Training plays a major role in learning organizations.

Training is an important tool for developing a productive workforce and fine-tuning operations, a major approach to helping people control or manage change, and a way of organizing information and experience so that employees can alter their behaviors on the job to their own and the company's benefit. At some point, all employees will need training. The most effective training programs for learning organizations are built on models grounded in basic theories of adult learning, including Malcolm Knowles' andragogical model of adult learning. The following steps are key to training development: (1) conduct a needs assessment; (2) assess target learners' relevant characteristics; (3) analyze the work setting's characteristics; (4) gather detailed information about the work done by the organization's workers; (5) write statements of performance objectives; (6) develop performance measures; (7) specify the instructional strategies; (8) design the instructional materials; (9) conduct the training; and (10) evaluate the instruction. The critical step of evaluating training should measure the following items: participants' satisfaction with the training; what participants learned during training; how they applied their learning on the job; the business results achieved when participants met the training objectives; and the return on investment for training and development. (Contains 12 references.)

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The Role of Occupational Training and Evaluation in the Learning Organization

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Introduction

As the marketplace grows more global, businesses are looking for every technology edge possible. Investments in computers, new software, communication equipment and the like are occurring at unprecedented rates. But the most important technological asset of all - that of human capital - may be getting lost in the high-tech shuffle. Continuous training for all employees needs further development if U.S. firms are to respond rapidly to changing customer needs and to keep pace with technology and the mass customization of products. The training challenge must be met at national, state, and local levels if we are to remain the world's economic leaders, and the skills' shortage must be addressed as the national crisis it truly is. Otherwise, the American worker will run out of gas on the information superhighway (Losey, 1994).

Because of these important changes in the marketplace, no other concept has so quickly entered the Human Resources Development (HRD) literature as that of the learning organization. The learning organization has been widely studied by researchers, sometimes to be praised and sometimes to be criticized (Jacobs, 1995). A learning organization is an organization that has an enhanced capacity to learn, adapt, and change. It's an organization in which learning processes are analyzed, monitored, developed, managed, and aligned with improvement and innovation goals. The essence of a learning organization is continuous learning at every level of the organization; knowledge generation and sharing; critical, systemic thinking; a culture of learning, where learning is rewarded and supported; a spirit of flexibility and experimentation (people are free to take risks and explore new ideas); and, people-centered (Gephart, Marsick, Van Buren, & Spiro, 1996).

Training plays a major role in the learning organization. In a learning organization,
learning occurs as part of work, often between peers and co-workers. The responsibility for training is usually delegated to the HRD department and management. Training is a tool for learning; learning - and ultimately, performances are the desired outcomes of training.

HRD professionals should avoid training-for-activity. The focus should be on results-oriented training that is driven by business needs, help the organization achieve its goals, provide people with the skills and the knowledge they need to improve their performance, assesses readiness of the work environment to support learned skills, has management accepting the responsibility for a supportive work environment that encourages skill transfer, and has measurable results that can be tracked. In training-for-impact, the HRD professional, as the project begins, creates a partnership with key line managers associated with the training project. Training is viewed as a means to an end, rather than an end in itself. In training-for-impact, the business results are what really matters (Robinson & Robinson, 1991).

Training plays an important role in developing a productive work force and in getting operations finely tuned so they can contribute more directly to profits. Training is one major approach to helping people control or manage change. This happens because training is designed to lead the trainee to master new knowledge, attitudes, and skills. A person leaves training with the confidence that he can cope with change. Training is a way of organizing information and experience so that an employee can behave differently on the job. The final result of the training process is to his or her own and the company's benefit. Training can be a manager's most efficient strategic tool for enabling employees to take charge of change (Nilson, 1990).

