of support provided to trainees in applying training to their jobs. According to Broad and Newstrom (1992), trainees don't expend the energy to do something new because the trainers believe no one around them seems to care. The second most powerful impediment to transfer reported by Newstrom (1985) is interference by the immediate environment, such as work and time pressures; insufficient authority; ineffective work processes; or inadequate equipment and facilities. This implies that even if trainees are willing to change, they still cannot use their new skills because of obstacles (real or imagined). The third most important barrier to transfer is lack of active support by the organizational climate (culture) for the workplace transfer of the program's content or skills. Those who were surveyed believed that the typical corporation simply doesn't provide strong philosophical support for the goals of training programs.

Problems can usually be solved more easily if they are well defined and classified for identification. The same is true for barriers to transfer. Broad and Newstrom (1992) examined the major impediments to transfer of training and classified them along two dimensions. First, when do the impediments usually arise (timing)? Second, which source or stakeholder is primarily responsible for the impediment (sources)?

A powerful conclusion emerging from their analysis of timing of barriers is that an organization cannot wait until after a training program is over to address the transfer

of training problems. Barriers to transfer of training should be eliminated or reduced before, during, and after the training program. A similar analysis of the primary responsibility (sources) for impediments to transfer was performed by Broad and Newstrom (1992). Four of these barriers (1, 2, 3, and 9) are well outside the control of the trainers, and within the responsibility of trainees' managers. Trainers and managers share responsibility for three barriers (4, 5, and 7). Only one barrier (8) is primarily affected by the trainers. This holds the same for the trainees, with only one barrier (6) affecting their role.

In another investigation, a survey of top executives by John Kotter (1988) reported four major factors that frequently inhibited the success of training and development efforts to improve the performance of managers. The most powerful of these inhibiting factors was a lack of involvement by managers in the behavior change process (reported by 71% of the respondents). A second factor was the recognition by 51% of the respondents that new efforts to improve were too centralized in the top statuses of the organization, resulting in little acceptance by lower-level participants. Third, new efforts to improve employee behavior were believed by 21% of the executives to be too staff-centered, with insufficient participation by the direct users. Finally, 17% of the executives believed that expectations from the training programs were often unrealistic: too much was expected too soon. Kotter's findings, along with Broad and Newstrom's, suggest that barriers to transfer of training occur relatively often in organizations, especially at higher levels, and that these barriers represent substantial impediments to change. These impediments to change, in turn, drastically affect on-the-job performance.

In the past, instructional technologists have explored organizational factors which support individual and group performance. Rummler and Brache (1995) outline six factors, which are essential for effective performance. They include:

- 1) Clear performance specifications (expected outputs and standards).
- 2) Necessary support (sufficient resources, logical responsibilities).
- 3) Clear consequences (rewards, potential dangers).
- 4) Prompt feedback (how well actual performance matches expectations).
- 5) Individual capacity (physical, mental, emotional capability to perform).
- 6) Necessary skills and knowledge (applying training to job performance)

These factors will be examined more closely in the next section by examining who the stakeholders are in the transfer of training and what their specific roles are before, during, and after training.

### *Stakeholders*

Broad and Newstrom (1992) state that the responsibility for the effective transfer of training falls into a gray area between trainers, trainees, and management. It is easy for trainers to point fingers at management and say that they are not supporting the transfer of learned skills in the work environment, just as, it is easy for trainees to say the message was not clearly delivered by the trainers. Rather than simply pointing fingers, the attention should be focused upon all three stakeholders. The trainer, trainees, and management should be viewed holistically as a synergistic unit. The transfer of training will not occur when one of these stakeholders fails to fulfill their role. Each of these key stakeholders has a crucial role before, during, and after training.

*Manager.* Managerial duties are of primary importance. Gunter (1996) emphasizes that managers are essential training contributors, and should therefore, be involved in the overall development of training. Managers include the individuals with

authority and responsibility for accomplishing an objective or mission through the efforts of others. Management includes the chief executive officer down to the first-line supervisors and team or group leaders. The manager supports learning, as well as application on the job. According to Broad and Newstrom (1992), the manager has three crucial roles in the transfer of training. These roles include: developing the transfer partnership between the manager, trainer, and trainee for each high priority training program; managing this partnership; and serving as an advocate for transfer within the organization.

Managers can make a tremendous difference in the success that the employees have in transferring recently learned information back to the job. Broad (1992) reports that before the training can even take place, it is of the utmost importance to clarify for the employees the specific need for the training. This can be done through developing a strategic plan, with clearly defined goals and objectives. The manager should ensure that the employees understand exactly why they are going to the training program and specify the particular skills that they want them to concentrate on obtaining. Managers need to tell the employees why the training is important to their job and to their team and how it will contribute to the achievement of organizational goals. By letting the employees know the relevance of the training and how it will relate to their current job, the trainers will be prepared to get the most out of the actual training session.

