

## Learning to Learn

### 1. Introduction

Learning is a life long exercise. We do learn through out our life in different ways. Learning for specific purposes is one of the major types of learning. Though learning for specific purposes is different from the life long learning which is about life and how it is shaped, the same principles are applicable for any type of learning. The success of learning depends on the effectiveness of the method of learning.

Methods of learning are unique or tailored individually or contextually, but still there are general concepts that are applicable and useful in developing the method of learning despite the differences in the subject matter as well as the individual learners. Once you know the proper methods of learning no matter what the subject is, you will be able to reach your target either with respect to the general learning about life or learning for specific purposes effectively and efficiently.

### 2. What is Learning?

Learning is an effort to have a behavioral change in the identified area. Once the process of learning is over there should be a behavioral change in the particular individual or the group with respect to the targeted behavior for instance, the learning process of a military officer. Once the military training and the other learning processes are over there should be a behavioral change in the particular individual as a military leader to achieve the target of a military outfit where the particular officer is one of the elements of it. Similarly in the other professions, learning for specific targets and to learn the meaning of life which is life long or (perhaps) life to life, there should be a behavioral change after the learning.

### 3. Types of Learning

There are different ways of classifying learning. Among them the following two classifications may help us to understand the concept of learning to learn.

#### 3.1 Overview Classification – based on the overview general features of the learning stuff

- i. Learning for specific purposes
- ii. Learning of the life

##### 3.1.1 Learning for Specific Purposes

Learning for Specific Purposes includes learning for specific qualifications, either academic or professional, skill training and training for other mental and physical abilities etc. E.g. learning to become an engineer, understanding or the knowledge of a particular subject etc., examinations based learning, and certificate based learning. In these types of learning the scope of learning is very precise. Since the learning outcomes can be identified prior to learning it is easier for both the student and the teacher to plan the learning process. The emphasized on this article is on examination based learning.

##### 3.1.2 Learning of Life

Learning for spiritual development, learning about life are few examples of Learning of Life. These types of learning are applicable to everybody in society. However depending on the interest people involve in these types of learning. This particular type of learning is a life long effort of human beings. One who is physically and mentally healthy with the necessary capabilities does well in this area of learning. Only the human being who was born with the mental capability takes up this challenge with or without his or her knowledge. One who takes this challenge up methodically will be able to achieve the goal and will be able to help others also to achieve goals. E.g. religious leaders and philosophers. The learning methods discussed here may not be sufficient or applicable to this type of learning.



### 3.2. Categorical Classification of Learning.

There are three types of learning.

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

#### 3.2.1 Cognitive: Mental Skills (Knowledge)

This type of learning starts from simple intellectual targets such as professional or other targets of qualification for extensive level learning such as meaning of life, the reality etc. After the learning there should be cognitive behavioral changes with respect to the knowledge.

#### 3.2.2 Affective: Growth in Feelings or Emotions (Attitude)

It includes learning of different qualities with respect to perception of the individual/s or the group/s. E.g. attitudinal changes, behavioral changes in line with the intuition of an individual or a group (collective perception). After this type of learning there should be a change with respect to the level of Emotional Intelligence (IE) of the individual or the group.

#### 3.2.3 Psychomotor: (Skills)

It includes mental and physical skills. This particular learning is related to the movements of physical and mental elements and their speed. E.g. acrobatic skills, magical skills, typing skills, sports skills, Yoga etc.

The above classifications are linked with each other. Therefore, the two classifications are required to be considered in a complementary manner.

## 4. Theoretical Models of Learning

### 4.1 Behaviorism

Behaviorism is the first major perspective on how humans learn. It gained popularity at the beginning of the 20th century with theorists such as Pavlov, Thorndike, and Skinner. According to behaviorists a learning principle that is developed from a research with respect to one species can be applied for other species as well. It is believed that organisms enter into the world just as a blank sheet and learn everything from the environment. Learning is a science and it should focus only on observable and measurable events. Stimuli and responses are the two events in behaviorism. The modern behaviorists pay attention to motivation and reinforcements as they are important in education. In the field of education many of the behavioral concepts that are developed by the classical and neoclassical behaviorists are used in designing various learning modules.