All kinds of working people will at some point or other need training. This is because
over time organizations change, techniques, equipment, and knowledge change, and people change. At some time, employees will require to know new information, acquire new skills, and develop new attitudes to successfully master the changes in their work environment. Managers who are responsible for the effectiveness of the work force must recognize that no one is exempt from the need for training. Nevertheless, not all the leaders of the administrative world understand the value of training programs. The basic reason that both managers and employees have an aversion to training is that both tend to see training as costing too much. This means that neither the boss nor the subordinate feels very good about the time that is taken up during training. Countering the perception that training costs too much is a tricky business. The best way to convince all persons concerned that training really pays is for the training to directly address areas that have an impact on a company's profit. Training time has to be perceived as time that will add value to work, as a value-added function. Training must be directly relevant to a business purpose and that affects the bottom line (Nilson, 1990).

In this paper, organizational training will be analyzed, starting with the presentation of the basic theories of adult learning. A special emphasis will be placed in the Andragogical Model of adult learning by Malcolm Knowles. Also, it will be briefly studied the basic steps in the training process as it has been discussed by three well-developed models for the instructional design, namely Instructional Design Process (IDP) by Rothwell & Kazanas (1992), Critical Events Model (CEM) by Nadler (1984), and Active Training (AT) by Silberman (1990). The conclusion will briefly examine the important issue of training evaluation; in this sense, five basic ways of how to analyze the value of training will be concisely discussed.
Theories of Adult Learning

In recent years, there has been a flurry of interest in answering how do adults learn. There are different answers, and therefore, different theories. It can be identified five fundamental adult learning theories: Sensory Stimulation Theory, Cognitive Theory, Reinforcement Theory, Facilitation, and Andragogy. The Sensory Stimulation Theory states that for people to change, they must invest their senses in the process. The people who manage the learning process must try first to stimulate and control what students see, hear, touch, and do during a learning session (Laird, 1985). The Cognitive Theories equate man with brain, based on the proposition that the one thing that distinguishes human beings from other living things is that they possess brains that are capable of critical thinking and problem solving. The purpose of learning, accordingly, is to teach the brain to engage in such critical thinking and problem solving (Nadler, 1984).

The Reinforcement Theory is based on the behaviorist psychology, especially Skinner's findings. The instructor presents the original stimulus. After that, there is a mutual exchange of adapted stimuli. Hopefully this exchange is punctuated by positive reinforcement in which the learner and the instructor share the desire to offer happy consequences for mutually beneficial behaviors (Laird, 1985).

Facilitation, a theory developed by Carl Rogers, has outlined a different theory of learning which emphasis is on the learner's involvement in the process and especially the relationship between the learner and the instructor. The instructor is a facilitator of the learning process, rather than a stimulator or controller. He believes above all that humans have a natural capacity to learn. A facilitative instructor is less protective of his own constructs and beliefs, more able to listen, and is able to accept feedback, both positive and negative (Laird, 1985).
Andragogy is the last model that we will analyze. Nevertheless, the first question is why andragogy instead of pedagogy? "Ped" is a Latin root meaning child; and "andra" derives from the Greek "anere," meaning man, not boy. Thus andragogy studies how adults learn. Another question is if there are significant differences between children and adults ways of learning? Malcolm Knowles has pointed to several differences. While children are dependent, adults see themselves as self-directing. Children expect to have questions which must be answered by outside sources, adults expect to be able to answer part of their questions from their own experience. What may be more important, children expect to be told what they need to do, adults have a very different viewpoint on that issue, because they value on their experience (Laird, 1985).

Thus Andragogic learning designs involve a number of features which recognize the essential maturity of the learner: they are problem-centered rather than content-centered; they permit and encourage the active participation of the learner; they encourage the learner to introduce past experiences into the processes in order to reexamine that experience in the light of a new data; the climate of the learning process must be collaborative as opposed to authority-oriented; planning and evaluation are mutual activities between learner and instructor; evaluation leads to reappraisal of needs and interests -and therefore to redesign and brand-new learning activities; and, activities are experiential, not "transmittal and absorption" as in standard pedagogy (Laird, 1985).