Broad and Newstrom (1992) identify standards for managers to abide by before the training begins. The standards are as follows:

- Build transfer of training into supervisory performance
- Collect baseline performance data
- Involve supervisors and trainees in needs analysis program

- Provide orientations for supervisors
- Involve trainees in program planning
- Brief the trainees on the importance of the training and on the objectives
- Review the instructional content and materials
- Provide supervisory coaching skills
- Provide time to complete pre-course assignments
- Offer rewards and promotional to trainees who demonstrate new behaviors
- Select the trainees carefully
- Arrange conferences with prior trainees
- Send co-workers to training together
- Provide a positive training environment (time, location, facility)
- Plan to participate in the training themselves

More importantly, managers must provide the necessary support throughout the training for the employee's job performance to be successful. During the training, the manager should provide an atmosphere that allows the employees to fully concentrate on the learning process. They should recognize trainee participation, and establish clear consequences to inform employees of the rewards for performance and negative outcomes from non-performance.

Once the training takes place, the manager should conduct a post-training debriefing to allow the employees the opportunity to discuss what they learned. Managers should give the employees every possible opportunity to practice the new skills and hold them accountable for these skills. According to Love (2001), learning is reinforced through practice and application, not by merely thinking about the newly learned skills. Finally, employees need to have the tools and resources they need to apply the new skills. When the manager creates this supportive transfer climate, the employees



will see that they are appreciated and the transfer of their training back to their job will be a smooth process.

*Trainer.* Trainers often have a vast array of challenging duties to fulfill. In some cases, the trainer will serve as the manager as well, but typically there is just the individual role of the trainer. The trainer designs, develops, and delivers the curriculum. Broad and Newstrom (1992) explain that trainers usually consist of all human resource development professionals. They may be internal consultants (employees of the organization) or external consultants who assist organizations on a temporary basis.

Trainers are often faced with the most difficult task. Esque and McCausland (1997) point out that most trainers still find it difficult to influence management to view training as one component in a larger system for improving performance. Brinkerhoff (1987) emphasize that while the practice, needs, and opportunities for training are expanding, so too are the expectations for its effectiveness, power, and worth. Trainers are being asked to do more with less with increased outcome expectations. In other words, trainers have to demonstrate, in a measurable fashion, that a specific training program will have a positive ROI, or return on investment. They also have the obligation to show and convince both the trainees and managers of the impact of implementing the training program.

Once the initial phase has taken place and the training program has been approved and supported financially, the trainer has to focus his/her attention on the design and development of the training. Trainers have to take the lead in developing training interventions, so that the new knowledge and skills that are required are effectively learned. They are, in many situations, seen as the subject matter experts.

When it is time to begin designing, Dick and Carey's (2001) systematic instructional design process is a suggested model. Dick and Carey provide a systems approach model for the design, development, implementation, and evaluation of instruction. Based on this recommended methodology, the trainer should identify each key component of the model to ensure that they are included in the design and development of the training.

Dick and Carey (2001) highlight the components of the systems approach design model as follows:

- *Analysis Phase*
  - 1) Needs Assessment, to identify goal(s)
  - 2) Conduct an instructional analysis (i.e. entry behaviors)
  - 3) Analyze the learners and contexts in which they will use the skills
  - 4) Write performance objectives
- *Design phase*
  - 1) Develop assessment instruments
  - 2) Develop instructional strategies
  - 3) Develop and selecting appropriate instructional materials
- *Evaluation Phase*
  - 1) Design and conducting a formative evaluation of the instruction
  - 2) Conduct a summative evaluation
  - 3) Revise instruction (ongoing)

After the systematic design and development is in place, the trainer has yet another important role: to deliver the instruction. The trainer must be the motivator and advocate for skills transfer through effective training delivery. During the training, some of the trainer's tasks will be to learn how to manage the unlearning process; how to approach learner motivation and answer the "what's in it for me?" question; provide

visualization experiences and authentic work-related tasks; adhere to different learning styles, and give individualized feedback (Broad and Newstrom, 1992).

If at all possible, it is beneficial for the trainer to stay involved even after the training is complete. Broad and Newstrom (1992) emphasize that the consequence of the pressures and distractions is both predictable and dysfunctional: trainers often do not support the transfer process following the training itself. The trainer should be there to provide follow-up support or problem-solving sessions. It is also an advantage to conduct evaluation surveys and to provide feedback, so the trainees are reminded of what they learned and the need for application.

