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## P.O.S.T. Instructor Development

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# Instructor Development Training Program

## Pre-course Student Workbook

The following workbook is to be completed by each student prior to the first day of class. The purpose of each reading assignment is to give students a preview of some of the important topics covered throughout the week. Make sure you take the time to complete the entire workbook, as failure to do so will put you at a disadvantage in the class as well as those in your group.

The following topics are covered in the pre-course workbook:

- 1- Understanding Adult Students and the Learning Process (Knowles)
- 2- Bloom's Taxonomy
- 3- Kirkpatrick's Four Levels of Evaluation (how to evaluate training effectiveness)

Each of the topics above will begin with a reading assignment and will be followed by a questions sheet that must be completed.

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## Adult-Based Learning – Level One

Pre-Read Article – Malcolm Knowles

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## Understanding Adult Students and the Learning Process:

### Introduction:

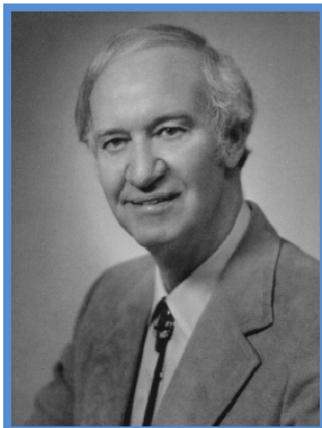
Most of us remember sitting in a lecture listening to an instructor telling us about some subject for an hour or so, taking a short break, and then continuing the lecture for another hour or so. How well did we learn the material covered during this lecture? How much of this material do we remember today? The most likely answer to both questions is "little".

The situation just described did not take into consideration "how adults learn". The purpose of this article is to describe adult learning concepts, relate these concepts to practical adult training, and discuss how lessons can be structured to make good use of adult learning concepts.

Part of being an effective instructor involves understanding how adults learn best. Compared to children and teens, adults have special needs and requirements as learners. There are a number of theories about the learning process and styles of learning. Knowledge of a few basic concepts of learning theory will assist instructors in helping their students to learn. Adult learning theory, recognizes that adult learners bring a wealth of experience to the training environment. In addition, adult learners have a complex set of needs and presentation requirements that must be fulfilled for learning to occur. One of the most respected names in the theory and practice of adult learning—is Malcolm Knowles.

During this training program, we will be looking at Malcolm Knowles and his theories. They play a very important role in the Adult-Based Learning Principle.

### Who is Malcolm Knowles?



Malcolm Shepherd Knowles (1913 - 1997) was a, perhaps 'the', central figure in US adult education in the second half of the twentieth century. In the 1950s he was the Executive Director of the Adult Education Association of the United States of America. He wrote the first major accounts of informal adult education and the history of adult education in the United States. Furthermore, Malcolm Knowles' attempts to develop a distinctive conceptual basis for adult education and learning via the notion of using specific methods or techniques to teach adults (andragogy) became very widely discussed and used. He also wrote popular works on self-direction and on groupwork (with his wife Hulda). *His work was a significant factor in reorienting adult educators from 'educating people' to 'helping them learn'.*

### Malcolm Knowles identified the following characteristics of adult learners:

**Adults are autonomous and self-directed.** They need to be free to direct themselves. Their teachers must actively involve adult participants in the learning process and serve as facilitators for them.

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Specifically, they must get participants' perspectives about what topics to cover and let them work on projects that reflect their interests. They should allow the participants to assume responsibility for presentations and group leadership. They have to be sure to act as facilitators, guiding participants to their own knowledge rather than supplying them with facts. Finally, they must show participants how the class will help them reach their goals (e.g., via a personal goals sheet).

**Adults have accumulated a foundation of life experiences and knowledge** that may include work-related activities, family responsibilities, and previous education. They need to connect learning to this knowledge/experience base. To help them do so, they should draw out participants' experience and knowledge which is relevant to the topic. They must relate theories and concepts to the participants and recognize the value of experience in learning.

**Adults are goal-oriented.** Upon enrolling in a course, they usually know what goal they want to attain. They, therefore, appreciate an educational program that is organized and has clearly defined elements. Instructors must show participants how this class will help them attain their goals. This classification of goals and course objectives must be done early in the course.

**Adults are relevancy-oriented.** They must see a reason for learning something. Learning has to be applicable to their work or other responsibilities to be of value to them. Therefore, instructors must identify objectives for adult participants before the course begins. This means, also, that theories and concepts must be related to a setting familiar to participants. This need can be fulfilled by letting participants choose projects that reflect their own interests.

**Adults are practical,** focusing on the aspects of a lesson most useful to them in their work. They may not be interested in knowledge for its own sake. Instructors must tell participants explicitly how the lesson will be useful to them on the job.

As do all learners, **adults need to be shown respect.** Instructors must acknowledge the wealth of experiences that adult participants bring to the classroom. These adults should be treated as equals in experience and knowledge and allowed to voice their opinions freely in class.

### **Application in the Adult-Based Learning Process:**

How can these adult learning principles be applied to training sessions? Let's examine each one separately.

**Adults need to know why they should learn something and must be ready to learn.** This principle tells us that we need to provide a practical reason why the trainee should pay attention to the lesson. This reason must be stated at the beginning of the lesson, as part of the introduction, and relate the lesson content to their job. As will be mentioned in the section on lesson structure, the introduction to lesson is the most important part of a lesson. As an instructor you need to set the stage for the entire lesson in the

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first five minutes. Similarly, adults need to recognize that there is a gap between what they know and what they need to know. With recognition comes a readiness to fill that gap through a learning activity.