### 4.2 Cognitivism

Cognitivism is another theoretical explanation with respect to learning. It focuses on the individual's perception, processing, interpreting, storing, and retrieving of information. According to the cognitive theory instructors must become aware not only of what students learn, but also of how they attempt to learn it. Jean Piaget's contribution to cognitive theory (1896-1980) is the major among others. Teachers should present information in organized sets and should help learners as individuals taking things depending on their past experiences. New information must be related to old ideas. If students can learn to control their own cognitive processes, they in turn will determine what is to be learnt and how it should be done. Cognitivism believes that learning is a unique phenomenon whereas the behaviorism believes that learning depends on the environment where the individual is living in. In designing learning modules both cognitivism as well as the behaviorism are important because the two models focus on two different dimensions of an individual that affect learning.



### **5. Learning Process**

Learning is a process. If the learner as well as the teacher is conscious and effective in each stage or event of the process, the learning is successful. There are many learning models. Some learning models are traditional and some are modern. Both types of models help in learning as the learning models depend on the type of learning and the nature of the individual or the group whom are taught.

An individual receives information from the environment through senses. This input provides the initial perception of the information. It remains in the Sensory Register for only a fraction of a second. The input then moves to Short Term Memory (STM) and is encoded as a concept. The input remains in STM for a few seconds. Rehearsal may keep the information in STM (like remembering a phone number just until it is dialed) or move it to Long Term Memory (LTM) for later recall. Most theories assume that storage in Long Term Memory is permanent and failure to recall is not a loss of memory. Information gained from either STM or LTM, when retrieved, passes to a Response Generator which transforms the information into a message which then produces an action. It is at that point the instructor can tell that information has been processed and the learner has indeed learned. Here the learner has the ability to exercise Executive Control and Expectancies will influence how information is processed. These two components are considered in (Cognitive) Learning Strategies (Gane & Driscol, 1988).

The potential of an individual and the potential of the environment where the individual performs are the major challenges of learning. The potential of an individual depends on the self. There are different theories to explain the self. The potential of an individual is different from person to person. However, it is one of the determinants of the success of learning. E.g. mental and physical capacity of an individual. Apart from that the available resources, the family and the social environment also affect the potential of the individual. In the learning process understanding of such potentials and the lapses/ weaknesses of the individual that limit the potentials are important. The individual himself/herself can identify and assess such potentials and the weaknesses or it can be done with the support of experts such as professional counselors and set their learning goals.

Understanding the potential of the environment where the individual performs is the other challenge of learning. The environment includes socio-economic, political, institutional environments etc. It can be physical, economical, social, legal or otherwise E.g. class room, school or the institution, society, legal frame etc. An individual cannot go beyond the potential of the environment except in exceptional situations. Therefore, proper assessment of the environment of the learning atmosphere is also important. The development of information technology may encompass these limitations but such assessment of the environment helps to set the goals of learning without problems. The proper assessment of individual capacity and environment help to avoid the unnecessary frustrations of the learners that are possible on the way of the learning process if there is no proper assessment of the specified area.

### **6. Memory**

Memory is an active process of assembling and retaining sensory inputs in the brain. Memory helps you ride a bike, write your name, and remember the street you lived on as a child. The brain consists of neurons (nerve cells) which communicate with other neurons through junctions called synapses. It is now estimated that the human brain has some 1014 synapses; established pathways among these synapses underlie memory. At the most fundamental level, memory corresponds to chemical, electrical, structural and functional changes in the brain.

### **7. Forgetting - Loss of Memory**

There is a relationship between what is forgotten and what is remembered. The forgetting or







the loss of memory is explained by various theories. Among them are: Decay Theory-spontaneous loss of information over time. Consolidation Theory-certain neural activities that are responsible for permanent memories are set into motion, and disruption of these activities lead to poorly formed memories, and thus, forgetting. Interference Theory-forgetting caused by interference between information. Retrieval Failure Theory-"retrieval failure."

Following are a few selected instances to understand the memory loss.

The forgetting or the loss of memory of certain situations can be prevented but prevention may be difficult in certain other situations as those become natural phenomena. E.g forgetting during the latter stage of life. However, the memory capacity affects learning. Maintenance of proper learning methods (a balanced learning) helps to maintain a relatively good memory.

### 8. How to Improve Learning

Under the circumstances in which resources are limited and the wants are unlimited there is a need of effective and efficient learning to achieve goals. Therefore, the time and other resources that are spent on learning should have to be managed to achieve the targets. Peer learning is another complementary type of learning that can be applied for effective learning. In order to achieve the targets the following can be considered as the prerequisites.

