Chapter IV

The Adult Learner
You can provide lots of training, but still end up with employees who do not have the skills they need to do their job well. As the work place becomes more technical and more competitive, companies are reassessing their employee training programs.

It is simply not enough just to provide training. In today’s globally competitive work world, you must provide training that directly impacts both the employee’s performance and the company’s bottom line, maximizing the intellectual capital tucked inside the organization.

A recent report from WM Hambrecht & Co. suggests corporate training is now a $66 billion industry\(^1\). Companies not only want value from those dollars, they want efficiency. Today companies want training to accomplish goals and to do that within a specific time frame. Even effective leadership training is now tied to specific company results and consequences. All the training techniques in the world will make no difference if the training does not affect the bottom line performance of managers and employees. Training has to be efficient – it has to accomplish the goals set with outcomes that are achievable and measurable. Sound learning techniques allow these outcomes to be immediately demonstrated. Efficiency is not an add-on. It needs to be embedded in the training.

On the contrary many companies, so-called training programs are little more than one-way ‘information dumps.’ Information is transmitted, but the trainees get little guidance on exactly what to do with it or why. As a result the words float by in isolation, seemingly detached from the employees’ real world of paperwork and production quotas. Because the information is never used, it is quickly forgotten.

Learning is as natural as breathing. In the senses alone, brain picks up over 50,000 bits of information per second, processes them and makes decisions\(^2\). So if the brain is constantly absorbing data, why does learning seem so difficult at times? Why do some people learn quicker than others? And why can’t we remember what we learn, particularly if we have just been trained? Why doesn’t the training stick?

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\(^1\) Barkley, S. & Blanco, T., “Shortfalls in onsite and online training” \textit{EXPRESS COMPUTERS - IT PEOPLE}, November 20, 2000

\(^2\) Ibid
The fundamental flaw in traditional training is that trainers teach what they want to train rather than what the person wants to learn. While there are many training methods, there are only a few sound learning methods. Everyone can learn but people learn in different ways. How people learn is as important as what they learn. Knowing the learning and working styles of learners provides a portal through which learning and long-term retention can occur for everyone.

Trainers can no longer afford to assume that trainees will learn through whichever training strategy is used. Trainees can be given information by their trainers but unless these trainees are actively engaged in analyzing an issue or using the information in a problem-solving activity the learning is sterile. First of all, trainers need to acknowledge the fact that adults learn differently from children. Adult learning is generally differentiated from that of children and adolescents by the tendency to be “life-centered”, with a greater interest in practical applications and a capacity to be critically reflective. Research indicates that as people mature they develop individual learning styles that reflect personal needs and goals. These differences in learning styles have implications for how training activities and environments should be structured for adults. Effective training requires trainees to have an understanding of how adults learn. In any given training environment, trainers may find trainees who vary widely in ages, abilities, job experiences, cultural backgrounds and personal goals. A good trainer or teacher, who has knowledge of concept and theory of adult education, can orchestrate the style and environment of the training so that learning will occur naturally, almost unconsciously.

*"The adaptive process which we call "learning" is obviously fundamental to any understanding of the nature of training". – King, 1964.*

Since training is essentially a learning process, all those who are in any way involved in training need to have an understanding of learning and what needs to be taken into account in the design and provision of training. Because learning is a continuous human activity, it has always occupied an important position in psychological studies. The main questions to be discussed are, what learning is and how people learn. There is a general consensus about the first question but much more debate about the second.
4.1 Learning

Learning has been defined as a relatively permanent change in behavioural potentiality that occurs as a result of reinforced practice.\footnote{Kimble, G.A., Hilgard and Marquis’ Conditional learning, Englewood Cliffs, N.J., Prentice-Hall, 1961}

The following elaborates on this basic definition:\footnote{Ibid}

- Learning is indexed by a change in behaviour, which must be translated into observable behaviour. After learning, learners are capable of performing something that they could not do before the learning experience.
- This change is relatively permanent; it is neither transitory nor fixed.
- The change in behaviour need not occur immediately following the learning experience. Although there may be a potential to act differently, this potential may not be translated into a new behaviour immediately.
- The change in behaviour results from experience or practice.
- The experience or practice must be reinforced.

Learning may be defined as a more or less permanent change in behaviour, which occurs as a result of the influence of external environmental stimuli on the inherent, generic dispositions of the individual.\footnote{Kulshreshtha, K., “Approaches to Management Training” in Management training and Executive Development, Kanishka Publishers, New Delhi, 1998, pp52-53.} In the context of training it is useful to consider learning and behavioural change in terms of knowledge, skills and attitudes needed for effective performance. In formal learning situations, this change is required to be demonstrated and assessed by examinations or tests. In everyday life it is ascertained by observable changes in behavioural patterns. For example, a previously lazy employee demonstrates through behaviour that he is now hard working and conscientious. Since training is diverted towards the effective performance of work, ultimately this is the point where learning or behavioural change usually matters and needs to be demonstrated. There is no point in such changes being shown at the end of the training course, if they are not transferred into observable changes in practice in real work.
4.2 Process of learning

Recent research by J. R. Anderson and others suggest that individuals go through three stages in learning to perform consistent tasks.\(^1\) (A consistent task is one in which most of the rules remain the same – for instance in the task of typing, the keys are always located in the same place.) At each stage of learning a consistent task, different abilities are important and different teaching methods may be needed.

In the first stage trainees acquire what is called as declarative knowledge, the factual information and concepts relevant to the task. It has been referred to as “knowing what” about the task. Intelligence is important at this stage of learning, as there are high demands on memory and attention while learning about the task. Performance at this stage is slow and halting with the learner concentrating and planning each step in the task. Errors are common as facts or rules are forgotten or not yet learned.

