CHAPTER 3

THEORETICAL FOUNDATIONS
3.1 INTRODUCTION:

Theory is helpful to understand what really our psychologists, philosophers, educationists believe about it. In this chapter some theoretical aspects of perception, teaching and learning which are important to this study are presented. The study of these theoretical aspects was also helpful to prepare tools for this study. It will be also useful to know whether the teachers' work or behaviour in the classroom is based on theoretical aspects.

The main theoretical dimensions of this study are perception, teaching and learning. I have tried to give a brief sketch of the basic tenets and contemporary viewpoints. At the end of the chapter inter-relationship among these concepts is also presented.

3.2 PERCEPTION:

To study the perception of teachers towards teaching-learning practice is the main aim of this study. It is necessary to understand what perception is! Here study of the concept of perception, factors affecting its process, review of theories of perception are delineated to give an over-view of the concept of perception and its related aspect. The theoretical exposition has helped me in interviewing the teachers and in observing their actual classroom practice.

3.2.1 Concept of Perception:

Generally people believe that to perceive means to become aware of or to see or notice. Sensation is considered as an important factor in perception. Sensation is only raw material of perception. The common belief that sensation means perception does not hold much ground. The process of sensation and perception compared with computer. A computer needs data. If data is given, it will give information as the output. In the same way sensation is the first step of perception. It works as input but output is perception.

Dutt, S. C. [1960:75] says, "Perception is usually described as a presentative (actual sensation) representative (revived sensation) process."

: 28 :
Sensation supplies the materials of knowledge and some information about existence and qualities of external objects. Sensation is stimulation for perception. Between sensation and perception brain works as a processor. Brain adds some information and then interprets it. According to Bergson [Quoted in Spinelli, Emesto. (1989:46)] Neuro-psychologists initially pointed out that one of the main function of the brain is to filter or select incoming stimuli.

Kimble [1956:143] believes, "Perception tends to be more complex than sensation. Perception is relatively more dependent upon learning, motivational, social and personality factors than sensation.

Perception requires sequence of stimulation. Activity of sensation is as receptors and activity of perception is as mediating process to which sensation gives rise.

To understand the concept of perception it is necessary to understand difference between them. Here are some characteristics of perception and sensation.

1. Perception is knowledge; sensation is raw material of knowledge.
2. Perception is the consciousness of objects themselves (e.g. a ball, a flower, etc.) sensation is the consciousness of qualities of object (such as redness, softness etc.)
3. Perception is active state of mind whereas sensation is passive state of mind.
4. Perception is concrete mental state; sensation is one of the elements of perception.

Perceiver is in direct contact with real world and perceive connect with real world only with the help of sensation.

Swami Vivekanand considers three important steps in perception. He says, [1996:22, 23] "In each act of perception, three things are necessary - first the external instruments, then the internal organs and lastly the mind. If any one of them be absent then there will be no perception."

According to him organs means not the external organ as eye, ear etc. but organ means the nerve center in brain. Eyes and ears, etc. are not the organ
but only the instruments. He says that unless the organs are present a person cannot see even if he or she has eyes. But given both the organs and the instruments, unless the mind attaches itself to these two, no vision takes place.

Perceptions are tentative and learned. They are never find or done for once and all. Explaining this Gouran Dennis, Millar, Larry and other [1992:27] say that, "Because we usually lack completely satisfactory information for interpreting experience, most of our perceptions are tentative to some degree." They also add that the interpretations of experiences, especially of others' inner states are not innate but learned.

3.2.2 Process of Perception:

Process means a continuous series of successive acts. The acts are interdependent in a process. Bruner [1957:41-69] suggests that perception is a progression that has several distinctive stages.

3.2.2.1 Perception is process of sensation to interpretation

(1) Sensation:

In this stage perceiver is stimulated by sensory data. Sensation is important factor for perception. For perception to occur, there must be some stimulus that activates one of our five senses.

(2) Awareness:

Sensation is insufficient for perception. At some point perceivers becomes aware of sensation. Brain is an important factor in human body which leads a person towards awareness of sensation.