**An adult learner's experience is a valuable resource for additional learning.** If trainees have some experience with the lesson topic, it is good to have them share these experiences with the rest of the group. Because these experiences may be different from your experience, both you and the other students learn something new. Rejecting an adult learner's experience is equivalent to rejecting the adult as a person. This sharing process also helps to establish a good learning environment and enhances the "readiness to learn" mentioned in the first principle.

**Adult learners tend to focus on life-centered, task-centered, or problem-centered learning activities.** This principle tells us that adults want get something practical from their training sessions. That is, they want to be able to take what they learn back to their job or their personal life and use it as soon as possible. This statement tells us that if concepts and principles are discussed, they should be followed by practical exercises or case studies that illustrate the concept or principle.

**Adult learners learn best when they practice, perform and work with new knowledge, skills and attitudes.** Retention and understanding of new knowledge, skills and attitudes is best accomplished by using them over and over. There is a limit to the number of times something can be repeated during a lesson, but if a new ideas can be used and repeated through practical exercises or case studies, the probability of retention and understanding goes up.

**Adult learners learn easiest what they have some familiarity with.** This principle tells us that we should start with something familiar to the student and expand into new areas as the lesson progresses, eventually arriving at the objective of the lesson. The idea of building on established knowledge and skills is important. Lesson material must be sequenced properly to make this happen.

**Adult learners favor different senses for learning.** Studies have shown that some adults are visual learners, some are auditory learners, some are kinesthetic (or hands-on) learners, while others learn best through some combination of these. This fact means that an instructor should use a variety of delivery methods to ensure that all learners' optimum learning medium is used at some point during the lesson.

**Adult learners like to be self-directing and see their own progress during a learning experience.** It would be nice to allow students to select the topics they would like to have in a course. This approach, however, is not practical in most cases. Nevertheless, instructors need to recognize and respect the learners' need for self-direction. In many cases, instructors become facilitators rather than teachers. They must also avoid "talking down" to students. Similarly, adult learners like to feel that they are learning something during a training session. This feeling can be achieved through exercises and short oral reviews intermingled throughout the lesson. These exercises and short quizzes challenge students and allow them to check their ability to understand the material. These types of activities also allow the instructor to see if students have gained some understanding of the topic.

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### Malcolm S. Knowles on informal adult education

The major problems of our age deal with human relations; the solutions can be found only in education. Skill in human relations is a skill that must be learned; it is learned in the home, in the school, in the church, on the job, and wherever people gather together in small groups.

This fact makes the task of every leader of adult groups real, specific, and clear: Every adult group, of whatever nature, must become a laboratory of democracy, a place where people may have the experience of learning to live co-operatively. Attitudes and opinions are formed primarily in the study groups, work groups, and play groups with which adults affiliate voluntarily. These groups are the foundation stones of our democracy. Their goals largely determine the goals of our society. Adult learning should produce at least these outcomes:

**Adults should acquire a mature understanding of themselves.** They should understand their needs, motivations, interests, capacities, and goals. They should be able to look at themselves objectively and maturely. They should accept themselves and respect themselves for what they are, while striving earnestly to become better.

**Adults should develop an attitude of acceptance, love, and respect toward others.** This is the attitude on which all human relations depend. Adults must learn to distinguish between people and ideas, and to challenge ideas without threatening people. Ideally, this attitude will go beyond acceptance, love, and respect, to empathy and the sincere desire to help others.

**Adults should develop a dynamic attitude toward life.** They should accept the fact of change and should think of themselves as always changing. They should acquire the habit of looking at every experience as an opportunity to learn and should become skillful in learning from it.

**Adults should learn to react to the causes, not the symptoms, of behavior.** Solutions to problems lie in their causes, not in their symptoms. We have learned to apply this lesson in the physical world, but have yet to learn to apply it in human relations.

**Adults should acquire the skills necessary to achieve the potentials of their personalities.** Every person has capacities that, if realized, will contribute to the well-being of himself and of society. To achieve these potentials requires skills of many kinds—vocational, social, recreational, civic, artistic, and the like. It should be a goal of education to give each individual those skills necessary for him to make full use of his capacities.

**Adults should understand the essential values in the capital of human experience.** They should be familiar with the heritage of knowledge, the great ideas, the great traditions, of the world in which they live. They should understand and respect the values that bind men together.

**Adults should understand their society and should be skillful in directing social change.** In a democracy the people participate in making decisions that affect the entire social order. It is imperative, therefore, that every factory worker, every salesman, every politician, every housewife, know enough

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about government, economics, international affairs, and other aspects of the social order to be able to take part in them intelligently.

The society of our age, as Robert Maynard Hutchins warns us, cannot wait for the next generation to solve its problems. Time is running out too fast. Our fate rests with the intelligence, skill, and good will of those who are now the citizen-rulers. The instrument by which their abilities as citizen-rulers can be improved is adult education. This is our problem. This is our challenge.

Malcolm S. Knowles (1950) *Informal Adult Education*, Chicago: Association Press, pages 9-10.

### Conclusion

Malcolm S. Knowles was responsible for a number of important 'firsts'.. He was the first to chart the rise of the adult education movement in the United States; the first to develop a statement of informal adult education practice; and the first to attempt a comprehensive theory of adult education (via the notion of andragogy). Jarvis (1987: 185) comments:

As a teacher, writer and leader in the field, Knowles has been an innovator, responding to the needs of the field as he perceived them and, as such, he has been a key figure in the growth and practice of adult education throughout the Western world this century. Yet above all, it would be perhaps fair to say that both his theory and practice have embodied his own value system and that is contained within his formulations of andragogy.