With additional practice, learners pass through the second stage, called knowledge compilation. Facts and behaviours that go together are “chunked” into a routine and parts of the task become more integrated. Performance improves and smoothes out.

When this stage is finished, the learners are at the final stage of procedural knowledge where they not only “know what” but also “know how”. Facts are organized into well learned “if then” rules that allow performers to apply their knowledge to carrying out task procedures fluidly. Much of the task can be performed automatically, with little attention or conscious thought. This frees mental capacity to think about unusual or more demanding aspects of the task. Psychomotor skills like, hand eye coordination are the most important abilities needed for performance in this final stage, which is referred by some theorists as automaticity.

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4.3 Learning styles

Think about what you do when you have to learn something new. You probably approach the task in a similar fashion each time. That is, over time you have developed a pattern of behaviour that you use for new learning. This pattern is called a learning style. While we don’t approach every learning task exactly the same way, each of us develops a set of behaviours that we are most comfortable with.

People have different learning styles - characteristic strengths and preferences in the ways they take-in and process information. Some people tend to focus on facts, data; others are more comfortable with theories and mathematical models. Some respond strongly to visual forms of information, like pictures, diagrams and schematics; others get more verbal forms - written and spoken explanation. Some prefer to learn actively and interactively; others function more introspectively and individually.

These differences in learning styles have implications for how training activities and environments should be structured for adults. For example, the prevalence of experiential learning styles among adults suggests that formal classrooms ought not to be the only environments to be considered by organizations when designing training.

There are many ways to measure learning styles. David Kolb has written extensively on the subject and his model called the Experiential Learning Model (ELM), is frequently used.

4.3.1 Kolb’s ELM

Kolb’s model theorizes that people develop preferences for different learning styles in the same way that they develop any other sort of style i.e. management, leadership, negotiating etc. Kolb insists that learning styles are relatively stable attributes or preferences in the way individuals process information when solving problems.2

Learning according to Kolb’s conceptualization, is the process whereby knowledge is created through transformation of experience.

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1 Learning Styles, [http://www.algonquin.on.ca/oodeco/genera/styles.html](http://www.algonquin.on.ca/oodeco/genera/styles.html).
Kolb's ELM is a simple model that summarizes learning as a four-stage, cyclical, problem-solving process. The cycle begins with the learner's personal involvement through concrete experience, next the learner reflects on his experience, looking for meaning (reflective observation) then the learner applies this meaning to form a logical conclusion (Abstract conceptualization), which leads to active experimentation, that results in new concrete experiences and then, the learning cycle begins again. The learning cycle is assumed to be continuous. Previous learning influences future learning in the training process. Further because the learning process is cyclical, it is possible to begin new learning at any stage of the process.

![Kolb's Learning Cycle](image)

**Figure: 4.1** Kolb's learning Cycle

This model provides a framework for identifying students' learning style preferences.

According to Kolb, there are two major differences in how people learn. The first is how they perceive; the second is how they process experience and information.

Some people best perceive information using concrete experiences (like feeling, touching, seeing and hearing) while others best perceive information through abstract conceptualization (using mental or visual conceptualization)
Once information is perceived it must be processed. Some people process information best by active experimentation (doing something with the information) while others perceive best by reflective observation (thinking about it)

Thus, people have a preference for 1) Concrete experience or abstract conceptualization (how they take information in perceive) and 2) active experimentation or reflective observation (process – how they internalize information).

So there are four learning dimensions in this model:

- Concrete experience – Learning from specific experiences, relating to people, and sensitivity to feelings and people.
- Reflective observation – Careful observation before making a judgment, viewing things from different perspectives and looking for the meaning of things.
- Abstract Conceptualization – Logical analysis of ideas, systematic planning, acting on intellectual understanding of a situation.
- Active experimentation – Ability to get things done, risk taking, influence people and events through action.
By combining these two opposite dimensions we get four quadrants of learning behaviour:¹

![Figure: 4.2 Quadrants of learning behaviour](image)

**Type I learners - called Accommodators**

Prefer learning by doing and feeling. Tend to learn primarily from “hands-on” experience. They tend to act on “gut” feelings (intuition) rather than on logical analysis. When making decisions they tend to rely more heavily on people for information than on their own technical analysis. They enjoy carrying out plans and enjoy involvement in new and challenging experiences. They often seek action-oriented careers such as marketing, sales, politics, public relations and management. They are usually good leaders, they are willing to take risks and they get things done. They do not always set clear goals. They enjoy applying their learning to real life situations. A characteristic question of this learning type is “what if?” They like applying course material in new situations to solve real problems. To be effective the instructor should stay out of the way, maximizing opportunities for the trainees to discover things for themselves.

¹“Learning styles”, [http://www.algonquinc.on.ca/edtech/](http://www.algonquinc.on.ca/edtech/)
Training approach – problem solving, small group discussions, peer feedback, and homework are helpful.

Methods to be used – Simulations, case study and home assignments.

**Type II learners - called Divergers**

They prefer learning by observing and feeling. They have the ability to view concrete situations from many different points of view. When solving problems, they enjoy brainstorming. They take their time and analyze many alternatives. They tend to have broad cultural interests and like to gather information. Divergers are sensitive to the needs of other people. They would rather watch than take action. They like to gather information and create many categories for things. They tend to be imaginative and are able to recognize problems. They work well with people and are very sensitive to feelings when learning.

A characteristic question of this learning type is “why?” They respond well to explanations of how course material relates to their experience, their interests and their future careers. To be effective with such trainees, the trainer should function as a motivator.