(3) Categorization:

When a person is aware of sensory data, he or she begins to categorize the information. A person begins to categorize its shape, size, colour etc. Many factors affect this process of categorization of sensory data; and it is helpful to determine what it is and what it is not. Categorization gives much information about that object. Categorization includes naming. Naming also suggests interpretation. The process of naming can be shown through a diagram.
Interpretation:

The last process of the perception is interpretation while someone categorized the information collected by his/her senses. At some point they are able to decide what they are experiencing. We can see the process of perception through this figure.

3.2.3 Factors Affecting Perceptual Process:

Perception is a result of some process. It is simple that there is some factors also responsible for this process or its result. In the same way, there are many factors which affect perceptual process. Since it is a psychoneural process, several factors play a vital role in it.

3.2.3.1 Experience

Experience enriches our perception. According to Dutt, S. C. [1960:76] "Perception is knowledge about an object. The more diverse our previous sensory experience connected with it, the more we know about it and hence the fuller is our perception of it."
Sensation is important factor in perception but the constructivist theory of perception maintains that sensory stimulation is inadequate by itself to produce perception. Brain is important factor to interpret sensory cues but brain learns through experience. Thus brain is important to interpret perception but experience plays primary role to interpret it.

Sometimes previous experience produces faulty estimate. Sometime on the basis of the schemata built up from past experience a person infer its meaning and react to the perceived stimulus. If the previous experience recurs frequently, a person's interpretative schema becomes so fixed that person's response becomes one of habits. Sometimes it happens that vast majority of persons daily experiences are perceived in a habitual manner which is based on repeated previous experience.

3.2.3.2 Fusion

Fusion is a combination of two or more stimuli into an unanalysed and sometimes unanalysable impression. In fusion sensation and ideas so combine that person perceive it a one whole thing. Person's given sensation implicitly revives a similar past sensation. In such a way that the two are indistinguishably fuse together. Hoffding called it implicate memory. Because of this a person can recognize different characteristics of things as a whole.

3.2.3.3 Free memory

In free memory the revived idea represents a different object. It can linger in thought in total independence of the receiving sensation or idea. According to Dutt [1960:79] "in free memory the train of ideas breaks loose from the original exciting cause, the given sensation". In free memory a person has association between independent items of thought, unlike what we find in mere perception.

3.2.3.4 Attention

According to Titchner [Defined in Dictionary of Psychology – (1956 : 22)] it is a state of consciousness marked by levels of sensory or imaginal clearness.

Attending is bringing an object into clear consciousness while perceiving is knowing or understanding it through a sense. There can be no clear
perception without attention or attentive perception, especially when deliberately undertaken, is called observation in science.

3.2.3.5 Beliefs

The term belief refers to a person’s feeling about what is true. It affects person’s perception. If two persons believe different about one object or other persons, it is sure that their perceptions of a same thing or a same person is different. Belief affects perception because belief is an attitude involving the recognition or acceptance of something as real. And perception is a process of recognition or know some object.

3.2.3.6 Motives

Motive is the reason behind an action that causes an individual to behave in a particular way. Motive leads a person towards different perception. It is natural that food smells and tastes better when a person is hungry than he or she has just eaten. Motive is an affective factor which operates in determining the direction of an individual’s behaviour unconsciously it affects person’s perception.

According to Spinelli [1989 : 45] “one of the first evaluations of the effects of motivation on perception was carried out by R. N. Sanford [1935] who studied the effect of hunger on the perception of ambiguous figure.”

3.2.3.7 Attitude

Attitude is the inclination a person has to evaluate objects of perception favourably or unfavourably. There is a difference in behaviour due to favourable attitude and unfavourable attitude.

3.2.3.8 Cognitive code

Perception is process of encoding. Our nervous system creates cognitive codes. Sometimes cognitive codes can be flashed out or reconstructed. Person’s general knowledge of the world helps to reconstruct cognitive codes. The process involved in storing, recovering and reconstructing cognitive codes is an aspect of our mental lives. Generally people refer it as memory.
Neisser's definition of cognitive psychology suggests how cognitive affects perception. Best [1989: 6] summarize Neisser's definition of cognitive psychology: "cognitive processes create codes that are used by people. That is the cognitive codes developed by individuals are the basis of their knowledge of the world. Such codes enable people to work, make decisions, study, play tennis and so on."

3.2.3.9 Neural event

Neural event helps in perception. Sensory mechanism are capable of creating code. It also possess aspect of physical stimulation pattern of neural events which can produce awareness and understanding of the physical object.