Knowles proposes the most important assumptions to make about adults as learners. This author mentions that the adults learn more effectively if they understand why they need to know. When adults undertake to learn something on their own, they explore the benefits of learning...
versus the costs of not learning before they invest their time and energy. Hence, it is important that a strong case be made for the personal benefits the employees (in HRD programs) will gain. Adults have a deep psychological need to take responsibility for their own lives -to be self-directing. Self-directed learning does not mean learning in isolation or learning without help from peers, teachers, printed materials, audiovisual aids, and every other kind of resource. The key distinction between learning and being taught is the locus of responsibility, now is in the learner (Laird, 1985).

The Development of a Training Process

Conducting a needs assessment is the first step in the design process. The purpose of needs assessment is to uncover what the performance problem is, who it affects, how it affects them, and what results are to be achieved by training. A needs assessment is an evaluation of instructional requirements. Needs assessment is very important because all subsequent steps depend on its results. The starting point are the location of a current organization chart, strategic business plans, job categories in the organization, existing performance problems in each job category, and individual training needs. Then, it should be identify, for each job category, the knowledge, skills, and attitudes necessary for employees to perform competently (Rothwell & Kazanas, 1992).

Nadler (1984) also considers that the initial step should take in account the identified needs of the organization. The training program should address the causes of organizational problems rather than symptoms. While analyzing the identified organizational problems, the training designer must ascertain if a change in skills, knowledge, or attitudes of the proposed
learners will help to resolve the problem. It could be more appropriate to introduce changes in the work flow or supervisory mechanisms, or any other intervention, but training.

The second basic step is assessing relevant characteristics of learners, and it is considered in three models: Critical Events Model (CEM), Instructional Design Process (IDP), and Active Training (AT). Obviously, all learners are not alike. Even within occupational groups learners vary. Some learn best by reading, some by listening, and some by trying procedures. When training is developed, these characteristics must be taken into consideration. Learner assessment is the process of identifying these specific characteristics. Assessing learner characteristics resembles segmentation, the process used to categorize consumers by similar features. In this sense, learners are consumers of services provided by instructional designers (Rothwell & Kazanas, 1992). Gathering information about the learners is the first step in designing an Active Training (AT) program, and after determine that training is the way to address the problem. Why it is important to assess the participants? Because, as long as you have a reliable information about them it will help to determine the appropriate training content, to obtain case materials, and to develop a relationship with participants (Silberman, 1990). Nadler (1984) considers the identification of learners' needs as an important issue, that includes the knowledge about number of learners, location of the learners, education/training/work experience backgrounds of the learners, language or cultural differences, motivations, physical or mental characteristics of learners, specific interest or biases of learners.

A third step is to analyze the characteristics of the work setting or setting analysis. It is the process of gathering information about an organization's resources, constraints, and culture so that the instruction will be designed in a way appropriate to the environment. Instructional
designers should be able to evaluate a setting analysis in order to determine whether it was conducted at the appropriate time and was focused on appropriate issues (Rothwell & Kazanas, 1992).

The fourth essential step is the process of gathering detailed information about the work that people do in organizations. It is called work or job analysis. A job analysis is the process of obtaining information about the jobs by determining what the duties, tasks, or activities of jobs are. Job analysis is important because it identifies what people do -or should do- and thereby provides information for selecting, appraising, compensating, training, and disciplining employees. The job analysis is important because it is a process of identifying the essential information that learners should translate into work-related knowledge, skills, and attitudes through planned instructional experiences (Rothwell & Kazanas, 1992). Laird (1985) describes in the CEM model that this step is a necessary prerequisite before initiating any learning program.