Much of his writing was descriptive and lacked a sharp critical edge. He was ready to change his position - but the basic trajectory of his thought remained fairly constant throughout his career. His focus was increasingly on the delineation of a field of activity rather than on social change - and there was a significantly individualistic focus in his work. ***'I am just not good', he wrote, 'at political action. My strength lies in creating opportunities for helping individuals become more proficient practitioners'*** (Knowles 1989)

### References

- Knowles, Malcom, 1990: *The Adult Learner, The Neglected Species*. Gulf Publishing Co., Houston, 292 pp.
- Mitchell, Garry. 1993: *The Trainer's Handbook, The AMA Guide to Effective Training*, 2nd Edition. AMACOM, New York, 423 pp.
- Pike, Robert W., 1994: *Creative Training Techniques Handbook, Tips, Tactics, and How-To's for Delivering Effective Training*. Lakewood Books, 197 pp.
- Knowles, M. S. (1950) *Informal Adult Education*, New York: Association Press. Guide for educators based on the writer's experience as a programme organizer in the YMCA.
- Knowles, M. S. (1962) *A History of the Adult Education Movement in the USA*, New York: Krieger. A revised edition was published in 1977.

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**Pre-Read Work Sheet: Knowles – Adult Learning**

Use the following “3 – 2 – 1 Review Strategy”:

**3: List three points that captured your attention:**

γ \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

γ \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

γ \_\_\_\_\_  
\_\_\_\_\_  
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**2: List two questions you have as a result of reading the article.**

γ \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

γ \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**1: Describe one “big idea” or the “Most Important Point” (MIP) you learned, realized or can use.**

γ \_\_\_\_\_  
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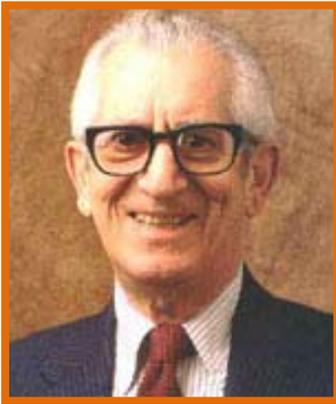
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Pre-Read Article – Bloom's

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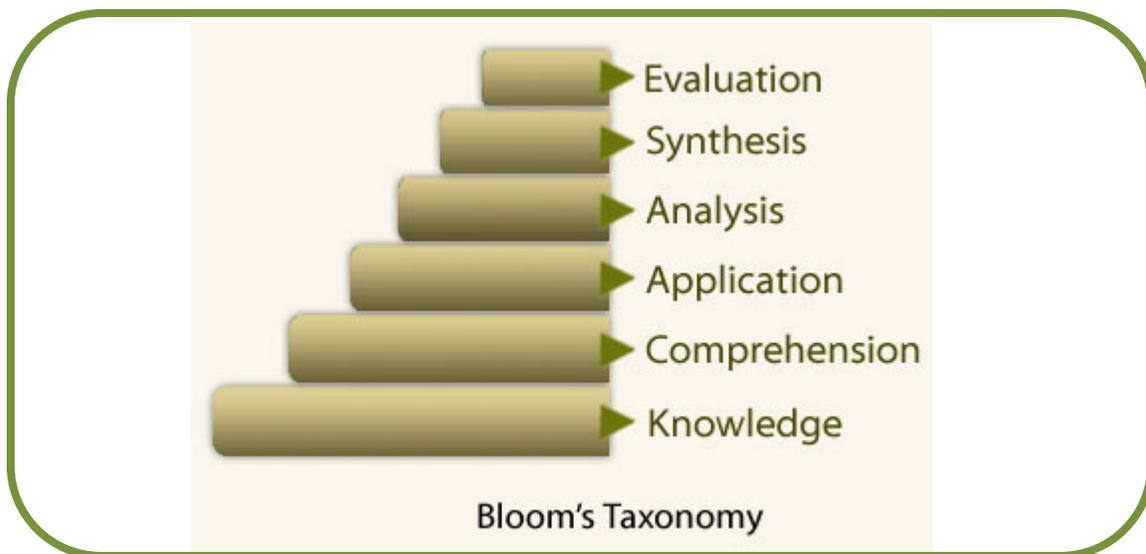


### BLOOM'S TAXONOMY



In 1956, Benjamin Bloom headed a group of educational psychologists who developed a classification of levels of intellectual behavior important in learning. Bloom found that over 95 % of the test questions students encounter require them to think only at the lowest possible level...the recall of information.

Bloom identified six levels within the cognitive domain, from the simple recall or recognition of facts, as the lowest level, through increasingly more complex and abstract mental levels, to the highest order which is classified as evaluation. Verb examples that represent intellectual activity on each level are listed here.



1. **Knowledge:** arrange, define, duplicate, label, list, memorize, name, order, recognize, relate, recall, repeat, reproduce state.
2. **Comprehension:** classify, describe, discuss, explain, express, identify, indicate, locate, recognize, report, restate, review, select, translate,
3. **Application:** apply, choose, demonstrate, dramatize, employ, illustrate, interpret, operate, practice, schedule, sketch, solve, use, write.
4. **Analysis:** analyze, appraise, calculate, categorize, compare, contrast, criticize, differentiate, discriminate, distinguish, examine, experiment, question, test.
5. **Synthesis:** arrange, assemble, collect, compose, construct, create, design, develop, formulate, manage, organize, plan, prepare, propose, set up, write.
6. **Evaluation:** appraise, argue, assess, attach, choose compare, defend estimate, judge, predict, rate, core, select, support, value, evaluate.