#### a. Appropriate Values and Attitudes

- i. The way you think
- ii. Positive thinking
- iii. Motivation within you
- iv. Liking towards what you are learning
- v. Determination

#### b. Concentration Skills

Those who are with concentration problems can consult professional counsellors and those who want to improve the concentration skills can practise meditation under the guidance of a suitable teacher in this field. Concentration may also affect due to lack of oxygen, water, rest and sleep, working conditions, and nutrition. Therefore, availability of these factors needs to be guaranteed prior to the beginning of learning.

c. Organization- Organize the whole learning process to achieve goal/s

d. Being a good listener (attentive listening)-Avoid doing too many things while learning

e. Being a good thinker and a debater-need to be with an analytical mind

f. Being an efficient student with VATK

V-Visual- arrange the learning materials to visualize. Organize the reading stuff as diagrams.

A-Audio- arrange the learning materials to hear frequently. E.g. Listening to a radio program or TV program in the related subject

T-Tactile- arrange the things to be experienced through senses e.g. Anatomy

K-Kinaesthetic – Learning through physical activities .e.g. weapon training

### 9. Peer Learning

The individual learning with the necessary conditions can be enhanced with complimentary learning methods. Peer learning is one of such methods that the students are commonly used. Peer learning is an informal method of learning and therefore students will be able to ask questions freely. In such a situation the peer learning will enable the students to solve problems. The other advantage that the peer learning has is that the students will be mutually benefitted. However, this particular type of learning method is not going to be successful all the time and peer learning alone may not be always sufficient.

### 10. The Best Learning Method

The general methods explained above may not be the best methods of learning for all

individuals. Therefore there is a need of an individually tailored learning method based on the theories, concepts of learning and the general learning methods. The following will help you to find a better method for effective learning.

#### **Step No 1**

In identifying an individual learning method first there is a need of assessing the challenges of learning as mentioned earlier and the types of learning tasks that the individual has to take in. Once you know the task the first thing that you have to follow is the assessment of the individual capacity and the available resources within the learning atmosphere.

Thereafter, you need to look at your past and see how you have performed in various learning tasks and question on various aspects of learning. E.g. Did I like to read? Was I able to memorize? /recite? /interpret? .Was I able to benefit from group discussion? Was I able to summarize the reading materials? What are my study habits? How did they evolve? What is the level of performance in the past? What weaknesses that I had? All these questions will help you to understand your successes and failures.

#### **Step No 2**

In the light of the past, you can get into the present and can question again on the issues at hand: How interested am I in the task at hand? How much time that I have? What affects my attention? Am I over burdened? Are the circumstances right for success? What can I control? What is out side my control? What affects my dedication? What I can change? and What I cannot change? Do I have a plan? If so have I considered the successes and failures in the past? All the answers that you collect can be helpful for you to set your learning program.

#### **Step No 3**

In the third step you can question about the task at your hand and question about the expectations with respect to the task and the available resources and find concrete answers to bridge the gaps if there is such. E.g. Do I understand the subject? What kind of resources and information will help me? Will I need additional information? Resources? Should I go more quickly or slowly? Do I need a help from others? If so, from whom?

#### **Step No 4**

Once the learning is in the process you have to question again on performance, discipline and make changes to the way of learning. The most important thing at this stage is to set your discipline to achieve your goals at your hand in the most successful way. In this regard have a schedule for different tasks at hand. Hold firm in what you do. Avoid wage and loose thoughts on various activities. Explore for a better time management method and integrate that with your self discipline. It is important to prioritize the list of things that you have to do depending on their importance and the urgency in line with your learning goals.

#### **Step No 5**

Do monitoring and evaluation of your own time schedule in line with the performance/reaching towards goals and do changes when it is required. SWOT (the Strength, Weaknesses, Opportunities and Threat on learning) analysis is another way to correct your way in learning.

Once you learned you may have to prove that you have learned. Therefore, performances are automatically linked with examinations. In most instances the learning process is continued until the student complete his or her tasks in the examination. Therefore, methodical preparation for the examination is also important.

### **11. Preparing for Examinations/Test of the Knowledge**

Once the learning is over there is a need of checking whether the individual or the group has achieved the objectives. In many cases there are examinations either written or oral or both.





Even there is no examination it is the responsibility of the respective individual or the group or the responsible organization to check the outcome or the effectiveness of the program that cost for the organization. If the necessary conditions for the students to do the study and the teachers to teach are available the individual or the group should learn in the proper manner and the performance of the examinations becomes successful.

