

LESSON 6

ADULT LEARNING

Dear Friends,

After reading previous few lessons you are position to explain learning and training.

After reading this lesson You will be able to :

1. **Understand and Explain Adult Learning**
2. **Differentiate between adult learning and Child learning**
3. **Apply the principles of adult learning for practical training.**

Learning is a life-long activity; we are never too old to learn, but we are frequently resistant to change, People often talk about problems as if they safe-guarded their position, e.g, "There are so many problems I cannot change" What they mean is do not remove the problem or I might have to change. Learning is change.

ADULT LEARNING

Pedagogy

All formal education institutions in modern society were initially established exclusively for the education of children and youth. At the time they were established there was only one model of assumptions about learners and learning - the pedagogical model (derived from the Greek words, ped meaning "child" and agogus meaning "leader" so "pedagogy" means literally "that art and science of teaching children."

This model assigned full responsibility for making all decisions about what should be learned, how it should be learned, when it should be learned. Students were given the . role of being submission recipients of the directions and transmitted content of the teacher. It assumed that they were depended personalities, that they had little experience that could serve as a resource for learning that they become ready to learn what they were told they had to learn (to get promoted to the next level), that they were subject -centered in their orientation to learning and that they were motivated by extrinsic pressure or rewards, The backbone methodology of pedagogy is transmission techniques. As educational psychologists started researching educational phenomena around the turn of the century they were governed largely by these assumptions *too*. But they were not really looking at learning; they were investigating reactions to teaching and the more they found out how teachers could control learners reactions, the more controlling teaching became. Pedagogy was king.

When adult education began to be organized systematically in the first quarter of this century, pedagogy was the only model teachers of adults had to go on, with the result that until recently adults were taught as if they were children. I believe that this fact accounts for many of the troubles adult educators encountered, such as a high drop-out rate (where attendance was voluntary), low motivation, and poor performance. When

training began emerging as a speciality within the general adult education movement almost half a century later, this was the only model available to trainers, as well.

THEN CAME ANDRAGOGY

The first inkling that the pedagogical model may not be appropriate for adults appeared in a book by Eduard C Lindeman, "The meaning of Adult Education," in 1926. Based on his experience as both an adult learner and a teacher of adults, Lindeman proposed that adults were not just grown-up children, that they learned best when they were actively involved in knowing what, how, and when they learned. But it was not until 1950. When we began getting empirical research on adults as learners, that the notion that there are differences between youth and adults as learners began being taken seriously.

A seminal study by Houle spawned a crescendo of studies (Tough, Peter, Penland, and others) of how adults learn naturally. (e.g. when they are not being taught). These studies document the fact that adults do indeed engage in more intentional learning outside of formal instruction than in organized programs and that they are in fact highly self-directed learners. Meantime, knowledge about adult learners was coming from other disciplines. Clinical psychologists were providing information on the conditions and strategies that promoted behavioural change (which is what education should be about too). Developmental psychologists were illuminating the development stages that adults experience throughout the life span, which are a main stimulus of readiness to learn, sociologists were exposing the effects that many institutional policies and practices have inhibiting or facilitating learning (especially the inhibiting effects of rules and regulations, requirements, registration procedures, time schedules and the like). Social psychologists were revealing the influence of forces in the larger environment, such as social attitudes and customs, reward systems and socio-economic and ethnic satisfaction.

Early in the 1960s European adult educators were feeling a need for a label for the growing body of knowledge about adult learners that would enable them to talk about it in parallel with the pedagogical model and they coined the term andragogy: It is derived from the Greek word, *andros*, meaning "adult" (literally, "man, not boy"). It was initially used to mean "the art and science of helping adults learn", but, as will be shown later, the term has taken on a broader meaning. It is a term that is now widely used around the world as an alternative to pedagogy.

WHAT DO WE KNOW ABOUT ADULTS AS LEARNERS

The research cited above leads to the following assumptions about adults as learners on which the andragogical model is based ;,.

1. Adults have a need to know why they should learn something. Tough found that adults would spend considerable time and energy exploring what the benefits would be of their learning something and what costs would be of their not learning it before they would be willing to invest time and energy in learning it. We therefore now have a dictum in adult education that one of the first tasks of the adult educator is to develop a "need to know" in the learning what we have to offer. At the minimum this case should be made through

testimony from the experience of the trainer or a successful practitioner; at the maximum by providing real or simulated experience through which the learners experience the benefits of knowing and the costs of not knowing. It is seldom convincing for them to be told by someone (like the boss) that would be good for them.