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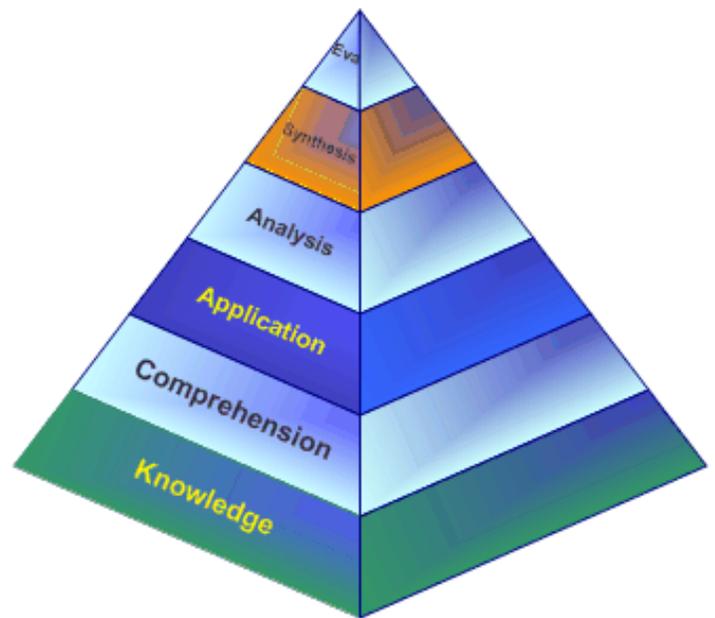
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As teachers we tend to ask questions in the "knowledge" category 80% to 90% of the time. These questions are not bad, but using them all the time is. Try to utilize higher order level of questions. These questions require much more "brain power" and a more extensive and elaborate answer. Below are the six question categories as defined by Bloom.

- **KNOWLEDGE**
  - remembering;
  - memorizing;
  - recognizing;
  - recalling identification and
  - recall of information
    - Who, what, when, where, how ...?
    - Describe
- **COMPREHENSION**
  - interpreting;
  - translating from one medium to another;
  - describing in one's own words;
  - organization and selection of facts and ideas
    - Retell...
- **APPLICATION**
  - problem solving;
  - applying information to produce some result;
  - use of facts, rules and principles
    - How is...an example of...?
    - How is...related to...?
    - Why is...significant?
- **ANALYSIS**
  - subdividing something to show how it is put together;
  - finding the underlying structure of a communication;
  - identifying motives;
  - separation of a whole into component parts
    - What are the parts or features of...?
    - Classify...according to...
    - Outline/diagram...
    - How does...compare/contrast with...?
    - What evidence can you list for...?



**Bloom's Taxonomy**

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- **SYNTHESIS**
  - creating a unique, original product that may be in verbal form or may be a physical object;
  - combination of ideas to form a new whole
    - What would you predict/infer from...?
    - What ideas can you add to...?
    - How would you create/design a new...?
    - What might happen if you combined...?
    - What solutions would you suggest for...?
- **EVALUATION**
  - making value decisions about issues;
  - resolving controversies or differences of opinion;
  - development of opinions, judgements or decisions
    - Do you agree...?
    - What do you think about...?
    - What is the most important...?
    - Place the following in order of priority...
    - How would you decide about...?
    - What criteria would you use to assess...?

## Learning Domains or Bloom's Taxonomy

### The Three Types of Learning

There is more than one type of learning. A committee of colleges, led by Benjamin Bloom, identified three domains of educational activities:

- **Cognitive:** mental skills (*Knowledge*)
- **Affective:** growth in feelings or emotional areas (*Attitude*)
- **Psychomotor:** manual or physical skills (*Skills*)

### Cognitive

The cognitive domain involves knowledge and the development of intellectual skills. This includes the recall or recognition of specific facts, procedural patterns, and concepts that serve in the development of intellectual abilities and skills. There are six major categories, which are listed in order below, starting from the simplest behavior to the most complex. The categories can be thought of as degrees of difficulties. That is, the first one must be mastered before the next one can take place.

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Category	Example and Key Words
<p><b>Knowledge:</b> Recall data or information.</p>	<p><b>Examples:</b> Recite a policy. Quote prices from memory to a customer. Knows the safety rules.</p> <p><b>Key Words:</b> defines, describes, identifies, knows, labels, lists, matches, names, outlines, recalls, recognizes, reproduces, selects, states.</p>
<p><b>Comprehension:</b> Understand the meaning, translation, interpolation, and interpretation of instructions and problems. State a problem in one's own words.</p>	<p><b>Examples:</b> Rewrites the principles of test writing. Explain in one’s own words the steps for performing a complex task. Translates an equation into a computer spreadsheet.</p> <p><b>Key Words:</b> comprehends, converts, defends, distinguishes, estimates, explains, extends, generalizes, gives <b>Examples</b>, infers, interprets, paraphrases, predicts, rewrites, summarizes, translates.</p>
<p><b>Application:</b> Use a concept in a new situation or unprompted use of an abstraction. Applies what was learned in the classroom into novel situations in the work place.</p>	<p><b>Examples:</b> Use a manual to calculate an employee’s vacation time. Apply laws of statistics to evaluate the reliability of a written test.</p> <p><b>Key Words:</b> applies, changes, computes, constructs, demonstrates, discovers, manipulates, modifies, operates, predicts, prepares, produces, relates, shows, solves, uses.</p>
<p><b>Analysis:</b> Separates material or concepts into component parts so that its organizational structure may be understood. Distinguishes between facts and inferences.</p>	<p><b>Examples:</b> Troubleshoot a piece of equipment by using logical deduction. Recognize logical fallacies in reasoning. Gathers information from a department and selects the required tasks for training.</p> <p><b>Key Words:</b> analyzes, breaks down, compares, contrasts, diagrams, deconstructs, differentiates, discriminates, distinguishes, identifies, illustrates, infers, outlines, relates, selects, separates.</p>
<p><b>Synthesis:</b> Builds a structure or pattern from diverse elements. Put parts together to form a whole, with emphasis on creating a new meaning or structure.</p>	<p><b>Examples:</b> Write a company operations or process manual. Design a machine to perform a specific task. Integrates training from several sources to solve a problem. Revises and process to improve the outcome.</p> <p><b>Key Words:</b> categorizes, combines, compiles, composes, creates,</p>