**Type III learners - called Convergers**

They prefer learning by doing and thinking. They like solving problems and finding practical solutions. They seek practical uses for their learning. They tend to prefer dealing with technical tasks and problems rather than with social and interpersonal issues. They are usually very good at deductive reasoning, solving problems and decision-making.

A characteristic question of this learning type is “how?” They respond to having opportunities to work actively on well-defined tasks and to learn by trial and error in an environment that allows them to fail safely. To be effective, the instructor should function as a coach, providing guided practice and feedback.
Type IV learners - called Assimilators

Prefer learning by observing and thinking. Assimilators are effective at understanding a wide range of information and putting it into concise, logical form. It is more important to them that an idea or theory have logical soundness than practical value. They tend to be more concerned with abstract ideas and concepts than people. Assimilators are skilled at creating models and theories and developing plans. A characteristic question of this learning type is “what?” They respond to information presented in an organized logical fashion and benefit if they have time for reflection. To be effective the instructor should function as an expert.

To reach all types of learners a trainer should explain the relevance of each new topic, present the basic information and methods associated with the topic, provide opportunities for practice in the methods and encourage exploration of applications. The term “teaching around the cycle” was originally coined to describe this instructional approach.\footnote{Kolb, D.A., Experiential Learning: Experience as the source of learning and development, Englewood Cliffs, Prentice-Hall, N.J., 1984}
4.3.2 Honey and Mumford Cycle

Peter Honey and Alan Mumford subsequently adapted Kolb's original cycle to:

![Diagram of Honey and Mumford Cycle]

**Figure: 4.3** Honey and Mumford Cycle

*Experiencing* happens whenever you do something which makes use of learning to date, and by doing, you may well figure out how to do it better. You attempt something, and some evidence is available which indicates levels of success. A great deal on information is available to you (the 'doer'), but its interpretation will be biased according to your previous experience and existing skill.

*Reviewing* happens when you reflect on your own (or other people's) past attempts. Depending on how successful you (or they) feel about the action experienced, you may seek ways of improving next time. These ways may include getting advice, reading a book, or accessing guidance in other ways.

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1 Learning to Learn,
http://www.ic.polyu.edu.hk/posh97/student/learn/learning_to_learn.htm
Concluding happens when you start to gather these other inputs or theorizing about a possible model which describes what is happening. They may be your own original thoughts, other people's original thoughts, some ideas gathered from reference material, or a model offered by a teacher or trainer. This phase tends to build understanding.

Planning usually precedes action. It may be based on your experience to date, models derived or the reflective reviews of others. Your planning may focus on a particular aspect of the 'doing', or may be a comprehensive and detailed plan of action. Planning may not be either overt or explicit, but implicit and to a degree sub-conscious.

Although, hypothetically, a learner would consciously move through every stage in the cycle in every learning situation, practical experience and research show that not all learners are equally at home at all stages of the cycle. Many show marked preferences for one or more of the stages and sometimes positive dislike of one of the others. And there is no evidence to show that such preferences make them better or worse than one another.
Honey and Mumford have identified four different preferences, or ways in which people prefer to learn, each related to a different stage of the learning cycle. These preferred "learning styles" they call Activist, Reflector, Theorist and Pragmatist.¹

**Figure: 4.4 Preferred learning styles**

**Activists**

Activists involve themselves fully and without bias in new experiences. They enjoy the ‘here and now’ and are happy to be dominated by immediate experiences. They are open-ended not skeptical and this tends to make them enthusiastic about anything new. Their philosophy is "I will try anything once". Their days are filled with activity. They tackle problems by brainstorming. As soon as the excitement from one activity has died down, they are busy looking for the next. They tend to thrive on the challenge of

¹ Learning to Learn,  
new experiences but are bored with implementation and longer-term consolidation. They are gregarious people, constantly involving themselves with others but, in doing so, they seek to make themselves the centre of all activities.

Activists learn best from novel experiences, from being encouraged to "have a go" and from being thrown into things. They enjoy relatively short "here and now" learning activities like business games and competitive team exercises.

Activists learn least well from passive situations like reading, watching or listening to lectures, particularly those on concept or theory. They do not enjoy solitary work, repetitive tasks, situations which require detailed preparation, or being asked to review their learning opportunities and achievements.

**Reflectors**

Reflectors like to stand back to ponder experiences and observe them from many different perspectives. They collect data, both first-hand and from others, and prefer to analyze them thoroughly and think about them from every possible angle before coming to any definite conclusions. These, they postpone as long as possible. Their philosophy is to be cautious. They enjoy watching other people in action and prefer to take a back seat in meetings and discussions. They think before they speak. They tend to adopt a low profile and have a slightly distant, tolerant, unruffled air about them. When they act, it is part of a wide picture, which includes the past as well as the present and others' observations as well as their own.

Reflectors learn best from activities where they are able to stand back, listen and observe. They like to have a chance to collect information and be given time to think about it before commenting or acting. They like to review what has happened.

Reflectors learn least well when they are rushed into things with insufficient data or without time to plan, when they are forced into the limelight by being required to role-play or chair a meeting, or when asked to take short-cuts or do a superficial job.
**Theorists**

Theorists like to analyze and synthesize. They assimilate and convert disparate facts and observations into coherent, logical theories. Their philosophy prizes rationality and logic above all. They think problems through in a vertical, step-by-step, logical way. They tend to be perfectionists who will not rest easy until things are tidy and fit into a rational scheme. They are keen on basic assumptions, principles, theories, models and systems thinking. They tend to be detached, analytical and dedicated to rational objectivity. They feel uncomfortable with subjective judgments, ambiguity, lateral thinking and anything flippant.