To practice-e-what t-preach; let me try to make a case for your learning about "Treating Adult learners as Adults." Let me quote from an article I wrote for the Training and Development journal of September 1976, "Separating the Amateurs from the Pros in Training."

When I first got into training in 1935 the assumption was made that one didn't need to have qualifications much different from any other administrative role to do a good job as a training director. The role was defined essentially as that of managing the logistics of organizing and operating activities for various groupings of individuals. If one had any experience in planning schedules, building budgets, getting out promotional materials, hiring people, and filling out reports, he (there were no she's at that time) was qualified. We were all amateurs. But no longer. During the intervening years there has been a body of knowledge about how adults learn and a body of technology for facilitating that learning that is changing the role of trainer and requiring that he or she knows things few teachers know and probably none of his or her associates know. The trainer must know' andragogy - the art and science of helping adults learn- and how it differs from pedagogy - the art and science of teaching youth. . . . This is the mark of the pro.

2. Adults have a deep need to be self-directing. In fact the psychological definition of "adult" is one who has achieved a self-concept of being in charge of his or her own life, of being responsible for making his or her own decisions and living with the consequences. At the point at which we arrive at this self-concept we develop a deep psychological need to be seen and treated by others as being capable of taking responsibility for ourselves. This fact creates a special problem for us in adult education and training in that although adults may be completely self-directing in most aspects of their lives (as full-time workers, spouses, parents, and voting citizens) when they enter a program labeled "education" or "training" they had back to their conditioning in school and college and put on their hats of dependency, fold their arms, sit back, and say, "Teach me". The problem arises if we assume that this is really where they are coming from .and start teaching them as if they were children. We then put them into an inner conflict between this intellectual map-learner equals dependent-and their deeper psychological need to be self-directing. And the way most people deal with psychological conflict is to seek to withdraw from the situation causing it. To resolve this problem adult educators have been developing strategies for helping adults to 'make a quick transition from seeking themselves as being dependent learners to becoming self-directed learners

3. Adults have greater volume and different quality of experience than youth. Except in certain pathological circumstances, the longer we live the more experience and more varied experience we accumulate. The greater reservoir of experience affects learning in several ways:

Adults bring into a learning situation a background of experience that is itself a rich resource for many kinds of learning for themselves and for others. Hence, in adult education, the greater emphasis on the use of experiential learning- techniques such as discussion methods and problem-solving exercises, that tap into the accumulated knowledge and skills of the learners, or techniques, such as simulation exercises and field experiences, that provide learners with experiences from which they can learn by analyzing them.

Adults have a broader base of experience to which they attach new ideas and skills and give them richer meaning. The more explicit these relationships (between the old and the new) are made through discussion and reflection - the deeper and more permanent the learning will be.

It is predictable that a group of adults, especially if there is an age mix, will have a wider range of differences in background, interests ability, and learning styles than is true of any group of youth. Adult groups are heterogeneous groups. Accordingly increasing emphasis is being placed in adult education on individualized learning and instruction, through contract learning self-paced multimedia modules, learning resource centres and other means.

But there is a potentially negative consequence of this fact of greater experience - it tends to cause people to develop habits of thought and biases, to make presuppositions to be less open to new ideas. (How often have you heard somebody react to a new proposal "It won't work. We tried it five years ago and it didn't work"?) some techniques have been developed to try to counter this tendency sensitivity training open-mindedness scales, creativity exercises, and others.

But the difference in quality of experience adults bring with them is also significant. Few youth have had the experience of being full-time workers, spouses, parents voting citizens, organizational leaders, and of performing other adults roles. Most adults have. Accordingly, adults have a different perspective on experience : it is their chief source of self identity. To youth, experience is something that happens to them. But adults define themselves in terms of their unique experience. An adult's experience is who he or she is. So if adults' experience is not respected and valued, is not made use of as resource for learning they experience this omission not as a rejection of their experience but as a rejection of them as persons. Evidence indicates that this phenomenon is especially characteristic of under educated adults.