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	devises, designs, explains, generates, modifies, organizes, plans, rearranges, reconstructs, relates, reorganizes, revises, rewrites, summarizes, tells, writes.
<b>Evaluation:</b> Make judgments about the value of ideas or materials.	<p><b>Examples:</b> Select the most effective solution. Hire the most qualified candidate. Explain and justify a new budget.</p> <p><b>Key Words:</b> appraises, compares, concludes, contrasts, criticizes, critiques, defends, describes, discriminates, evaluates, explains, interprets, justifies, relates, summarizes, supports.</p>

**Affective**

This domain includes the manner in which we deal with things emotionally, such as feelings, values, appreciation, enthusiasms, motivations, and attitudes. The five major categories listed the simplest behavior to the most complex:

<b>Category</b>	<b>Example and Key Words</b>
<b>Receiving Phenomena:</b> Awareness, willingness to hear, selected attention.	<p><b>Examples:</b> Listen to others with respect. Listen for and remember the name of newly introduced people.</p> <p><b>Key Words:</b> asks, chooses, describes, follows, gives, holds, identifies, locates, names, points to, selects, sits, erects, replies, uses.</p>
<b>Responding to Phenomena:</b> Active participation on the part of the learners. Attends and reacts to a particular phenomenon. Learning outcomes may emphasize compliance in responding, willingness to respond, or satisfaction in responding (motivation).	<p><b>Examples:</b> Participates in class discussions. Gives a presentation. Questions new ideals, concepts, models, etc. in order to fully understand them. Know the safety rules and practices them.</p> <p><b>Key Words:</b> answers, assists, aids, complies, conforms, discusses, greets, helps, labels, performs, practices, presents, reads, recites, reports, selects, tells, writes.</p>
<b>Valuing:</b> The worth or value a person attaches to a particular object, phenomenon, or behavior. This ranges from simple acceptance to the more complex state of commitment. Valuing is based on the	<p><b>Examples:</b> Demonstrates belief in the democratic process. Is sensitive towards individual and cultural differences (value diversity). Shows the ability to solve problems. Proposes a plan to social improvement and follows through with commitment. Informs management on matters that one feels strongly about.</p>

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<p>internalization of a set of specified values, while clues to these values are expressed in the learner’s overt behavior and are often identifiable.</p>	<p><b>Key Words:</b> completes, demonstrates, differentiates, explains, follows, forms, initiates, invites, joins, justifies, proposes, reads, reports, selects, shares, studies, works.</p>
<p><b>Organization:</b> Organizes values into priorities by contrasting different values, resolving conflicts between them, and creating an unique value system. The emphasis is on comparing, relating, and synthesizing values.</p>	<p><b>Examples:</b> Recognizes the need for balance between freedom and responsible behavior. Accepts responsibility for one’s behavior. Explains the role of systematic planning in solving problems. Accepts professional ethical standards. Creates a life plan in harmony with abilities, interests, and beliefs. Prioritizes time effectively to meet the needs of the organization, family, and self.</p> <p><b>Key Words:</b> adheres, alters, arranges, combines, compares, completes, defends, explains, formulates, generalizes, identifies, integrates, modifies, orders, organizes, prepares, relates, synthesizes.</p>
<p><b>Internalizing values</b> (characterization): Has a value system that controls their behavior. The behavior is pervasive, consistent, predictable, and most importantly, characteristic of the learner. Instructional objectives are concerned with the student’s general patterns of adjustment (personal, social, emotional).</p>	<p><b>Examples:</b> Shows self-reliance when working independently. Cooperates in group activities (displays teamwork). Uses an objective approach in problem solving. Displays a professional commitment to ethical practice on a daily basis. Revises judgments and changes behavior in light of new evidence. Values people for what they are, not how they look.</p> <p><b>Key Words:</b> acts, discriminates, displays, influences, listens, modifies, performs, practices, proposes, qualifies, questions, revises, serves, solves, verifies.</p>

**Psychomotor**

The psychomotor domain includes physical movement, coordination, and use of the motor-skill areas. Development of these skills requires practice and is measured in terms of speed, precision, distance, procedures, or techniques in execution. The seven major categories listed the simplest behavior to the most complex:

<b>Category</b>	<b>Example and Key Words</b>
<p><b>Perception:</b> The ability to use sensory cues to guide motor activity. This ranges from sensory stimulation,</p>	<p><b>Examples:</b> Detects non-verbal communication cues. Estimate where a ball will land after it is thrown and then moving to the correct location to catch the ball. Adjusts heat of stove to correct</p>