Theorists learn best when they are offered a system, model, concept or theory, even when the application is not clear and the ideas may be distant from current reality. They like to work in structured situations with a clear purpose, and be allowed to explore associations and interrelationships, to question assumptions and logic and to analyze reasons and generalize. They like to be intellectually stretched.

Theorists learn least well when asked to do something without apparent purpose, when activities are unstructured and ambiguous and when emotion is emphasized. They do not learn well when faced with activities lacking depth, when data to support the subject are unavailable, and when they feel "out of tune" with the rest of the group.

**Pragmatists**

Pragmatists are keen on trying out ideas, theories and techniques to see if they work in practice. They positively search out new ideas and take the first opportunity to experiment with applications. They are the sort of people who return from management courses bursting with new ideas which they want to try out in practice. They like to get on with things, and act quickly and confidently on ideas which attract them. They tend to be impatient with ruminating and open-ended discussions. They are essentially practical, down-to-earth people, who like making practical decisions and solving problems. They respond to problems and opportunities “as a challenge”. Their philosophy is “There is always a better way” and “If it works, it is good”.
Pragmatists learn best when there is an obvious link between the subject matter and their current job. They like being exposed to techniques or processes which are clearly practical, have immediate relevance and which they are likely to have the opportunity to implement.

Pragmatists learn least well where there are no immediate benefits or rewards from the activity and the learning events or their organizers seem distant from reality.

4.3.3 Seagal and Horne's Model: ¹

Seagal and Horne have developed a model that relies on three dimensions:

- The mental dimension is responsible for our thoughts, values, objectivity, focusing and abstract conceptualization.
- The relational or emotional dimension is responsible for connecting, organizing, feeling, assessing and communicating skills.
- The physical dimension is responsible for doing, manifesting, producing, and action oriented skills.

The three dimensions work together but we have a preferred mode. That is if we prefer the mental dimension we would struggle with the "idea" of problem. If we are relationally oriented we would organize and assess the parts of the problem. If we prefer the physical mode we are likely to try and do or act out the problem.

Those who prefer the mental mode of learning probably learn best by developing overviews, abstracting information, making precise notes, going to lectures and working in a solitary environment.

Those who prefer the relational/emotional mode of learning probably learn best by working in groups, verbalizing information, and working in relaxed environment. Those who prefer the physical mode probably learn best by hands-on applications, daily repetitions, taking good notes allowing time for demonstration and imitation and allowing free flowing movement from one task to another.

¹ Learning Styles, http://www.algonquin.on.ca/sldtech/gencf/styles.html
4.3.4 Visual, Auditory and Kinesthetic Learning Styles (VAK)\(^1\)

We learn through three main sensory receivers – vision, listening, touching (kinesthetic). Learners use all three to receive information. However, one or more of these receiving styles are dominant. The dominant style defines the best way for a person to learn new information by filtering what is to be learned.

- Visual learners gain knowledge best by seeing, reading what the trainer is trying to teach.
- Auditory learners gain knowledge best by listening
- Tactile learners gain knowledge best by doing.

This style may not be always be the same for some tasks. The learner may prefer one style of learning for one task and a combination of others for another task.

Classically, our learning style is forced upon us through life like this: In grades kindergarten to third, we learn kinesthetically; grades 4 to 8 are visually presented; while grades 9 to college and into the business learning environment information is presented to us as auditory by lecturers. Most learners are visual or kinesthetic dominant. Less than 20% of the learners have auditory as their dominant learning style.

So, trainers need to present information using all the three styles. This allows all learners, no matter what their preferred style is, the opportunity to become involved. It also allows a learner to be presented with the other two methods for reinforcement. Just because we prefer one style, does not mean the other two do us no good. Quite on the contrary, they help us to learn the information even faster. To assess a learning style a sample learning test is attached. (Refer Annexure 4.1)

Functioning effectively in any professional capacity, however, requires working well in all learning style modes. For example competent engineers and scientists must be observant, methodical and careful (sensing style) as well as innovative, curious and inclined to go beyond facts to interpretation and theory (intuitive style). Similarly, they must develop both visual and

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\(^1\) Clark, Donald R., "Instructional System Design –development (ISD) and System Approach to Training (SAT), http://www.mylifmek.com/~donclark/hltd/isd.html
verbal skills. Information routinely comes in both forms, and much of it will be lost to someone who cannot function well in both these modes.

If instructors teach exclusively in a manner that favors the trainees’ less preferred learning style modes, the trainees’ discomfort level may be great enough to interfere with their learning. On the other hand if instructors teach exclusively in the trainees’ preferred modes, they may not develop the mental dexterity, they need to reach their potential for achievement as professionals.

An objective of training should be to help trainees build their skills in both their preferred and less preferred modes of learning. Learning style models that categorize these modes provide good frameworks for designing instruction with the desired breadth. The goal is to make sure that the learning needs of students in each model category are met at least part of the time.
4.4 Adult Learning Principles

How people learn has been the subject of continuing discussion and some controversy for many decades. Various theories have been popular at different times. There is no need for training practitioners to become deeply immersed in the literature of learning theory. However, this wealth of research has led to the discovery of a number of principles that underlie and facilitate the learning process which need to be considered in the provision of effective training. Enough research has been done on adult learners and the field of adult learning is called *andragogy* and was pioneered by Malcolm Knowles.

Most instructional techniques are based on the science of teaching children, which is called *pedagogy*. Andragogy believes that different techniques are more effective with adult learners. Andragogy is based on assumptions about key differences between adult and child learners.