4. Adults become ready to learn when they experience in their life situation a need to know or be able to do in order to perform more effectively and satisfyingly. The pedagogical model makes the opposite assumption- that people become ready to learn what they are told by some authority figure (teacher, trainer, boss), that they have to learn because it's good for them or the authority figure demands it. Adults experience "being told" as infringing on their adulthood-their need to be self-directing-and tend to react with

resentment, defensiveness, and resistance. Adults learn best when they choose voluntarily to make a commitment to learn.

This principle is often difficult to apply in business and industry since rightly or wrongly employer-provided training tends to be perceived as employers required training. Indeed, often attendance is compulsory. When I sense that there are people in one of my activities who have been "sent", I do two things to try to reduce the resistance it induces. First, I make it public that I realize that there may be some people in the room who aren't there because they want to be, and that I am sorry this because it tends to get in the way of learning. But, I explain, there is nothing I or you can do to change this at this time, so let's accept it as a given and see if we can't have a pleasant and profitable time together anyway. More importantly, I try to involve them in discovering for themselves-through participation in simulation exercises self-diagnosing their learning needs through competency-based rating scales, observing role models of superior performance-the value for their own lives of learning what the program has to offer.

One of the richest sources of readiness to learn is the transitions people make in moving from one developmental stage to another. As Havighurst points out, as we confront having to perform the development tasks of the next at age of development, we become ready to learn those tasks; and the peak of our desire to learn them he calls the "teachable moment." A typical sequence of developmental tasks in work life would be (1) to begin a process of career planning (2) to acquire the competencies required for a first job, (3) to get a first job (4) to become oriented to the first job (5) to master the competencies required to perform excellently in the first job, (6) to plan and prepare for a next-step-up job, and so through a cycle of career development. The final development task would be to prepare for retirement from a career. A main implication of this concept is the importance of timing our educational offerings to coincide with the worker's developmental tasks. Indeed, some of the great goods of training have occurred as a result of

5. Adults enter into a learning experience with a task-centered (or problem centered or life-centered) orientation to learning. Children and youth have been conditioned by their school experience to have a subject-centered orientation to learning; they see learning as a process of acquiring the subject matter necessary/to pass tests. Once that is done, their mission is accomplished. This difference in orientation calls for different ways to organizing the content to be learned. In traditional education that content is organized into subject-matter courses-such as composition II, in which sentence and paragraph structures are memorized and composition III, in which rules of outlining syntax and the like are memorized. In adult education the content is organized around life tasks: Composition II becomes

"Writing for pleasure and profit" and composition III becomes "Improving' Your Professional Communications."

I have found that this principle is commonly violated in orientation programs, in which the sequence of topic might be (1) The History and Philosophy of XYZ Co., (2) The Market and Products of XYZ Co., (3) The personnel policies of XYZ., and so on, instead of starting with a census of problems and concerns, along with problems and

concerns of the organization and trainer. But I strongly urge trainers to review their programs and restructure the units around tasks, problems, or life situations. The participants will see the program as such more relevant to their lives and they will learn the content with the intention of using it.

6. Adults are motivated to learn by both extrinsic and intrinsic motivators. One of the most significant findings of the search into adult learning is that adults are motivated to learn. Allen Tough, the researcher who has to date accumulated the largest volume of information about how adults learn in normal life, has yet to find a subject in his research who had not engaged in at least one *major* learning-project (a minimum of +hours of intentional learning) in the preceding year, and the average number of learning projects was over seven. The problem (and our challenge) is that they may not be motivated to learn what we want to teach them: hence the importance of following through on the first assumption above- developing a need to know.

The pedagogical model makes the assumption the children and youth are motivated primarily, if not exclusively, by extrinsic motivator-pressures from parents and teachers, competition for grades, diplomas, and the like. Adult learners respond to extrinsic motivators - wage raises, promotion, better working conditions, and the like- up to the point that they are reasonably well satisfied but the more potent and persistent motivators such intrinsic motivators as the need for self-esteem broadened responsibilities, power, achievement, and the like. The message here as I read it, is to appeal to both the desire for job advancement and life enrichment in promoting your programs.