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<p>through cue selection, to translation.</p>	<p>temperature by smell and taste of food. Adjusts the height of the forks on a forklift by comparing where the forks are in relation to the pallet.</p> <p><b>Key Words:</b> chooses, describes, detects, differentiates, distinguishes, identifies, isolates, relates, selects.</p>
<p><b>Set:</b> Readiness to act. It includes mental, physical, and emotional sets. These three sets are dispositions that predetermine a person’s response to different situations (sometimes called mindsets).</p>	<p><b>Examples:</b> Knows and acts upon a sequence of steps in a manufacturing process. Recognize one’s abilities and limitations. Shows desire to learn a new process (motivation). NOTE: This subdivision of Psychomotor is closely related with the "Responding to phenomena" subdivision of the Affective domain.</p> <p><b>Key Words:</b> begins, displays, explains, moves, proceeds, reacts, shows, states, volunteers.</p>
<p><b>Guided Response:</b> The early stages in learning a complex skill that includes imitation and trial and error. Adequacy of performance is achieved by practicing.</p>	<p><b>Examples:</b> Performs a mathematical equation as demonstrated. Follows instructions to build a model. Responds hand-signals of instructor while learning to operate a forklift.</p> <p><b>Key Words:</b> copies, traces, follows, react, reproduce, responds</p>
<p><b>Mechanism:</b> This is the intermediate stage in learning a complex skill. Learned responses have become habitual and the movements can be performed with some confidence and proficiency.</p>	<p><b>Examples:</b> Use a personal computer. Repair a leaking faucet. Drive a car.</p> <p><b>Key Words:</b> assembles, calibrates, constructs, dismantles, displays, fastens, fixes, grinds, heats, manipulates, measures, mends, mixes, organizes, sketches.</p>
<p><b>Complex Overt Response:</b> The skillful performance of motor acts that involve complex movement patterns. Proficiency is indicated by a quick, accurate, and highly coordinated performance, requiring a minimum of energy. This category includes performing without hesitation, and automatic performance. For example, players are often utter sounds of satisfaction or expletives as soon as they hit a tennis ball or throw a football, because they</p>	<p><b>Examples:</b> Maneuvers a car into a tight parallel parking spot. Operates a computer quickly and accurately. Displays competence while playing the piano.</p> <p><b>Key Words:</b> assembles, builds, calibrates, constructs, dismantles, displays, fastens, fixes, grinds, heats, manipulates, measures, mends, mixes, organizes, sketches.</p> <p>NOTE: The Key Words are the same as Mechanism, but will have adverbs or adjectives that indicate that the performance is quicker, better, more accurate, etc.</p>

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 Pre-Read Article – Bloom’s



<p>can tell by the feel of the act what the result will produce.</p>	
<p><b>Adaptation:</b> Skills are well developed and the individual can modify movement patterns to fit special requirements.</p>	<p><b>Examples:</b> Responds effectively to unexpected experiences. Modifies instruction to meet the needs of the learners. Perform a task with a machine that it was not originally intended to do (machine is not damaged and there is no danger in performing the new task).</p> <p><b>Key Words:</b> adapts, alters, changes, rearranges, reorganizes, revises, varies.</p>
<p><b>Origination:</b> Creating new movement patterns to fit a particular situation or specific problem. Learning outcomes emphasize creativity based upon highly developed skills.</p>	<p><b>Examples:</b> Constructs a new theory. Develops a new and comprehensive training programming. Creates a new gymnastic routine.</p> <p><b>Key Words:</b> arranges, builds, combines, composes, constructs, creates, designs, initiate, makes, originates.</p>

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**P.O.S.T. Instructor Development Training Program  
Adult-Based Learning – Level One**

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## **Pre-Read Worksheet: Bloom's Taxonomy**

Use the following “3 – 2 – 1 Review Strategy”:

**3: List three points that captured your attention:**

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**2: List two questions you have as a result of reading the article.**

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**1: Describe one “big idea” or the “Most Important Point” (MIP) you learned, realized or can use.**

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## Kirkpatrick's Four Levels of Evaluation

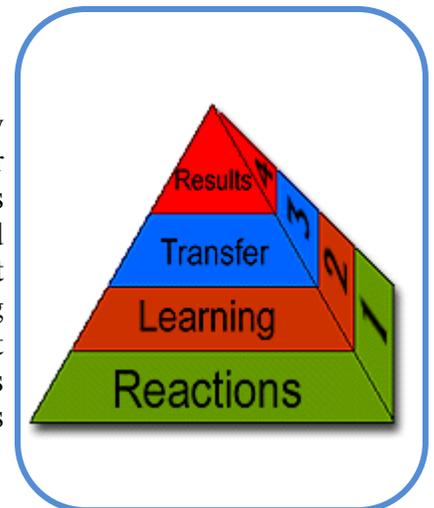


In Kirkpatrick's four-level model, each successive evaluation level is built on information provided by the lower level.

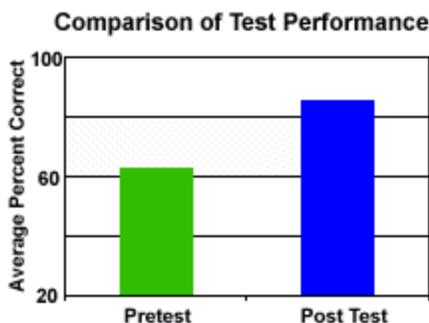
ASSESSING TRAINING EFFECTIVENESS often entails using the four-level model developed by [Donald Kirkpatrick \(1994\)](#). According to this model, evaluation should always begin with level one, and then, as time and budget allows, should move sequentially through levels two, three, and four. Information 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.

### Level 1 Evaluation - Reactions

Just as the word implies, evaluation at this level measures how participants in a training program react to it. It attempts to answer questions regarding the participants' perceptions - Did they like it? Was the material relevant to their work? This type of evaluation is often called a "smilesheet." According to Kirkpatrick, every program should at least be evaluated at this level to provide for the improvement of a training program. In addition, the participants' reactions have important consequences for learning (level two). Although a positive reaction does not guarantee learning, a negative reaction almost certainly reduces its possibility.