Adults have special characteristics as learners and any training program for employees needs to be based on these characteristics, in order to be efficient. These characteristics offer the trainer some interesting challenges and opportunities in the creation of effective training.

4.5 Characteristics of adult learners

➢ *Adults are autonomous and self-directed*

This characteristic suggests that successful training strategies ought to permit trainees to assume responsibility for their own learning and for group leadership where groups play a role in the delivery model. Adults want to take responsibility for themselves and their learning. The trainer should thus take on the role of a facilitator, guiding participants to their own knowledge and actively involving participants in the learning process rather than supplying them with facts.¹

Andragogy suggests that learning should be active and student-centered rather than passive and instructor-centered. Instructor-centered teaching occurs when the instructors decide what trainees should learn, present that

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¹ Ratzburg, W., “Adult learners: An Overview” HRDNotes.htm
content as they think best and then test the learners’ mastery of it. A student-centered approach allows learners to be involved in diagnosing their own training needs, picking their own learning goals and objectives and even structuring their own evaluation, thus ensuring that the trainees consider the program relevant.

Ownership of learning – like ownership of a job or role in a company, is the key to success. Businesses across the country have experienced the surge that occurs in productivity, morale, motivation and customer service when employees and managers are empowered to make choices, to initiate, to own their careers. The same is true of learning. No one learns anything he or she doesn’t own. And the only way to own it is to make it count for the learner.

➤ Adults have accumulated a foundation of life experiences and knowledge

Children come into a training environment usually not knowing anything; everything they hear is brand new. Adults on the other hand, already have a great deal of knowledge and experience which they have acquired from their previous training programs or their own work experience, that they can learn from and share with others. This means that adults may resent being treated like children in a learning situation. That is, when a trainer assumes that adults know very little, that their experience is irrelevant, and that they should learn exactly and only what the trainer tells them to learn, adults do not learn effectively. One author suggests that best and brightest employees often avoid attending training programs because these pedagogically oriented programs insult their intelligence.

Adragogy acknowledges and suggests the use of the knowledge that adults bring with them. Group discussions can be very effective in getting learners to share relevant experiences and to explicitly discover principles that they already know on an intuitive level. According to one adult trainer, “Never teach an adult something he or she already knows and never tell a group anything you can get from the group itself.” The trainer should take on the

4 Ibid
role of a facilitator and resource person rather than teacher, providing input and guidance only when the group falters in its self-directed learning. Trainers must accept and account for the trainees’ previous education and work experience. Thus, it becomes useful to get the trainees’ perspectives, to draw out the experience and knowledge which is relevant, and to connect the learning to this knowledge/experience base.

This can be done by showing the trainees the utility of the new concepts and the obsolescence of the old ones. It can also be done by showing them successful examples of people and organizations that have gained from the new ideas, through case studies and testimonials.

Interference occurs when habits and/or learning acquired prior to training make it difficult for the trainee to absorb new material. Interference is most severe when the trainee has learned a strong stimulus response connection in the past and now has to learn a totally different response to the same or similar stimulus. Interference can be a special problem when the new correct response must be performed reliably under stress. Under stress individuals have a tendency to revert to their old habitual responses. For instance, managers who have just been taught to use a participative leadership style may relapse to their old autocratic style when working under a tight deadline.

The trainer should try to anticipate any inappropriate habits that trainees might bring with them to the learning situation and explicitly address them in the training program. To overcome interference, the trainer should clearly teach the principles underlying the new correct response and provide a great deal of practice to increase the strength and automaticity of the new stimulus response connection.

Training that requests the trainee to make changes in his values, attitudes and social beliefs, usually achieves better results if the trainee is encouraged to participate, discuss and discover new, desirable behaviour norms. Trainees will change their behaviour if they become aware of better ways of performing (more productive or otherwise more satisfactory ways) and gain experience in their normal manner of operation.
Adults are goal-oriented

Often, training is undertaken in order to achieve higher status in a job, secure professional advancement, and stay abreast of competitors, to enhance skills and knowledge to perform in a more effective manner. For example, managers may go in for training to learn how to delegate responsibility more effectively, how to save their own limited time, how to understand subordinates better, how to eliminate labour problems, how to read reports quickly.

Very often, adults realize where their knowledge and skill deficiencies lie; they usually know what goal they want to attain. This goal-oriented characteristic can be addressed by an early classification of training goals and objectives. Learning objectives should be clearly defined with the active participation of the trainees themselves. This must be supported by a training programme that is organized and has clearly defined elements that lead to the attainment of the learning objectives. The trainees should also be made aware of how the training can be instrumental in achievement of their personal goals.

Adults are relevancy-oriented and practical

Trainees need to understand “what’s in it for them?” They need to be shown the relevancy of a training program. The training should be demonstrably applicable to their work or other responsibilities. The trainer should be able to demonstrate how the new knowledge or skill will solve a problem or make them better, faster and more effective in their jobs. Adults are problem-centered, they want to learn things that have immediate usefulness in solving their current problems. Adults who are motivated to seek out a learning experience do so primarily because they have a use for the knowledge or skill being sought. Learning, for them is a means to an end and not an end in itself. They prefer single concept, single theory training that focuses on the application of a concept to relevant problems.

Most trainees quickly develop perceptions about whether training is relevant. If trainees perceive that the instruction will actually help them on the job, they are much more likely to be receptive to the training. If they do
not perceive relevance, they are more likely to demonstrate active or passive resistance to the training. For example, if automotive mechanics and their superiors do not perceive the importance of training in customer relations, they will resist it. They must be made aware that their relationship with customers can help minimize customer dissatisfaction and gain repeat business for the firm, which, in turn, will result in continued employment and opportunities for advancement.