3.2.3.10 Knowledge

Constructivist position of perception believes that the rational events are inadequate to specify how objects are perceived and sometimes retinal signals can be ambiguous.

The constructivists support it by arguing that the retina has spatial extension. The space is only two-dimensional. So it cannot send a code to brain that specifies of an object's three dimensions. According to them our awareness includes knowledge of depth and this knowledge of depth could not have been produced at the retina. Brain must interpret aspects of the retinal code and as a result of its interpretation, generate the third dimension.

According to constructivist this other knowledge is a memorized representation of an object which is produced by experience.

3.2.3.11 Culture

Socio-cultural variables affect conclusions. Ours is a phenomenal reality and as such it remains open to a multiplicity of interpretations.

3.2.3.12 Effects of selection

Person's selective attention to certain stimuli over others help construct one's perception. What a person believes in large part is determined by person's focus of attention. Thus perceptions are selective. The brain of a man accepts many variables from our sensory system. Our sensory system bombard
unlimited variables, but brain selects from them. Not only brain accepts them but interprets and analyses. In no time brain selects these variables and filters them into our conscious attention. According to Gouran, Dennis, Millar, Larry and other [1992: 30] "perceptions are selective and observers tend to focus on only a few features of an object of perception at any given time, two objects having those particular features in common can be confused." Thus mechanism of selection is purposive. Through this process conscious perception must strive towards some desired outcome, and thus process of selection affects perception.

3.2.3.13 Expectation

Expectation means the attitude of waiting attentively for something usually to a certain extent defined. An interpretational variable in perception based upon past experience is our expectation of what to perceive. According to Spinelli [1989: 44] this phenomenon is often referred to as the perceptual set. Through perceptual set a person can perceive object in a particular way on the basis of previous information. Perceptual context is related to perceptual set and in the perceptual context other stimuli that are present at the same time affect person's perception of a stimulus.

3.2.4 A Review of Theories of Perception:

3.2.4.1 Stimulus theory

Stimulus theory gives importance to sensation and external stimulation in perception. But there is no intervening factor as brain which connects sensation and external stimulation.

3.2.4.2 Gibson's direct theory

Gibson's direct theory is in some way similar to stimulation theory. He believes that only our sensations are capable for perception. Perception does not need any process of mind. So learning and experience are not useful for perception.

3.2.4.3 Gestalt theory

According to Gestalt theory (its roots are in Descartes & Kant) mind possesses knowledge of size, form, time and space on sensory data. Thus they
give importance to sensory data and intervening process of mind both. Kohlar and Kofka—famous psychologists suggest that a person can perceive one thing as a fact of organized not in different parts. So learning and experience lead a person to perceive something as a whole.

3.2.4.4 Inference theory

Inference theory suggests that perception is not within one's mind but it is in the external world. So mind or brain's process is not important for them as Stimulus theory. But in inference theory experience of world is important to perceive.

3.2.4.5 Phenomenological theory

Phenomenological theory gives importance to process of brain upon stimulation. According to this a person has types of sensations (stimulations) but brain selects from them and filter them for perceiving a thing.

Phenomenologists point out that all acts of perception have a particular orientation or directional focus. They believed that the number of stimuli that the brain responds to at any moment in time is vast in relation to the amount that enters conscious awareness. Neuropsychological studies have pointed out that human brain filters wide number of variables. But in order to select out those variables which require person's conscious attention.

Thus phenomenologists give importance to person's mind and its process.

3.2.4.6 Constructivist theory

Constructivist theory opposes the direct theory and gives importance to brain's process to perceive something. According to this theory sensory stimulation is only one type of tool and it is inadequate to perceive something.

According to constructivist theory sensory stimulation is inadequate to produce perception. This theory is also called the transactional position. It is founded by Ittelson and Cantril [1954] and the computational position Ullman [1980].
They believe that through experience the brain learns how to interpret sensory cues which are ambiguous. Brain plays important role in perception. It is not simply processing neural events of physical energy but it adds information of its own based on knowledge that has been built up from previous perceptual activity.

They begin with the premise that retinal events are inadequate to specify how objects are perceived.

They believe that role of cognition and role played by the central nervous system is important in perception.