DUPLICATIONS FOR PRACTICE

The assumptions of pedagogy and andragogy have a number of implication for what we do as human resource developers. One basic implication is the importance of making a clear distinction between a content plan and a process design. /

When planning an educational activity, the pedagogy thinks in terms of drafting a content plan, and he has to answer only four questions to come up with a plan. (1) What content needs to be covered? (the assumption being that they will only learn what he transmits, and therefore he has to cover it all in the classroom). So he draws up a long laundry list of content terms. (2) How can this content be organized into manageable units? (1- hour, 3 -hour, etc. units). So he arranges the units in a sequence according to chronology (history, literature, political science) or from simple to complex (science, math). (4) What would be the most effective methods? Choice will probably be lecture and assign reading; if unit 2 involves skill performance, the method of choice will probably be demonstration by him and drill, drill, drill by them. By answering these four questions he ends up with a content-transmission plan.

The andragog, on the other hand, when she (get the gender change?) undertakes to plan an education activity, sees her task as being twofold: first, and primarily so design and manage a process for facilitating the acquisition of content by the learners; and only secondarily to serve as a content resource (she perceives that there are many content resources in addition to her own-peers, supervisors, specialists and a variety of materials

in the learner's environment, and that an important part of her responsibility is to keep up to date as to what these resources are and to link learners with them).

So the andragog has to answer very different kinds of questions to come up with a process design. (Notice that it is not a matter of the pedagog's being concerned with content and the andragog's not being concerned with it; rather, the pedagog is concerned with transmitting the content and the andragog is concerned with facilitating the acquisition of the content by the learners)

The questions raised by the andragog have to do with implementing the following elements of an andragogical process design:

1. Climate setting: A prerequisite for effective learning to take place is the establishment of a climate that is conducive to learning. Two broad aspects of climate must be considered: institutional climate and the climate of training situation.

Among the questions that might be raised regarding institutional climate are: Do the policy statements of the institution convey a deep commitment to the value of human resources development in the accomplishment of the mission of the institution? Does the budget of the institution provide adequate resources for the support of significant human resources development (HRD) efforts? Is the HRD staff involved in the decision-making process as regards personnel policies and programs? Are adequate physical facilities for HRD activities provided? Does the reward system of the institution give credit for the achievement of personal growth on the part of individuals and their supervisor?

As regards setting a climate in a training situation, these are the conditions that I think characterize a climate that is conducive to learning, and the questions that might be asked in creating a process design to achieve those conditions:

2. A climate of mutual respect: I believe that people are more open to learning if they feel respected. If they feel that they are being talked down to, embarrassed, or otherwise denigrated, their energy is diverted from learning to dealing with these feelings. I do several things to try to bring such a climate into being: First, I provide name tents—5 by 8 cards with their names printed on them with bold felt pens—so that I (and they) can start calling on them by name. Then I put them into small groups of five or six persons (preferably sitting around tables) and ask them to share their "whats" (their work roles); their "whos" (one thing about themselves that will enable others to see them as unique human beings); any special knowledge, skill, or other resources.

They would be willing to share with others; and any questions, problems or concerns they are hoping will be dealt with in this program. I ask one person in each group to volunteer to give a high-point summary of this information about each group. I feel that this hour is the most important hour in the whole training event, since it starts the process of creating a climate that is conducive to learning.

A climate of collaborativeness rather than competitiveness. The above sharing exercise causes the participants to start seeing themselves as mutual helpers rather than rivals. For many kinds of learning, the richest resources are within their peers, hence the importance of making these resources available.

A climate of supportiveness rather than judgementalness. I think I largely set this climate by being supportive in my own behaviour but the opening exercise also tends to

establish peer - support relationships.

A climate of mutual trust. In order to reduce the instinctive mistrust with which people typically react to authority figures, in presenting myself I emphasize who I am as a human being rather than as an expert, and I urge them to call me by my first name.

A climate of fun. Learning should be one of the most joyful things we do and so I do everything I can to make the experience enjoyable. I make a lot of use of spontaneous (not canned) humor.

A human climate. Learning is a human activity; training is for dogs and horses. So I try to establish a climate in which people feel that they are being treated as human beings not objects. I try to care for their human needs. Comfortable chairs, frequently breaks. adequate ventilation and lighting availability of coffee or cold drinks, and the like.

The first questions an andragog asks in constructing a process design, therefore, is "what procedures should I use with this particular group to bring these climate conditions into being?"

2. Creating a mechanism for mutual planning. A basic law of human nature is at work here: people tend to feel committed to a decision or activity to the extent that they have participated in making the decision or planning the activity. The reverse is even more true. People tend to feel uncommitted to the extent they feel that the decision or activity is being imposed on them without their having a chance to influence it.