Ultimately, trainers will be serving as change agents throughout the process. The trainer must actively promote the application of training, or in other words, they must sell change. As change agents, trainers must design, develop, oversee, and direct change within an organization. Schmidt and Rieck (2000) report that in this role, trainers serve as a catalyst for change, problem solver, process helper, and resource linker. Before transfer of training can occur, trainers must first accept their role as “purveyors of change.”

*Trainee.* The trainees are the individuals for whom the training is designed. Broad and Newstrom (1992) refer to the trainees as the key central figures. Once training begins, the trainees should demonstrate a commitment to learning new ideas and skills. They choose whether to admit deficiencies, attend the training, open themselves up to new learning, make commitments to change, and carry them out. Further, they bring with them into training an array of talents, abilities, backgrounds, cultures, motivational

desires, and career aspirations that need to be considered. Trainees are the final piece in the transfer process.

There are a few responsibilities that trainees should take care of before the training begins. The trainees should be given the opportunity to provide input into program planning. Gunter (1996) suggests trainees must take the initiative to request training, identify skill deficiencies, clarify any cultural differences, and suggest program features that they believe will be beneficial to their learning. In addition, trainees should also actively explore the nature of a training program and participate in advance pre-training activities if applicable. This might include completing background readings, studying technical manuals, completing self-inventories, taking basic tests of knowledge, or analyzing generic case studies.

Broad and Newstrom (1992) point out seven roles that trainees should initiate during training. These roles include:

- Linking with a “buddy”
- Maintaining an ideas and application notebook
- Participating actively
- Forming support groups
- Planning for applications
- Anticipating relapse
- Creating behavioral contracts

The time period during which trainees are actively involved in the training represents an opportunity for stimulating the transfer of training. Haskell (2001) stresses how trainees need to build on the concept of self-management during training, by setting specific goals and measurable objectives, identifying desired personal rewards, engaging in the planned actions, and obtaining feedback.

In order for trainees to apply new skills to the job after training takes place, the following elements must be present: the ability to apply a new skill, the opportunity to do so, the confidence to try, and the perception that there is some value from doing so.

Burke (2001) emphasizes that those being trained must be able to remember what they learned (retention) and find some internal or external support for their actions.

Ultimately, trainees are the ones in control of determining whether or not training gets transferred.

Broad and Newstrom (1992) report four responsibilities that are under the control of the trainees after they are finished with training. These include practicing self-management, reviewing training content and learned skills, developing a mentoring relationship, and maintain contact with training partners. Trainees must take responsibility to monitor their own behavior before and after the training program. They should set goals for themselves, initiate behavioral changes, watch for opportunities to apply their new learning, and collect objective data (where possible) to substantiate behavioral changes. Trainees should also establish a regular time for periodically reviewing their course materials following training.

In addition, trainees will find it useful to report back not only to their direct supervisors but also to their mentors following training. Broad and Newstrom propose they use the mentor to provide feedback, to exchange new ideas, or to ask for candid advice on the merits of using new approaches. Trainees should also be encouraged to maintain contact with their training partners, or "buddies." The purpose of this relationship is to increase the likelihood of transfer through the use of interpersonal

commitment, mutual support, shared goal setting, and the availability of an ally who has experienced the same training program and can “speak the same language.”

Even though managers, trainers, and trainees, may have taken numerous actions before and during training to help initiate transfer of training, it still requires follow-up actions after training. It is crucial that each stakeholder has a clear vision of their expectations and their duties to ensure the transfer of training. A collaborative effort among the manager, trainer, and trainee in focusing on transfer can help produce the results needed.

### *Measuring Transfer of Training*

Measuring the impact of training on human performance needs to be thought of as a strategic management process, including the design, delivery, and realization of targeted value. Reiser and Dempsey (2002) emphasizes that the practical challenge of measuring the impact of training on human performance revolves around deciding what to measure and when to take measures. The purpose of these measures is largely to make clear and objective things that might otherwise remain vague or anecdotal. Reiser and Dempsey further point out that measuring the impact of training on human performance should lead to the following outcomes: an agreement on the causes of critical gaps in the application of knowledge and skills of the employees; determining established links between training and other human performance interventions to performance goals; identifying a systemic understanding of the human performance influences; and identifying behavioral underpinnings that are suggestive of future performance.