Training should focus on real world problems perhaps through techniques like case studies, business games, role plays similar to their own work situations. Occasionally this relevancy need can be fulfilled by permitting trainees to choose projects that reflect their own interests and needs.

➢ Adults have learning barriers

“When kids are going to school, they are excited about it. They get to meet new people; there’s new information. They get a recess and get to play”, says La Bonne, senior trainer at Indianapolis based Power Way inc. “When adults are in a learning environment, a lot of times they are thinking about the work that’s piling up on their desks and emergencies going on because they are not there. So they could have a lot of barriers to learning that they are bringing into the classroom.”¹ With adults, it is important to keep in mind that they have many responsibilities that must be balanced against the demands of learning. These responsibilities may act as barriers to learning.

The existing knowledge and experience of trainees can also sometimes become a barrier to learning. Because of their vast personal experiences, many come to the training with well-developed personal identities and “value sets”. Adults prefer to be able to integrate new ideas with what they already know. On the other hand, information that conflicts sharply with previously held views is less likely to be integrated and retained. However, sometimes the very nature of the subject matter requires that long held beliefs are questioned and even modified. Some instruction must be designed to effect a change in belief and value systems. Trainers must be sensitive to variety of values being brought to training sessions by adults; programs need to be designed to accept viewpoints from people in different life stages and with different value sets.

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¹ Training Trends: Growing Up is Hard to Do, Quality Magazine, October 1999
Psychomotor skills present a very prevalent barrier to learning that increases with age. Adults may compensate for being slower in some psychomotor learning tasks by being more accurate and making fewer trial and error ventures. While being careful, adults also impede the learning process by taking fewer risks. When designing a training program, fast-paced, physically complex tasks ought to be avoided.

Because self esteem and ego are frequently on the line when trainees are asked to risk trying a new behaviour in front of peers and cohorts, the importance of psychological comfort cannot be underestimated with adult trainees. Exercises that expose participants’ lack of knowledge or skill can be risky and also they may not be ready to reveal their limitations in front of colleagues. Alternatively, an activity that asks participants to comment on something familiar eases them into the course content.

Often trainees come to training programs with trepidation that is rooted in unhappy experiences in schools. They may have negative feelings about returning to school-like environment. Such negative feelings can be overcome by acknowledging their wealth of experience, treating them as equals and letting them voice their opinions fully in class. It can also be done by making the physical environment more comfortable. During sessions, trainees should be allowed to move around, change configurations of chairs, keyboards etc.
In addition to these characteristics of adult learners, there are other learning principles which essentially need to be taken into consideration for a conducive learning environment.

Trainee readiness

Trainees must possess the background skills and knowledge necessary to learn the material that will be presented to them. For instance, knowing basic math is a prerequisite for learning statistical quality control techniques. Similarly, many trainers find that the greatest drawback in teaching people to use computers is that many people do not know how to type. Some top U.S. business schools feel that several years of work experience is a prerequisite that enhances readiness to learn in M.B.A. programs.

Trainees who begin a training program without the prerequisites may not be in a position to fully grasp the training content and its applicability and may become frustrated and discouraged. Their confidence in their ability to do the work can be destroyed. When this occurs, trainees are likely to drop out of the training program and, perhaps leave the organization.

When trainees lack the prerequisites, they should be provided with additional background information to prepare them for the desired training. Such pre-training is often particularly important when the trainees are educationally disadvantaged.

Trainee motivation

Motivation to learn is the basic requisite to make training and development programs effective. Trainees would be more responsive to a training program if they feel the need for the new skills and understand how successful training would benefit them.

Although some learning can occur without motivation, learning is much more effective if trainees want to learn. There are several ways to increase motivation. Research has shown that the attitudes and expectations of trainees as they begin a training program can affect their reactions to the programme and the amount they learn. Individuals who fully choose to

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attend a training programme learn more than those who are required to attend\(^1\). Moreover individuals who are committed to their causes and have engaged in career planning seem to respond better to training\(^2\). Organizations can influence the attitudes of potential trainees by involving them in needs assessment phase and/or by giving a realistic training preview. A synopsis of what benefit they can expect from the training programs and how it fits into their career plans.

Two additional ways to increase motivation are goal setting and self-efficiency enhancement. A number of studies have shown that when individuals set specific goals for themselves, they perform better than when they have no goals or vague goals\(^3\). For a long-term program trainees should have a clear picture of their final desired goal but should also have intermediate goals, allowing them to get a feeling of success and progress as they increase their mastery of different components of the training program.

Self-efficacy expectations are simply one’s belief that one will be able to perform a task successfully. These beliefs are a strong determinant of persistence and eventual success in learning difficult tasks\(^4\). Thus it has been suggested that trainers attempt to increase the efficacy expectations of trainees by –

a) Persuasion – telling the trainees that they can do it, that there is a high rate of success in the programme

b) Modeling – showing the trainees (in person or on videotape) others like themselves who have succeeded in training or

c) Enactive mastery – causing the trainees to experience success in the early stages of training.

Since mastery is usually the most potent method of increasing efficacy expectations, trainers should structure early success opportunities into the training program and provide positive feedback on initial performance improvements.

\(^1\) Hicks, W.D. & Klimeski, R.J., "Entry into Training Programs and its Effects on Training Outcomes: A field Experiment", Academy of Management Journal, Sept 1987, pp 542-552.


**Conditions of practice**

Significant learning is acquired through doing. The best instructional material allows the learner to participate in the learning process. Learning is best acquired by doing and practicing the desired task. Actually practicing the skill or task being learned can increase learning and move learners through the stages towards automaticity.