In planning a total programme all the course workshops seminars of an institution, the usual mechanism is a planning committee, councilor task force.- To be effective, it is critical that it be representative of all the constituencies the program is designed to serve For a particular program, such as a course *pr* workshop, I prefer to use teams of participants, with each team having responsibility for planning one unit of the program.

The fullest participation in planning is achieved, however, through the use of learning contracts, in which case the learners develop their own learning plans. The second question the andragog answer in developing a process model therefore, is "what procedures will use to involve the learners in planning?"

3. Diagnosing the participant's learning needs. The HRD literature is rich in techniques. Trainers can use for assessing training needs as perceived by individuals, organizations and communities. These needs are the appropriate source of goals for a total program. But in a particular training event involving particular individuals, a learning need is not a need unless so perceived by the learner. One of the highest arts in training is creating the conditions and providing the tools that will enable learners to become aware of their training needs and therefore translate them into learning needs'. A new body of technology being developed for facilitating this process, with emphasis on such self-diagnostic as simulation exercise, assessment centers, competency-based rating scales, and videotape feedback

So the third set of questions the and agog asks in constructing a process design is "What procedures will use in helping the participants diagnose their own learning needs

4. Translating learning needs into objectives. Having diagnosed their learning needs participants now face the task of 'translating them into learning objectives-positive statements of directions of growth. Some kinds of learning (such as machine operation) lend themselves to objectives stated as terminal behaviours that can be observed and measured. Others (such as decision-making ability) are so complex that they are better stated in terms of direction of improvement.

So the fourth question the androgen asks is "What procedures can I use for helping participants translate their learning needs into learning objectives?"

5. Designing and managing a pattern of learning experience. Having formulated the learning objectives, the next task of the trainer and the participants is to design a plan for achieving them. This plan will include identify the resources most relevant to each objective and the most effective strategies for utilizing these resources. Such a plan is likely to include a mix of total group experiences including input by the trainer, subgroup (learning teaching team) experience, and individual learning projects. A key criterion for assessing the excellence of such a design is, how deeply involved is the participants in the mutual process of designing and managing a pattern of learning experiences?

So the fifth question the androgen asks is "What procedures can I use for involving the learners with me in designing and managing a pattern of learning experiences?"

6. Evaluating the extent to which the objectives have been achieved. In many situations institutional policies require some sort of "objective" (Quantitative) measure of learning outcomes.' But the recent trend in evaluation research has been to place increasing emphasis on "subjective" (Qualitative) evaluation- finding out what is really happening inside the participants and how differently they are performing in life. In any case, the andragogical model requires that the learners be actively involved in process of evaluating their learning outcomes.

The sixth question, therefore, that the andragog asks is "What procedures can I use to involve the learners responsibly in evaluating the accomplishment of the learning objectives?"

By answering these six sets of questions the learning facilitator emerges with process design- a set of procedures for facilitating the acquisition of content by~ learners.

But Not Andragogy versus Pedagogy

When I first began conceptualizing the andragogical model I perceived it as being, antithetical to the pedagogical model. In fact, in the book in which I first presented the andragogical model in detail, *The Modern Practice of Adult Education*, I used the subtitle "Andragogy versus Pedagogy." During the next few years I began getting reports from elementary and secondary school teachers saying that they had been experimenting with applying the andragogical model in their practice and finding that children and youth also learn better in many situations when they are involved in sharing responsibility. And I got reports from teachers of adults that they had found situations in which they had to use the pedagogical model. So when I revised the book in 1980.1 used the subtitle, "From Pedagogy to Andragogy".

As I see it now, whereas for 13 centuries we had ~nly one model of assumptions and strategies regarding education-the pedagogical model. Now we have two models. So we have the responsibility now checking out which set of assumptions is realistic in which situation and using the strategies of whichever model is appropriate for that situation. In general the pedagogical assumptions are likely to be realistic in those situations in which the content is totally strange to learners and in which precise psychomotor skills are involved as in machine operation. But even in these situations, elements of the andragogical model such as climate setting, might enhance the learning. And I use elements of the pedagogical model such as reinforcement, in my andragogical practice. So my stance now is not either-or, but both-as appropriate to the situation.