They argue that perception would not be possible without the extensive computations performed by one’s brain. In short they want to tell that events that are out there in the world are not very informative by themselves. The brain adds some information to the stimuli so different kinds of perception is possible. According to them learning plays extremely important role in perception.

It can be concluded that direct theory and stimulus theory do not give much importance to brains activity in perception. For them stimulation (sensations) are sufficient while other theories as constructivist, phenomenological theory, gestalt theory etc. directly or indirectly give importance to brain as an intervening factor to perceive something.

Although they give importance to sensation but they believe that sensation is only a tool for perception. Sensation is a necessary condition but not sufficient.

3.3 TEACHING:

The process of teaching is as old as human beings on the earth. Not only human beings but animals also teach their young ones for successful adjustment to the environment. The process has undergone several changes from non formal to formal with the passage of time.

Today the old concept of teaching as giving of information has been completely discarded because of researches and many new methods and techniques.
The theoretical aspect of teaching has contributed to this study in framing the inventory and even in generating qualitative data.

3.3.1 Definitions and Concept of Teaching:

Efforts to define 'teaching' have centered on explorations of various facets of the concept of teaching rather than on the formulation of explicit definitions. The concept of 'teaching' is not a concept like 'red' which picks out a simple quality, like horse which picks out an object or like 'running' or 'smiling' which pick out observable occurrences. The concept of teaching is discussed here in all its complexity.

3.3.1.1 Teaching is associated with learning

Words have history and they developed from primitive observations and experiences over long periods of time. The word teach has a long history and its uses have varied from one period to another.

From early times 'teach' has been associated to learn. In Shakespeare's the Tempest, Caliban explains: 'You taught me language, and my profit on't you, for learning me your language.' Both 'learn' and 'teach' used by Caliban to mean the same thing. Learn comes from middle English 'lernan' meaning to learn or teach. This lead us to reveal their kinship.

Teaching is considered as success. Teaching as success signifies the idea that learning is implicated in teaching. This implication is suggested by the hyphenated expression "teaching-learning" found in much pedagogical literature signifies that teaching and learning are inextricably intervened.

3.3.1.2 Teaching is promotion of learning

According to the changed concept, teaching is to cause the child to learn and acquire the desired knowledge, skills and also desirable ways of living in the society. The primary purpose of teaching is to facilitate student learning.

Teaching is also interpreted as a process of stimulating, directing and guiding the learner. Hough and Duncan also support this definition. According to them [1970 : 2] "Teaching is an activity – a unique, professional, rational and
humane activity in which one creatively and imaginatively uses himself and his knowledge to promote the learning and welfare of others.”

Burton has given a very precise but comprehensive definition of teaching, which is, supported the definition of Hough and Duncan. According to Burton [defines in Chauhan (1994 : 4)] 'Teaching is the stimulation, guidance, direction and encouragement of learning.'

3.3.1.3 Teaching means task and learning means achievement

'Teaching' is said to be a task verb and 'learn' the corresponding achievement verb. Thus teaching is normally expected to result in learning. Scheffler Israel [in Peter, R. S. Ed. 1973 : 120] believed “teaching may be characterized as an activity aimed at the achievement of learning.” These statement is supported by Hirst [in Peter, R. S. Ed.1973:169]. According to him verb teach means not only a task sense where trying or intending alone is implied, there is also a success or achievement sense where in addition to intention there is implication that learning intention has in fact occurred.

3.3.1.4 Teaching is both science and art

There has been much debate about teaching is science or art. The leading protagonists in the debate about teaching is an art or a science have been Hight and Gage.

According to Highet [1954 : VIII] teaching is an art, not a science, principally because it involves human beings, their emotions and their values, which he regarded as quite outside the grasp of science. Gallagher [1970 : 74-108] also support Highet. Gallaher had no doubt that teaching is an art. He compared teaching with surgery. He also made valuable comments about what is meant by classifying something as an art he saw two implications of calling something an art. (1) only a few people possess the skills required to be called 'artists' and (2) even the artists find it difficult to describe their artistry and pass it on only by acting as models to imitate.