Under the competitive environment the students become nerves and become the victim of examination stress. Therefore the following will be helpful for them to have a relief under such competitive environment.

There are number of ways of studying for examinations. Among them the following is one of the methods of preparation for the examination. In general it is called PQRS method. This will help you to get prepared for the examination and achieve goals.

P – Preview the learning stuff. Have a glance on what you have learned

Q – Question different aspects of learning that help you to read and memorize the learning stuff.

R – Read the stuff in line with the questions.

S – Study the stuff.

T – Test the understanding. May be a self test that can be done as a rehearsal.

## 12. Concluding Remarks

Learning in the today's context is a must because of the need of improvement in the productivity through enhancing the level of human capital. Learning in the face of the demand for human capital is naturally competitive and costly no matter what the level or the place is. Thus, there is a need for effective and efficient learning at all levels. Therefore, understanding all aspects of learning and making the learning methodical is a requirement for making it effective and efficient. Here it is important to draw the attention to a balanced learning when one considers the challenges of learning for an individual and the environment where learning takes place. The balanced learning maintains the integrity, continuity and the stability that helps in achieving the learning goals in line with the life vision of an individual without an interruption in their normal life.

## References

- Anderson, L. M. (1987). *Learners and Learning*. In R. Vasta (Ed.), *Annals of Child Development*, Vol. 4 (85-99). Greenwich, CT: JAI Press.
- Ashforth, (2001). *The Handbook of Emotional Intelligence: Theory, Development, Assessment, and Application at Home, School, and in the Workplace*. Personnel Psychology
- Bandura, A. (1977). *Social Learning Theory*. General Learning Press.
- Bandura, A. (1973). *Aggression: A social learning analysis*. Englewood Cliffs, NJ: Prentice HalBehling, O. & Eckel, N. L. (1991). *Making Sense out of Intuition*. *Academy of Management Executive*, 5(1), 46-54.
- Campione, J. C., & Armbruster, B. (1985). *Acquiring Information from Texts: An analysis of four approaches*. In J. W. Segal, S. Chipman, & R. Glaser (Eds.), *Thinking and learning skills*, Vol 1. Hillsdale, NJ: Erlbaum.
- Dave, R. H. (1975). *Developing and Writing Behavioural Objectives*. (R J Armstrong, ed.) Educational Innovators Press.
- Ebbinghaus, H. E. (1964). *Memory: A contribution to experimental psychology*. New York: Dover, 1964. (Originally published 1885; translated 1913).
- Ellis AW and Young AW (1988) *Human Cognition Neuro Psychology*, Lawrance Erlbaum Association ,London
- Gagne, R. M. (1985). *The Conditions of Learning* (4th ed.). New York: Holt, Rinehart, & Winston.
- Gagne, R. M. & Driscoll, M. P. (1988). *Essentials of Learning for Instruction*. (2nd ed.)

- Englewood Cliffs, NJ: Prentice-Hall.
- Krathwohl, D. R., Bloom, B. S., & Masia, B. B. (1973). *Taxonomy of Educational Objectives, the Classification of Educational Goals*. Handbook II: Affective Domain. New York: David McKay Co., Inc.
- Nembard, D. (2000, June 6). *The effects of task complexity and experience on learning and forgetting: A field study*. Human Factors (p. 272), The Gale Group
- Ormrod, J. E. (1990). *Human learning: Theories, principles, and educational applications*. New York: Merrill.
- Pohl, Michael. (2000). *Learning to Think, Thinking to Learn: Models and Strategies to Develop a Classroom Culture of Thinking*. Cheltenham, Vic.: Hawker Brownlow.
- Sternberg, R. J. (1977). *Intelligence, information processing and analogical reasoning*. Hillsdale, NJ: Erlbaum.
- Schacter, D.L., Wagner, A.D., & Buckner, R.L. (2000). *Memory systems of 1999*. In E. Tulving & F.I.M. Craik (Eds.) *Handbook of memory*. New York: Oxford University Press
- [www.indiana.edu/~reading/ieo/digests/d163.html](http://www.indiana.edu/~reading/ieo/digests/d163.html)
- [www.aarp.org/learn.tech/wellbeing](http://www.aarp.org/learn.tech/wellbeing)

**MM Jayawardena**

BA (Peradeniya) MA (Peradeniya) Dip in Psychology & Counselling (SLNIPC) APC (SLNIPC)

Senior Lecturer

Department of Social Sciences & Humanities

General Sir John Kotelawala Defence University