Preparing for the Future

In the third quarter of this century we accumulated more research based knowledge about adults as learners than was known in all of previous history. In the past decade the body of knowledge had at least doubled I am confident that the present body of knowledge will at least double in the next decade. My colleagues in the biological sciences assure me that their disciplines will contribute some of the major breakthroughs, especially as regards the physiological, chemical and neurological (such as right-brain, left-brain) processes involved in learning. The technology of making resources for learning available is already in a state of revolution, especially with the development of computer and communications . satellites. My own conviction is that by the end of this century most educational services will delivered electronically to learn at their convinces in terms of time place and pace

What a challenge we in human resources development face if we are to avoid the obsolescence of our work force. I can foresee this challenge requiring that we reconceptualize a corporation (or any social system) as a system of learning resources as well as production and service delivering system and redefine the role of **HRD** away from that of Managing the logistics of conducting training activities to that of managing a system of . Learning resources. We would then ask a very different set of questions from those we have traditionally asked in training and development. The first question would be, "What are all of the resources available in this system for the growth and development of people?" We might come up with a chart that iooks something like this:

Managing a system of learning

Resources	Strategies for Enhancing their Utilization
Scheduled training activities (course, workshops, seminars)	Revise time schedule so as to make more accessible to employees Revise programs so as to make them more congruent with adult learning principles. Train presenters in adult education methods.
Line supervisor and managers (the most ubiquitous resources for day-in-and-day-out employee development)	Building responsibility for people development into their job descriptions. Build into supervisory and management training programs, sessions on principles of adult learning and skills in facilitating learning. Give credit in personnel appraisals for performance as people developers.
Libraries, media centres (printed materials, audiovisual and multimedia programs)	Arrange to be open during hours accessible to all employees Make information about resources available to all employees. Provide help in using them.
Individual employees, specialists make it and technicians (many people in organizations have knowledge and skills others would like to learn)	Store this information in a data bank and available to employees through an educational brokering center.
Community resources (courses, workshops, specialists, etc., in colleges and universities community organizations, professional associations commercial providers etc.)	Include in the above data bank.

If nothing more is done than has been described so far the quality of human resource development in a corporation would probably be improved. But learning would still be episodic, fragmented and disconnected. It can be made more systematic, incremental, and continuous through the use of learning contracts or development plans

A contract simply specifies what an individual's objectives are for a given learning project, what resources will be used in fulfilling the objectives what evidence will be collected to demonstrate that the objectives have been fulfilled and how that evidence will be validated. In one corporation the contract is negotiated between the individual and the HRD staff.; in another it is between the individual and his or her supervisor; in another it is between the individual and a team consisting of the supervisor, a representative of the HRD department, *and* a peer. Progress *toward fulfilling the contract* is *monitored*, and the evidence is validated by these same parties. Several corporations with a management -by objectives program have incorporated the contracting process into the MBO process.

Several things happen when a systems approach is adopted. A heavier responsibility is placed on the line supervisors and managers for the development of their personnel than traditionally has been the case. This integrates tHe HRD function more closely with the operating function. and ~ine supervisors and managers derive added self-esteem and job satisfaction from their developmental role once they have become adept at it.

Employees find that their personal and professional developments are more integrated with their work life. A much wider range of resources for learning are available to them and employees are involved directly involved in planning and achieving their own development-adding to their self-esteem and satisfaction.

For HRD professionals, the systems approach represents a major shift in role. They are less concerned with planning, scheduling and conducting instructional activities, and are more concerned with managing a system. One of their major responsibilities is to serve as consultants to the line-a closer and more functional relationship, and one more centre to the operation of the business.

How much more fulfilling a role!

Learning Styles, Elements and Profiles

Learning Styles

Learning styles can be defined as the way in which a participant processes information be taught and have a profound effect on the way in which a participant will respond to a trainer's teaching methods. The following types of learning styles have been identified.

- **Auditory** - The auditory learner best processes new information when it is heard. The auditory learner does well with listening to instructor lectures or pre-recorded lectures on tape.
- **Visual** - This type of learner processes information most effectively when it is presented by reading, demonstrations, illustrations, slides, transparencies and posters.
- **Kinesthetic** - Kinesthetic learners learn best by touching or manipulating new information as in hands-on exercises or lab situations where they perform tasks appropriate to the material being presented. The kinesthetic learner does best when working along with a demonstration or by taking notes while listening to a lecture.
- **Environmental** - The environmental learner finds it difficult to learn unless the learning environment is one in which they are physically comfortable and they can concentrate. Distractions such as temperature, lighting and noise level must be suited to their individual tastes. Keeping a check on light, noise and temperature levels in the classroom will lessen obstacles to learning for the environmental learner. Some participants with learning differences that interfere with concentration and material retention can be thought to be environmental learners.