### Level 2 Evaluation - Learning



To assess the amount of learning that has occurred due to a training program, level two evaluations often use tests conducted before training (pretest) and after training (post test).

Assessing at this level moves the evaluation beyond learner satisfaction and attempts to assess the extent students have advanced in skills, knowledge, or attitude. Measurement at this level is more difficult and laborious than level one. Methods range from formal to informal testing to team assessment and self-assessment. If possible, participants take the test or assessment before the training (pretest) and after training (post test) to determine the amount of learning that has occurred.

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# P.O.S.T. Instructor Development Training Program

## Adult-Based Learning – Level One

Pre-Read Article - Kirkpatrick

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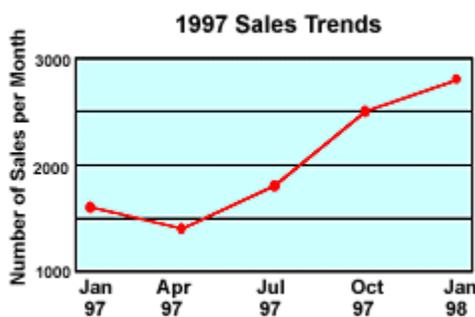


### Level 3 Evaluation - Transfer

This level measures the transfer that has occurred in learners' behavior due to the training program. Evaluating at this level attempts to answer the question - Are the newly acquired skills, knowledge, or attitude being used in the everyday environment of the learner? For many trainers this level represents the truest assessment of a program's effectiveness. However, measuring at this level is difficult as it is often impossible to predict when the change in behavior will occur, and thus requires important decisions in terms of when to evaluate, how often to evaluate, and how to evaluate.

### Level 4 Evaluation- Results

Level four evaluation attempts to assess training in terms of business results. In this case, sales transactions improved steadily after training for sales staff occurred in April 1997.



Frequently thought of as the bottom line, this level measures the success of the program in terms that managers and executives can understand -increased production, improved quality, decreased costs, reduced frequency of accidents, increased sales, and even higher profits or return on investment. From a business and organizational perspective, this is the overall reason for a training program, yet level four results are not typically

addressed. Determining results in financial terms is difficult to measure, and is hard to link directly with training.

### Methods for Long-Term Evaluation

- Send post-training surveys
- Offer ongoing, sequenced training and coaching over a period of time
- Conduct follow-up needs assessment
- Check metrics (e.g., scrap, re-work, errors, etc.) to measure if participants achieved training objectives
- Interview trainees and their managers, or their customer groups (e.g., patients, other departmental staff)