The fifth and next phase is writing statements of performance objectives. They guide the remaining steps in the instructional design process by describing precisely what the targeted learners should know, do, or feel on completion of a planned learning experience. They also communicate the results sought from the learning experience. In a sense, performance objectives create a vision of what learners should be doing after they master the instruction (Rothwell & Kazanas, 1992). It can be distinguished three major types of learning that should be considered in setting the learning goals: a) affective learning involves the formation of attitudes, feelings, and preferences; b) behavioral learning includes the development of competence in the actual performance of procedures, methods, operations, and techniques; and, c) cognitive learning includes the acquisition of information and concepts (Silberman, 1990). Nadler (1984) also
states that the written objective statements should reflect the identified organization's and learners' needs.

The sixth elementary step is developing *performance measurements*. Performance measurements are various means established by instructional designers of monitoring learner achievement. Test items are developed directly from performance objectives before instructional materials are prepared. In this way, accountability for results is built into instruction from early in the process. Performance measurements become benchmarks that, along with performance objectives, provide guidance in the preparation of instructional programs. Next, the following step is sequencing performance objectives. The instructional designer puts the objectives in the sequence they will be taught to trainees. Based on the previous steps in the process, the instructional designer must select a sequence for the objectives that is most appropriate for a particular course, the trainee population, and the organizational setting. The resulting sequence of objectives becomes the basis for an *instructional outline* (Rothwell and Kazanas, 1992).

Specifying *instructional strategies* is the seventh stage in the instructional design process. It describes how to go about the instructional process. It is an overall plan governing instructional content (what will be taught?) and process (how will it be taught?). It helps instructional designer to conceptualize, before they begin time-consuming and expensive preparation of instructional materials, what must be done to facilitate learning (Rothwell & Kazanas, 1992). During this step in the CEM, the designer organizes the learning content into meaningful instructional sequences. Nadler proposes the following ones: psychological order, the topics are organized according to ease of learning, such as: old to new, simple to complex, familiar to unknown, concrete to abstract, practical to theoretical, present to future; job
performance order, the content is presented according to the sequences of the job; logical order, the subjects are organized in their logical arrangement or level of difficulty that has been predetermined; and, problem-centered order, based in a diagnostic or problem-centered technique (Nadler, 1984).

At this point, discussing instructional strategies, it is important to mention that Silberman (1990) understands that there are three main ingredients that should be combine together in a training design: a purpose (what is to be accomplished), a method (how it is to be accomplished), and a format (in what setting). However, after making this combination there are several details remaining: time allocation (how many minutes will the design take?); buy-in (what will you say or do to get participants involved?); key points and/or instructions (what are the major ideas for each point or activity); materials (what do you or the learners need in the way of materials to implement the design?); setting (how should you set up the physical environment?); and ending (what remarks or discussion do you want the participants to have before the next activity?).

Nadler (1984) states that there are some important factors to be considered in the selection of methods and materials: the instructional/learner objectives; the nature of the subject matter content; the number, quality and individual competencies of the available instructors; the main characteristics of the learner population; classroom facilities and equipment; and, time and cost.

The eighth indispensable phase is designing instructional materials. It includes preparing a working outline, conducting research, examining existing instructional materials, arranging or modifying existing materials, preparing tailor-made instructional materials, and selecting or preparing learning activities. It is sometimes called a learning package or instructional package.
(Rothwell & Kazanas, 1992). Nadler states an important consideration during this step: the budget. If the resources are not enough to have those appropriate methods and materials previously selected, the designer must rework previous events. This can reduce the expected learning objectives, the depth and scope of the content coverage, etc. (Nadler, 1984).

Nadler and Silberman analyze the ninth stage that refers to *conducting the training*. Silberman (1990) states the importance of a mental walk through the overall design, visualizing the participants' experience. Revise and delete any details that seem impractical or out of the objectives. He states also that designing is never static, so it can be done some revising as you obtain feedback from participants and evaluate their performance, this could be the moment to apply the contingency plans that you have already prepared. Nadler (1984) makes an emphasis in the importance of ongoing design processes that must occur during the event. In this sense it is an open system, that should be redone by the facilitator and the participants as they go through the experience. Sometimes, the activities take more time, or the techniques fail to achieve the objectives, or occurs something that it is out of control.