Any class you teach will have a combination of participants with different learning styles. You may notice that some learners use a combination of learning styles as opposed to one predominate learning style. For instructor-led training, be sure to you mix your material delivery to accommodate all learning styles by alternating lecture with visuals and hands-on activities. Keep a check on environmental factors such as light, noise and temperature levels.

It is common fact that any given class of 10 participants has 1 or 2 participants who will have difficulty learning your material, 1 or 2 participants who will have an extremely easy time learning your material, and 6 to 8 participants who will fall somewhere in the middle of the two extremes.

Also remember that most people learn 20% of what they hear, 30% of what they see and 80% of what they do. Teach your material in a way that it can be best understood and digested by all participants and vary your delivery methods between lecture, visuals and hands-on exercises.

Exercise - Understanding Learning Styles

Refer to the instructions shown in the Appendix for Exercise 2. Complete the questionnaire shown in Exercise 2 and then refer to the Summary section to gain insight to the types of learning styles. A few of you will be asked to share your findings with the rest of the class.

Solution - Understanding Learning Styles

Answer each question below. When finished, refer to the Summary section at the end of the questionnaire. This is a short exercise aimed at making you aware of some of the characteristics of the different types of learners and by no means is intended to be a comprehensive analysis of your personal learning style.

1. I prefer classes in which the instructor
 - a. uses films and videos
 - b. lectures and answers questions
 - c. let's us participate in group activities
 - d. opens the windows so I can have fresh air

2. To learn more about the operation of printers I would prefer to
 - a. read the user guides
 - b. listen to someone tell me how they work
 - c. do some hand-on work with printers
 - d. take a computer-based tutorial in a private, quiet setting

3. To remember things best, I
 - a. create a mental picture
 - b. repeat what I'm trying to remember several times out loud to myself
 - c. write it down

4. Assembling a bicycle from a diagram and instructions would be
 - a. a piece of cake for me
 - b. absolutely impossible unless I had someone to read the directions for me
 - c. OK if I had a chance to experiment with the parts and the tools first
 - d. a complete disaster unless I went to a quiet room with lots of light, the right tools and no interruptions

5. I prefer training in which I
 - a. watch the instructor demonstrate new concepts
 - b. listen to the instructor lecture and give examples
 - c. handle equipment or work with models

- d. am not too cold or hot, and the chairs are comfortable
6. To understand and remember how a machine works, I would
- a. read a diagram or illustration
 - b. listen to an audio tape on the machine's operation
 - c. write notes on how it works
 - d. need to have some time in private and without interruptions to study the machine's operations
7. I prefer to learn new ideas by
- a. reading and writing notes
 - b. speaking and listening
 - c. drawing or working with my hands
 - d. learning at home on my sun porch in my sweats
8. If someone is giving me directions, I prefer that they
- a. draw me a map or write down the directions for me
 - b. simply tell me how to find the place I am looking for
 - c. write down the directions myself while the person gives them to me

Summary - Understanding Learning Styles

If your responses to the above questions were mostly:

a's - you predominantly depend on visual learning style

b's - you predominantly depend on auditory learning style

c's - you predominantly depend on kinesthetic learning style

d's - you predominantly depend on environmental learning style

Learning Elements

Most learners, especially the adult learner, tend to do well when they are actively involved in their own learning. Since most adults come to a training event with well established values, beliefs and opinions, they generally consider themselves to be strong participants in their own learning process. The effective trainer is wise to recognize this.

Adults also prefer to be given problem solving opportunities as opposed to being given solutions to problems. The instructor who simply states solutions without providing a problem solving environment will be less effective with adult learners.

Adults prefer training that is personalized and addresses specific needs. Job-relevant information where the adult is able to see a correlation with material presented to their own job responsibilities is most desired by adults.

Adults as Learners

(ADULT LEARNING STYLES: A FOUNDATION FOR STAFF DEVELOPMENT)

Stephen Lieb, Senior Technical Writer and Planner for the Arizona Department of Health Services and Part-time Instructor at South Mountain Community College has identified a profile and some common attributes for the adult learner. Any trainer who understands these attributes will be more effective when training the adult learner. It's a simple fact that adults do learn differently than teens and children, but any teacher would serve those being taught well by applying these concepts to *any* audience.