# P.O.S.T. Instructor Development Training Program

## Adult-Based Learning – Level One

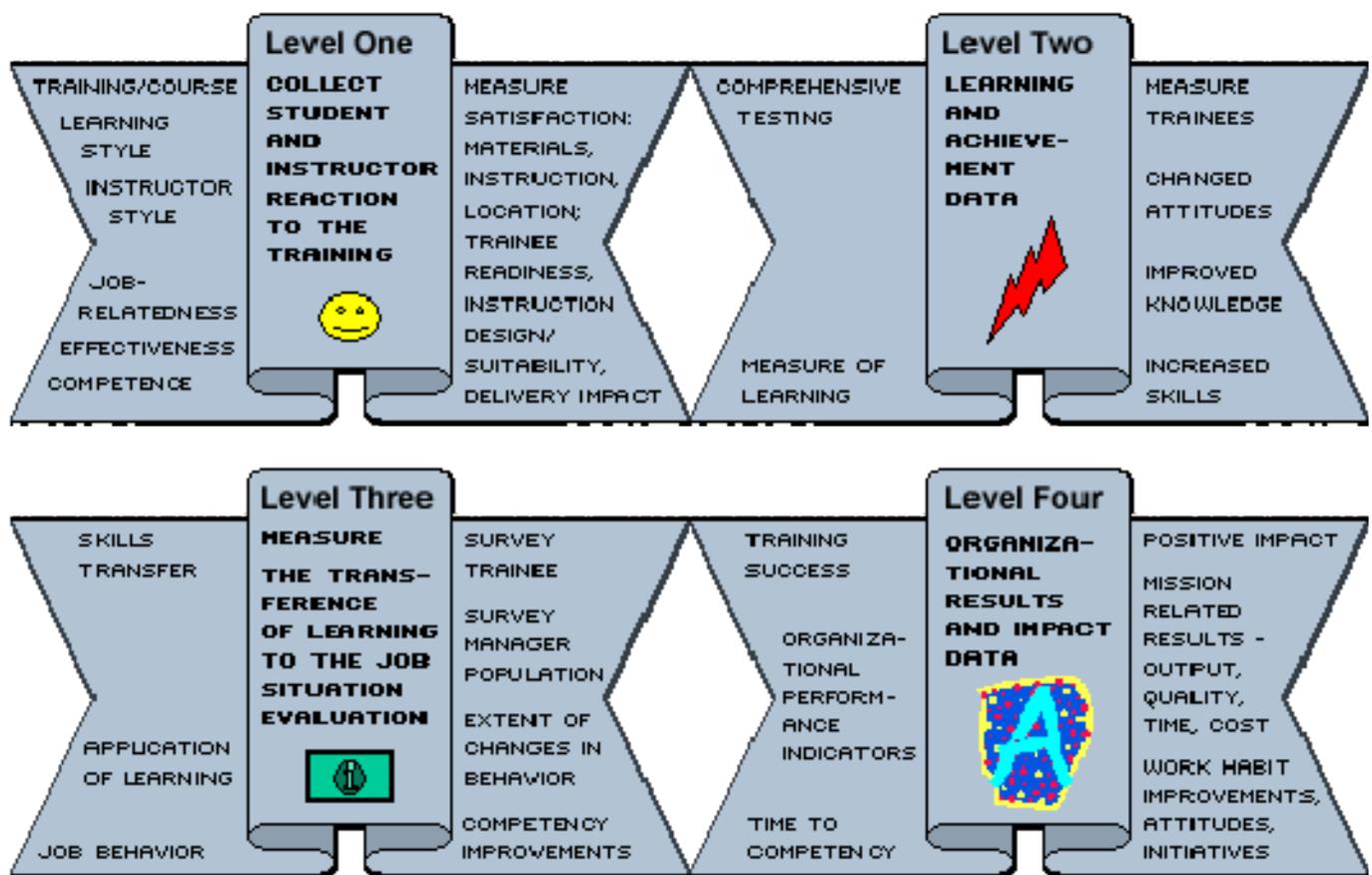
Pre-Read Article - Kirkpatrick



Elaine C. Winfrey - Graduate Student - SDSU Educational Technology - Winfrey, E.C. (1999). - Kirkpatrick's Four Levels of Evaluation. In B. Hoffman (Ed.), *Encyclopedia of Educational Technology*. Retrieved - October 12, 2007, from <http://coe.sdsu.edu/eet/Articles/k4levels/start.htm>

## The Kirkpatrick Training Model for Training Assessment

The classic training model used widely in industry and government today is based on the work of Professor Donald L. Kirkpatrick of the University of Wisconsin.



**Kirkpatrick Level 1** or Reaction data typically includes "learn-ability" data collected from trainees (e.g., learning preferences, instructional delivery, job-relatedness, training efficacy, instructor competence) and "teach-ability" data collected from instructors (e.g., trainee readiness, job-relatedness, instructional design, materials accuracy and suitability, training facility adequacy, as well as other reactions to the training event and its delivery).

**P.O.S.T. Instructor Development Training Program**  
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 Pre-Read Article - Kirkpatrick



**Kirkpatrick Level 2**, or Learning and Achievement data, is usually assessed through a comprehensive testing program, measures the extent to which trainees changed attitudes, improved knowledge and/or increased skills as a result of participating in the training.

**Kirkpatrick Level 3** or Behavior and Performance data, determines the extent to which changes in behavior and job performance have occurred as a result of the training event. Level 3 data is usually collected between 3 and 6 months after the training event and involves both students' and managers' evaluation of changes in job related activities.

**Kirkpatrick Level 4** or Organizational Results and Impact data, measures the mission-related outcomes considered indicative of training success that occurred as a result of participants having participated in the training event.

A Level 5 model is also proposed for use in some quarters. Although not the work of Dr. Kirkpatrick, this model attempts to measure the return on investment (ROI) achieved through improved performance resulting from the training. This would be accomplished by defining the value of the improved performance relative to the cost of obtaining that

**Donald L. Kirkpatrick's training evaluation model - the four levels of learning evaluation**

The four levels of Kirkpatrick's evaluation model essentially measure:

- reaction of student - what they thought and felt about the training
- learning - the resulting increase in knowledge or capability
- behavior - extent of behavior and capability improvement and implementation/application
- results - the effects on the business or environment resulting from the trainee's performance

**Kirkpatrick's four levels of training evaluation**

This grid illustrates the basic Kirkpatrick structure at a glance.

level	evaluation type (what is measured)	evaluation description and characteristics	examples of evaluation tools and methods	relevance and practicability
1	reaction	<ul style="list-style-type: none"> <li>• reaction evaluation</li> </ul>	<ul style="list-style-type: none"> <li>• e.g., 'happy sheets',</li> </ul>	<ul style="list-style-type: none"> <li>• quick and very easy</li> </ul>

# P.O.S.T. Instructor Development Training Program

## Adult-Based Learning – Level One

Pre-Read Article - Kirkpatrick



		is how the delegates felt about the training or learning experience	<ul style="list-style-type: none"> <li>feedback forms</li> <li>also verbal reaction, post-training surveys or questionnaires</li> </ul>	<ul style="list-style-type: none"> <li>to obtain</li> <li>not expensive to gather or to analyze</li> </ul>
2	learning	<ul style="list-style-type: none"> <li>learning evaluation is the measurement of the increase in knowledge - before and after</li> </ul>	<ul style="list-style-type: none"> <li>typically assessments or tests before and after the training</li> <li>interview or observation can also be used</li> </ul>	<ul style="list-style-type: none"> <li>relatively simple to set up; clear-cut for quantifiable skills</li> <li>less easy for complex learning</li> </ul>
3	behavior	<ul style="list-style-type: none"> <li>behavior evaluation is the extent of applied learning back on the job - implementation</li> </ul>	<ul style="list-style-type: none"> <li>observation and interview over time are required to assess change, relevance of change, and sustainability of change</li> </ul>	<ul style="list-style-type: none"> <li>measurement of behavior change typically requires cooperation and skill of line-managers</li> </ul>
4	results	<ul style="list-style-type: none"> <li>results evaluation is the effect on the business or environment by the trainee</li> </ul>	<ul style="list-style-type: none"> <li>measures are already in place via normal management systems and reporting - the challenge is to relate to the trainee</li> </ul>	<ul style="list-style-type: none"> <li>individually not difficult; unlike whole organization</li> <li>process must attribute clear accountabilities</li> </ul>

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**P.O.S.T. Instructor Development Training Program  
Adult-Based Learning – Level One**

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## **Pre-Read Work Sheet: Kirkpatrick’s Four Levels of Evaluation**

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