Furhermore, Reiser and Dempsey (2002) suggest that in order for organizations to effectively evaluate their training programs, it is crucial that human performance is

managed over the course of a training program life cycle. Gunter (1996) emphasizes that the purpose of evaluation is to improve the process of training, not to rate the learners. Furthermore, evaluation should not be a one-time event but a continuous process tied to the goal of making real behavioral change happen. Corporate organizations need to find out where the training process has fallen short, why and how it has done so, and where it can be improved.

Reviews of training transfer research studies and organizational training evaluation programs indicate that training transfer has been measured or evaluated in the majority of the cases by using self-report assessment methods (Baldwin & Ford, 1988; Smith, 1984). They found that most of the studies used employee self-report of training transfer as the dependent variable. Baldwin and Ford cautioned against relying so heavily on self-report measures to evaluate training transfer. They found that self-report measures of transfer are not adequate for developing a database regarding the relation of trainee characteristics to transfer or for determining which interventions have the greatest impact on transfer.

In a study done by Cruz (1997), measuring training transfer with job performance observations resulted in significantly higher transfer scores than measuring training transfer with either a detailed or general self-report assessment. The self-report assessment involves a response in the affective domain, while training and learning assessments most commonly involve the cognitive and/or psychomotor domains. According to Cook and Campbell (1979), measuring training transfer by one's own perception of his/her behavior, lacks construct validity. These findings suggest that evaluators would be advised to use training transfer assessments that are aligned with

post-training assessments (behavior change and job performance) since these may show greater transfer effects and result in more valid conclusions about transfer effectiveness.

There are two contexts in which evaluation should occur: short-term and long-term. According to Gunter (1996) short-term evaluation focuses on the immediate conduct of the training, or the training itself. Evaluating the training through feedback from the participants provides organizations with the kind of information that has both immediate and lasting value in helping to improve training presentation and content. The second context, long-term evaluation, focuses on the ongoing application, or the actual transfer of behavior. This changed behavior is what eventually leads to improved performance on the job.

Kirkpatrick's popular evaluation model has been used by the training community since the late 1950s. The model's focus is on measuring four kinds of outcomes that result from a highly effective training program. Kirkpatrick (1976) includes four levels or steps of outcome evaluation. Level 1 of Kirkpatrick's model will be considered short-term evaluation, while Levels 2, 3, and 4 can be considered long-term evaluation. These levels include:

- Level 1 Evaluation—Reaction (short-term)
- Level 2 Evaluation—Learning (long-term)
- Level 3 Evaluation—Behavior (long-term)
- Level 4 Evaluation—Results (long-term)

Brinkerhoff (1987) paraphrases these four levels as, "Did they *like* it?" "Did they *learn* it?" "Did they *use* it?" "Did it make a *difference*?"

*Level 1.* The goal of Level 1 is to measure participants' reactions to the training program. It is useful if the trainer measures their reactions, typically through the form of



a questionnaire, immediately after the program. Kirkpatrick (1976) states that level one evaluation should not just include reactions toward the overall program (i.e., Did you like the program?); it should also include measurements of participants' reactions or attitudes toward specific components of the program, such as the instructor, the topics, the design, the presentation style, the schedule, audiovisuals, etc.

According to Kirkpatrick, learning (level two outcomes) and transfer of learning (level three outcomes) are unlikely to occur unless participants have positive attitudes toward the training program. Therefore, it is important to determine participants' reactions to the training program. The measurement of specific aspects of the training program can also provide important information about what aspects of the training program can be improved in the future.

*Level 2.* During Level 2, the goal is to determine what the training program participants learned during the training event. The instructor should have specific learning objectives, which should aid in identifying clear learning outcomes. Learning outcomes can include changes in knowledge, skills, or attitudes. Some training programs may emphasize knowledge, some will emphasize skills, some will emphasize attitudes, and some will emphasize multiple learning outcomes. The evaluation should focus on measuring what was covered in the training event (i.e., the learning objectives).

According to Kirkpatrick (1976), knowledge is typically measured using already available or instructor constructed achievement tests (i.e., tests designed to measure the degree of learning that has taken place). In the training environment, these tests are usually criterion-referenced. Criterion-referenced tests are constructed to determine whether learners have mastered one or more learning objectives and these tests usually

include a cutoff point (pass/fail). Skills, on the other hand, typically require some kind of motor or manual response on the trainees' part, or some kind of manipulation; therefore, a performance test is most likely used. A performance test is a test that requires the trainee to create a product or demonstrate a process. The goal is to determine whether each person can perform the skills they have been taught in the training program. In the training environment, performance tests are likely to be criterion-referenced as well, where the trainees' scores are compared to a cutoff point. Finally, attitudes are usually measured with questionnaires similar to the questionnaires described for Level 1 evaluation. The trainer will typically have the participants give their ratings for various items and should include some open-ended items to allow the trainees to respond in his/her own words.