If the task is simple, it can be learned and practiced as a whole. If the task is complex it probably should be broken down into component parts that can be practiced as separate elements. However, some extremely complex tasks with very interdependent steps cannot be broken down into meaningful parts and must be learned and practiced as a whole. In any case, at the end of the training program, the entire task must be performed by the trainee as one complete unit.

Because at some point the trainee must be able to integrate the parts into a whole task, Irwin Goldstein recommends that trainers use a progressive method\(^1\). With the progression method, the trainee practices one part of the task during the first training session. During the next training session, the trainee learns a new part of the task, practices the new part and then practices parts one and two together. This progression continues until the trainee learns all parts of the task and demonstrates successful performance of the total task.

Another condition of practice that the trainer must consider is whether the practice should be distributed (divided into spaced segments) or massed (scheduled in one long session). Hull discovered that when practice periods are spaced apart (distributed practice), performance is superior to what it is when practice periods are close together (massed practice)\(^2\). Also during practice periods the learners’ performance will gradually improve until some maximal level is reached. If the learners are allowed to rest, and then resume practice, their performance will tend to exceed their previous maximal level (reminiscence effect). Learners that are provided rest or some other form of diversion between practice periods will reach higher levels of performance than learners who practice straight through rest or diversion.

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139
Research has shown that when a task is difficult, complex or meaningless, and must be remembered over a long period of time, distributed practice is better than massed practice. Massed practice seems to be better for simple tasks. Massed practice is also superior if the correct response is difficult to perform and is easily forgotten.

*Feedback*

For effective learning to take place, trainees need to receive feedback or knowledge of results, on how they are performing. Feedback is critical for both learning and motivation. If feedback is not provided, trainees may learn the technique incorrectly or lose the motivation to learn. Without immediate feedback, especially when the response is wrong, invites the trainees to learn a wrong response. These wrong responses then have to be unlearned. Critical training time is wasted by having the trainees unlearn wrong responses instead of learning new behaviours\(^1\). Feedback, because it makes the learning process more interesting for trainees, maximizes trainees willingness to learn. Feedback is also necessary if goals for maintaining or improving performance have been set. Feedback will enable the learner where he stands, and to initiate corrective action if any deviation from the expected goal has taken place.

The trainer should plan to give plenty of feedback and encouragement early in the training program. At first, the trainer should praise any improvement at all. Gradually, as the trainees’ skills increase the trainer should raise the level of performance required to receive positive feedback. Later in the program, the trainer should teach trainees how to evaluate their own performance and trainees should move towards reliance on self-generated feedback rather than feedback from others. This increases the likelihood that trainees will be able to continue to perform correctly when back on the job.

When designing learning activities, consider how to apply immediate feedback. Small student to instructor ratios, programmed learning, and well-designed learning environments are just a few ways to accomplish this.

Reinforcement

Reinforcement is another critical principle of learning. It involves the process of providing financial or non-financial incentives (such as praise or recognition) when the trainee reaches a higher level of skill. If a behaviour is rewarded, it probably will be repeated. Positive reinforcement consists of rewarding desired behaviours. A manager would want to do a postgraduate course in finance, if it earns him increments and makes him eligible for further promotions. Both the external rewards (increment and praise) and the internal rewards (a feeling of pride and achievement) associated with desired behaviours compel subjects to learn.

Training programs should be divided into segments or phases so that the trainees can show improvement and achievement periodically and frequently. The trainer can then provide reinforcement incentives as the trainee reaches each progressive skill level. Skills-based pay, through which employees are paid according to the number of skills they have mastered, is a powerful way of reinforcing the learning of new skills. Reinforcement can often encourage trainees to become more interested and involved in training, thereby improving the quality and rate of learning. All training programs should contain a plan for reinforcement.

Cognition

Wertheiner contrasts rote memorization with problem solving based on the Gestalt principles\(^1\). In the former, the learner has learned facts without understanding them. Such learning is rigid and can't be applied without truly understanding it. Learning in accordance with Gestalt principles, however, is based on understanding the underlying principles of the problem. This type of learning comes from within the individual and is not imposed on by someone else. It is easily generalizable and is remembered for a long time. Reaching an understanding according to Wertheiner, involves many aspects of the learners, such as emotions, attitudes, perceptions, and intellect. In gaining insight into the solution of a problem, a learner need not be logical. Rather, the learner should cognitively arrange and rearrange the components of a problem until a solution based on understanding is reached. Exactly how this is done will vary from learner to learner. In one experiment a piece of

paper with the following 15 digits was handed to a group of subjects with the instruction that they study it for 15 seconds: the paper contained these digits: 1, 4, 9, 16, 25, 36, 49, 64, 81. After the subjects studied the digits, they were asked to reproduce the sequence of numbers. Most subjects were able to reproduce only a few of the numbers. After a week most of them remembered more of the digits. Another group of subjects were asked to look for a pattern among digits. After studying them some of the subjects were able to determine that the numbers are squares of the digits from 1 to 9. These subjects were able to reproduce the series perfectly not only during the experiment but weeks and months afterwards.

Transfer of learning

What is learnt in training must be transferred to the job. Traditional learning theory recommends a number of ways to maximize transfer of training. Dealing mainly with training contents and methods, they include maximizing the similarity between training and work settings, teaching the principles that underlie the practice being taught, building in time for over learning, using a variety of job related examples so that the trainees can see how to apply the skill in a wide range of situations, and making sure that the material really is relevant to trainees on the job needs. Besides these guidelines for training content and methods, organizations can follow a number of other procedures to enhance transfer. Some of these occur during training, while others have to do with post training environment in which trainees work.