The field of adult learning was pioneered by Malcom Knowles. He 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. Specifically, they must get participants' perspective 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 to 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 education 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.

Adults are people with years of experience and a wealth of information. Focus on the strengths learners bring to the classroom, not just gaps in their knowledge. Provide opportunities for dialogue within the group. Tap their experience as a major source of enrichment to the class. Remember that you, the teacher, do not need to have all the answers, as long as you know where to go or who to call to get the answers. Students can be resources to you and to each other.

Adults have established values, beliefs and opinions. Demonstrate respect for differing beliefs, religions, value systems and lifestyles. Let your learners know that they are entitled to their values, beliefs and opinions, but that everyone in the room may not share their beliefs. Allow debate and challenge of ideas.

Adults are people whose style and pace of learning has probably changed. Use a variety of teaching strategies such as small group problem solving and discussion. Use auditory, visual, tactile and participatory teaching methods. Reaction time and speed of learning may slow, but the ability to learn is not impaired by age. Most adults prefer teaching methods other than lecture.

Adults relate new knowledge and information to previously learned information and experiences. Assess the specific learning needs of your audience before your class or at the beginning of the class. Present single concepts and focus on application of concepts to relevant practical situations. Summarize frequently to increase retention and recall. Material outside of the context of participants' experiences and knowledge becomes meaningless.

Adults are people with bodies influenced by gravity. Plan frequent breaks, even if they are 2-minute "stretch" breaks. During a lecture, a short break every 45-60 minutes is sufficient. In more interactive teaching situations breaks can be spaced 60-90 minutes apart.

Adult have pride. Support the students as individuals. Self-esteem and ego are at risk in a classroom environment that is not perceived as safe or supportive. People will not ask questions or participate in learning if they are afraid of being put down or ridiculed. Allow people to admit confusion, ignorance, fears, biases and different opinions. Acknowledge or thank students for their responses and questions. Treat all questions and comments with respect. Avoid saying "I just covered that" when someone asks a repetitive question. Remember, the only foolish question is the unasked question.

Adults have a deep need to be self-directing. Engage the students in a process of mutual inquiry. Avoid merely transmitting knowledge to expecting total agreement. Don't "spoon-feed" the participants.

Individual differences among people increase with age. Take into account differences in style, time, types and pace of learning. Use auditory, visual, tactile and participatory teaching methods.

Adults tend to have a problem-centered orientation to learning. Emphasize how learning can be applied in a practical setting. Use case studies, problem solving groups, and participatory activities to enhance learning. Adults generally want to immediately apply new information or skills to current problems or situations."

Some Contemporary Principles of Adult Learning

The process of action learning, founded by Reginald Revans about 50 years ago in England, is based on contemporary views of adult learning. Action learning asserts that adults learn best when:

1. Working to address a current, real-world problem
2. They are highly vested in solving the current problem
3. They actually apply new materials and information and
4. Exchange ongoing feedback around their experiences

In addition, adults often learn best from experience, rather than from extensive note taking and memorization

Learning Strategies

Learning strategies refer to methods that students use to learn. This ranges from techniques for improved memory to better studying or test-taking strategies. For example, the method of loci is a classic memory improvement technique; it involves making associations between facts to be remembered and particular locations. In order to remember something, you simply visualize places and the associated facts.

Some learning strategies involve changes to the design of instruction. For example, the use of questions before, during or after instruction has been shown to increase the degree of learning. Methods that attempt to increase the degree of learning that occurs have been called "mathemagenic" .

A typical study skill program is SQ3R which suggests 5 steps: (1) survey the material to be learned, (2) develop questions about the material, (3) read the material, (4) recall the key ideas, and (5) review the material.

Research on metacognition may be relevant to the study of learning strategies in so far as they are both concerned with control processes. A number of learning theories emphasize the importance of learning strategies including: double loop learning (Argyris), conversation theory (Pask), and lateral thinking (DeBono). Weinstein (1991) discusses learning strategies in the context of social interaction, an important aspect of Situated Learning Theory

ACTIVITIES AND ASSIGNMENTS:

1. What are various types of learning.

2. What is adult learning.

3. How is adult learning different than other types of learning.

4. How does adult learn.

5. How does knowledge of adult learning helps trainer.

Also see the article and presentations followed after this lesson