*Level 3 (Transfer of training).* The goal for Level 3 is to determine if training program participants change their on-the-job behavior as a result of their having attended and participated in the training program. This essential information must be obtained over a long-term, with a follow-up assessment. Kirkpatrick reports that the Level 3 question is, Did the training have a positive effect on job performance? Level 3 evaluation specifically involves measuring the transfer of knowledge, skills, and attitudes from the training context to the workplace. Kirkpatrick (1976) makes specific recommendations when designing a Level 3 evaluation. The recommendations are as follows:

- 1) Use a control group, if possible.
- 2) Allow time for the behavior change to take place.
- 3) Evaluate both before and after the program, if practical.

- 4) Survey and/or interview one or more of the following: trainees, their immediate supervisor, their subordinates, and others who often observe their behavior.

The more evidence, the better.

- 5) Get a sampling.
- 6) Repeat the evaluation at appropriate times.
- 7) Consider benefits versus cost.

The most common design used for Level 3 evaluation is typically the one-group pre-test/post-test design (i.e., get a baseline measure of the behavior targeted for training, train the participants, and then measure the participants' behavior again after the training). Level 3 is often harder than Level 1 and Level 2 evaluations because behavioral changes within the workplace are often harder to measure than reaction and learning directly after the training event. Trainers and managers must give the behavior time to transfer and time for evaluators to collect data at the workplace.

*Level 4.* Throughout Level 4, the goal is to determine if the training program led to positive final results, especially business results that contributed to business profits. Level 4 outcomes are not limited to return on training investment. Kirkpatrick states that Level 4 outcomes can include other major results that contribute to the successful operation of an organization. Level 4 outcomes are either changes in financial outcomes (such as positive ROI or increased profits) or changes in variables that should have a relatively direct effect on financial outcomes at some point in the future. Other major results could include improved quality of work, higher productivity, reduction in turnover, improved quality of work life, improved human relations, increased sales, fewer

grievances, lower absenteeism, higher worker morale, fewer accidents, and greater job satisfaction.

The reason for evaluating is to determine the overall effectiveness of a training program. Measuring training effectiveness often entails using the four-level model developed by Kirkpatrick. According to this model, evaluation should always begin with Level 1, and then, as time and budget allows, should move sequentially through levels 2, 3, and 4. Kirkpatrick (1976) notes that information from each prior level serves as a base for the next level's evaluation. Thus, each successive level represents a more precise measure of the effectiveness of the training program, but at the same time requires a more rigorous and time-consuming analysis. When the evaluation is done, all individuals involved can hope that the results are positive and gratifying, not only for those responsible for the program, but for upper-level managers who will make decisions based on the evaluation of the program.

### *Conclusions and Recommendations*

Training succeeds only if the trainees can demonstrate that they have mastered the material taught. Employees should be able to apply the skills learned in the workplace and their performance must improve in a way that benefits the organization. The real issue is whether the trainee's performance on-the-job has been enhanced by the training experience.

The key remedy to ensure transfer of training is to make certain that each stakeholder seeks out every opportunity to implement the essential strategies discussed. Once the stakeholders overcome the barriers to transfer of training, execute the proper strategies identified, and carry out effective measures to evaluate training programs, it is

then that transfer of training will succeed in the workforce and the organization will see performance at its optimal level of success.

Performance improvement professionals must be persistent and proactive in searching for stakeholders who are committed to improved performance and develop transfer strategies that achieve valued results. When trainers demonstrate they can help the organization achieve performance as the output of training and learning, managers will welcome trainers' contributions as directly supporting the corporate organization's strategic goals.

Without credible efforts for evaluation, trainers have no objective basis on which to defend themselves or to advocate the value of training. More importantly, the failure to commit to evaluation only reinforces the idea that training focuses too narrowly on the classroom, while failing to recognize that training should be an overall customer-driven process providing real benefits to the organization. If corporate organizations are to improve training, then they must emphasize measuring how well training programs are doing and find out where future improvement efforts should be directed.

Enhancing human performance must be the focus of the collective work of instructional technology stakeholders. The time has come for trainers to demonstrate their value to the organizations they serve by becoming experts and managers of the transfer of training. As corporate organizations show increased payoffs for training investments through enhanced transfer, training programs will be recognized as a strategic partner by managers at all levels. The ultimate payoff for training programs is the satisfaction the stakeholders will realize in becoming visible and successful in one of the most challenging professions.

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