To Gage the issue became not so much whether teaching is an art or a science as whether scientific methods can be employed in understanding more about teaching. He argued that artistic activities have inherent order and
lawfulness that make them quite suitable for scientific analysis. In Gage's later comment on the subject, he agreed that teaching is an art but he [1978 : 15] saw it as "a useful, or practical rather than one dedicated to the creation of beauty and the evocation of aesthetic pleasure as ends in themselves." Gage saw much scope for intuition, expressiveness, improvisation and creativity which are commonly accepted ingredients of artistry. Gage also believed that when applied to teaching, connoisseurship would probably be more concerned with high, rather than low, inference variables such as warmth.

To Gage science implies rigorous laws and high predictability and control. So it is problem to establish it for teaching a scientific basis. According to Gage even medicine and engineering are not science because they have strong scientific basis but artistry is required to apply the scientific basis to achieve practical ends. He adds that although teaching lacks the highly developed scientific basis but it has scope for development of a scientific basis.

These comments of Gage and Height lead us to conclude that teaching is considered art much but science less.

But Ornstein, Allen's (1990:527) view attracts us towards his view. He believed, "The science is based on psychological research that identifies cause-effect relationships between teaching and learning. The art is how those relationships are implemented in successful and artistic teaching."

3.3.1.5 Teaching as an enterprise

Teaching is both act and enterprise. The enterprise of teaching is widely dispersed – throughout society. An important function of teaching as an enterprise is to provide the acts of teaching with both an educational meaning and professional justification. The meaning and the justification will possess moral overtones because they denote reason for the intervention ‘for the better’ in the lives of children and young people. Teaching is an enterprise in which person may be engaged for a long period. The main aim of teaching is to help the child to respond to his environment in an effective way.
3.3.1.6 Teaching as an act

The act of teaching is institutionally bound. They take place in different types of educational establishment – in primary and secondary schools, in colleges and universities. Each school or college has, through the organization of teaching, the power to influence the lives and behaviour of their students. The acts of teaching are many. They include the logical acts of teaching – informing, explaining, describing, exemplifying, instancing, showing and quite different acts as controlling, motivating and evaluating.

It is very difficult to define teaching because teaching is not one specific activity. There are an enormous number of activities which may in fact be teaching. Our world is also very different from what it was fifty years ago. Many researches have taken place, and our society and schools have changed in many ways and this probably influence our concept of teaching. Ryle [as quoted in Dearden, R. F in Peters, R. S. Ed. 1973:136] is right who says “teaching is a polymorphous concept, it can take many forms and instruction is only one of them.”

3.3.2 Characteristics of Teaching:

Definitions or concept of teaching lead us towards some characteristics of ‘teaching’. Here are some characteristics of teaching.

(a) Goal Oriented Activity

Teaching is a distinctive goal oriented activity. Either the goal is learning or formation of good behavior or better life or formation of values. The goal may be adjustment with society as in birds and animals.

(b) Teaching is a complex Activity

Teaching practice which works in some situation with some students may not work in different school settings with different subjects, students and goals.

Hough and Duncan [1970 : 6] also believe, “The act of teaching is complex process that is influenced by a field of forces of which teachers can be only in part aware and which the teacher can only practically control.” According to Ornstein [1990 : 524] learning variables are numerous and the teaching interactions and relationships are complex. Raths, Louis. E. [1969:18,19] believes, “Teaching is a most difficult, most complex series of functions.”
(c) Practical Activity

Teaching is a practical activity in which a 'learned' person learns his pupils.

(d) Abstract Activity

Teaching is an abstract activity can be discussed and analysed.

(e) Rational Humane Activity

Teaching is a rational humane endeavour can be described, discussed and analysed. Hough and Duncan [1970:03] believe, “it is a complex, dynamic and human activity that does not easily lend itself to a single stereotyped mode of description or analysis.”

(f) Teaching is a Professional Activity

It does require the use of specialized knowledge and skill on the behalf of other people.

(g) Polymorphous Activity

Teaching is technically known as a polymorphous activity; it literally takes many different forms.

(h) Component of Instruction

All teaching has a component of instruction because all knowledge has a component of information.

(i) Different from other Activities

Teaching is differentiated from such other activities as propaganda, conditioning, suggestion and indoctrination which are aimed at modifying the person but strive at all costs to avoid a genuine engagement of his judgement on underlying issue.