The tenth and final fundamental step is *evaluation of instruction*. Instruction is not considered complete or released until it has been demonstrated that trainees can indeed learn from the materials. This type of evaluation -*formative evaluation*- is conducted before instructional materials are delivered to a majority of the targeted learners (Rothwell and Kazanas, 1992). Nadler (1984) formulates an internal and an external evaluation. The internal evaluation of the learning program focuses on the process of accomplishing the learning objectives: the appropriateness of strategies in order to accomplish them. The external evaluation should answer if the program meets the organization's needs. Silberman (1990) considers the evaluation as a
process that should cover three time periods: before the training event begins, while it is in progress, and as it concludes. Before the event occurs, it is important to have close communication with the supervisors of the learners, so they can consider if the design is appropriate or not. During the training program, the participants should express their attitudes about the skills being taught and their feelings about their performance. Finally, at the end of the program, several strategies can be applied to encourage application of the new skills, knowledge, and attitudes on the job, such as action plans.

Conclusion: The vital issue of training evaluation

For many years, measuring the return on investment (ROI) for training and development, has been a critical issue on the minds of top executives. Although interest has been heightened and some progress has been made, the topic still challenges even the most sophisticated and progressive HR departments. Some HR professionals argue that measuring ROI for training isn't impossible; others quietly and deliberately develop ROI measures. But overall, most practitioners acknowledge that they must show a return on the investment in training so that they can maintain training funds and enhance HR's status (Phillips, 1996a).

The ROI process has five levels for training evaluation. At level 1, participants' satisfaction with the training program is measured, and a list of their plans for implementing the training is included. At level 2, measurement focus on what participants learned during training. At level 3, the measures assess how participants applied learning on the job. At level 4, the measures focus on the business results achieved by participants when the training objectives are met. All the above phases have been deeply analyzed by Donald Kirkpatrick. Phillips, adds a
fifth, and ultimate level of evaluation, which is the return on investment. It compares the training’s monetary benefits with the costs.

One important recommendation is to set targets for each evaluation level. It provides measurable goals for assessing the progress of all training or a particular segment. Measurement and evaluation should usually focus on a single program. Also, it is vital to isolate the effects of training. Most of the time, training can take only partial credit for improvements in on-the-job performance. The companies are not content to show just that training can result in such improvements as increased productivity and decreased employee turnover. They take the process a step further by converting such improvements to monetary units so that the improvements can be compared into an ROI calculation. For such hard-data items as productivity, quality, and time, the conversion to unitary units is relatively easy; soft-data items such as customer satisfaction, employee turnover, and job satisfaction are not so easy to convert. Still, there are techniques for making the conversions with a reasonable amount of accuracy.

Phillips (1996b) describes 10 ways to isolate the effect of training so that it is credited over other variables as the reason for performance improvements. One of the specific approaches mentioned is the use of control groups. The experimental group receives training; the control group does not. Participants in both groups should be similar demographically, selected at random, and subjected to the same environmental influences. Other factors described by this author are trend-line analysis, forecasting, and participant, management, customer, expert and subordinate estimation. With criteria, it is possible to select the most appropriate one for any organization. Possible criteria are feasibility, accuracy, credibility, costs, and time.
Phillips (1996c) argues that many HR practitioners consider a training evaluation complete when they can link business results to the program. But for the ultimate level of evaluation -- return-on-investment -- the process is not complete until the results have been converted to monetary values and compared with the costs of the program. This shows the true contribution of training. The five steps for converting either hard or soft data to monetary values includes (1) focus on a single unit; (2) determine a value for each unit; (3) calculate the change in performance; (4) obtain an annual amount; and, (5) determine the annual value of improvement.

The point is that many organizations are trying to become more aggressive in determining the monetary benefits of training. They are no longer satisfied just to report business results. Instead, they are converting business results to monetary values and comparing them with the cost of training to obtain the true return-on-investment and the financial contributions of HR.
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