As trainees learn, they should be asked to develop an action plan, including measurable goals, for performing the new behaviour back on the job. After the training, they should be encouraged to assess themselves against these personal goals on a regular basis. Back on the job, a number of factors can affect transfer. One important factor is the opportunity to perform trained tasks, which if unavailable, the trainee may soon forget the newly acquired behaviour. Another key factor is the extent of support for the new behaviour in the work place. If superiors or peers do not accept or reward new behaviour by trainees, the new behaviour will quickly be given up or may not be tried at all. To facilitate transfer,

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trainees should be counseled both before and after the training by their immediate superior and receive encouragement to follow through with what they have learnt.

Whenever possible, groups or teams that will be working together should be trained together, so that they can learn how to apply the new concepts in the unique mix of personalities and abilities founded in their own team. Group training would also facilitate the development of group norms that support the new behaviour. Trained managers should make an effort to meet every few weeks to reinforce one another and share their experiences in applying the new ideas they have learned. Periodic formal refresher training is also helpful. During the training trainees can be given projects or assignments that require them to apply what they are learning to an actual work problem and report back at the next session. This ensures serious efforts to learn and apply the new skills to solving real world problems.

Trainers should plan as carefully for transfer of training as they do for the classroom portion of the training. The more the above suggestions the training program implements, the more likely it will be to produce positive transfer to the job.

In recent years, the principles of andragogy have been challenged.\(^1\) There is no concrete evidence that the learning process is truly different for adults as compared with children; some children respond well to student-centered learning and sometimes adults prefer direction and instructor-imposed structure to self-diagnosis and personal responsibility for learning. Thus, a pure andragogical approach is not always appropriate just because the learners are adults. For instance, it does not apply when the program teaches completely unfamiliar technical or physical skills, or when the trainees have chosen to attend in order to learn from an acknowledged expert in the field. However, andragogical principles contribute much to the design of management development programs and can be used in varying degrees to increase the motivation and personal responsibility of trainees in many kinds of programs. Switching between instructor-cantered methods such as lectures and student-centered methods such as group discussions can help ensure relevance and maintain learner interest.

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In conclusion, all the above-mentioned learning principles must be considered in the design of the training programs. If these principles are ignored, an ineffective training program is much likely to result.
Annexure 4.1

Learning Style Inventory¹

**Directions:** To gain a better understanding of yourself as a learner, you need to evaluate the way you prefer to learn or process information. By doing so, you will be able to develop strategies which will enhance your learning potential. The following evaluation is a short, quick way of assessing your learning style.

*This 2 item survey is not timed. Answer each question as honestly as you can.*

Place a check on the appropriate column for each statement:

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<tr>
<th>Statement</th>
<th>Often</th>
<th>Sometimes</th>
<th>Seldom</th>
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<tbody>
<tr>
<td>1. Can remember more about a subject through the lecture method with information, explanations and discussions</td>
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<td>2. Prefer information to be written on the chalkboard, with the use of visual aids and assigned readings</td>
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<td>3. Like to write things down or to take notes on visual review</td>
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<td>4. Prefer to use posters, models, or actual practice and some activities in class</td>
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<td>5. Require explanation of diagrams, graphs, or visual directions.</td>
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<td>6. Enjoy working with my hands or making things.</td>
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<td>7. Am skillful with and enjoy developing and making graphs and charts</td>
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<td>8. Can tell if sounds match when presented with pairs of sounds</td>
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<td>9. Remember best by writing things down several times.</td>
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<td>10. Can understand and follow directions on maps.</td>
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<td>11. Do better at academic subjects by listening to lectures and tapes</td>
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<td>12. Play with coins or keys in pockets</td>
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<td>13. Learn to spell better by repeating the words out loud than by writing the word on papers</td>
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<td>14. Can better understand a news article by reading about it in the paper than by listening to the radio</td>
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<td>15. Chew gum, smoke, or snack during studies.</td>
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<td>16. Feel the best way to remember is to picture it in your head.</td>
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<td>17. Learn spelling by “finger spelling” words</td>
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<td>18. Would rather listen to a good lecture or speech than read about the same material in a textbook</td>
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<td>19. Am good at working and solving jigsaw puzzles and mazes.</td>
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<td>20. Grip objects in hands during learning period.</td>
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<td>21. Prefer listening to the news on the radio rather than reading it in the newspaper</td>
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<td>22. Obtain information on an interesting subject by reading relevant materials</td>
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<td>23. Feel very comfortable touching others, hugging, handshaking etc.</td>
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<td>24. Follow oral directions better than written ones.</td>
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**Scoring procedure**

Directions: Place the point value on the line next to the corresponding item. Add the points in each column to obtain the preference scores under each heading.

Often: 5 points
Sometimes: 3 points
Seldom: 1 point
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VPS = Visual preference score  
APS = Auditory preference score  
TPS = Tactile preference score

If you are a VISUAL learner, then by all means be sure that you look at all study materials. Use charts, maps, filmstrips, notes and flashcards. Practice visualizing or picturing words/concepts in your head. Write down everything for frequent and quick visual review.

If you are an AUDITORY learner, you may wish to use tapes. Tape lectures to help you fill in the gaps in your notes. But do listen and take notes, reviewing notes frequently. Sit in the lecture hall or classroom where you can hear well. After you have read something, summarize it and recite it aloud.

If you are a TACTILE learner, trace words as you are saying them. Facts that must be learned should be written several times. Keep a supply of scratch paper for this purpose. Taking and keeping lecture notes will be very important. Make study sheets.