(j) Involving total Intellectual Functioning

According to Sadler William and Whimbey Arthur [1985:200] “Teaching must involve a student's total intellectual functioning not....... a set of narrowly defined skills.”
In teaching we do not impose our wills on the student but introduce him to the many mansions of the heritage in which we ourselves strive to live and to the improvement of which we are ourselves dedicated.

3.3.3 Factors Affect Teaching Practice:

Teaching is a complex activity and many persons are connected with this practice. So naturally many factors affected this practice. The important factors which may affect the teaching process are as under.

3.3.3.1 Teacher

Teaching is an important process and teacher plays important role in learning environment or in the failure of success of the learner. Teachers' nature, behaviour, personality etc. also affect teaching practice.

(a) Classroom tasks of teachers

Instructional tasks are core of classroom settings and teaching practice. It is important consequence for how teachers see their job and therefore what they do in the classroom.

(b) Teachers' teaching style

Teachers' teaching style is viewed as a broad dimension. Peterson [1979 : 57-69] defines teacher style in terms of "how teacher utilize space in the classroom, their choice of instructional activities and materials and their method of student grouping." Sometimes teacher uses style of authoritarian, teacher or democratic or laissez faire style. No education institution should impose one on its staff or faculty and also there is no ideal type of teacher style.

(c) Teachers' attitude

Teaching practice involves teacher attitude in three general areas - attitudes about teaching and learning, attitudes towards pupils, attitude towards self. The way a person actually behaves in class are molded by widely assumptions about teaching, learning and self. People can't hide their true attitudes.
(d) Teachers’ Conceptual Level

David Hunt used a test that assesses an individual’s conceptual level. Hunt as quoted in Sprinthall, N. A. and Sprinthall, R. C. [1990 : 395] has found that teachers conceptual level influences how they teach. According to him “teachers at a low conceptual level tend to be more authoritarian than teachers at higher levels”. The higher stage is less dependent, more flexible and essentially more competent as a teacher.

(e) Self Evaluation of Teachers

Socrates said that the unexamined life was not worth living. Evaluation of teaching should reside with the teacher himself when teacher honestly evaluates himself/herself; he/she becomes more self directed and tends to respond more relevantly to issues related to their teaching.

(f) Teachers’ Enthusiasm

Enthusiasm and success are highly interfaced and have a highly integrated effect on one another. The enthusiastic teacher can often motivate. Enthusiasm breeds enthusiasm and helps one to overcome the depressing effects.

(g) Teachers’ Expectations

It is well established that expectations of teacher affect the interaction between students and teacher and teaching practice. Robert Rosenthal [quoted in Sprinthall Norman and Sprinthall Richard (1990 : 379)] a social psychologists has shown that, “when experimenters expect their rats to do well, if they expect a good performance, they encourage the rats handle them more carefully, pat them with concern and great care because they are expected to do well.” According to him if that is so far rats what about pupils? Ornstein [1990 : 543] said, “if the teacher expects students to be slow or exhibit deviant behaviour, he/she treats them accordingly and in response they adopt such behaviours.” Rosenthal [1978 : 377-415] studied Oak-Hall school experiment and he was able to show the cumulative significance of how our expectations unintentionally affect the outcomes of our studies. The adult (teacher, researcher, professor) does not consciously seek to affect the outcome, yet nonetheless our attitudes and perceptions shape how we interact.
(h) **Teachers’ Personality**

Personality is made up of all the factors that make the individual what he is, the complex pattern of characteristics that distinguishes from the others of his kind. Chand Tara [1990 : 84] rightly said, "Effective teaching and learning are the results of an integrated personality of teacher."

(i) **Teachers’ Interactive Decision making**

While teaching in the class, the teacher heeds to decide the course of action. For this, he/she discusses or talks with the students and immediately selects her/his path. Since there is no or little time for reflection in the flowing classroom reality such interactive decision making becomes crucial factor affecting learning.

(j) **Teachers’ Peer Interaction**

Heck, Shirley F. and C. Ray Williams [1984 : 17] believe, “Self-confidence is often developed through the reactions of fellow teachers. Thus to create a healthy and productive teaching environment, there must be opportunities and a willingness to share information and ideas.” Peer interaction may be affected positively and negatively both.

3.3.3.2 **Student/Learner**

Teaching and learning both are interdependent process. So students also influence teaching process. Many factors related to students affect teaching process. They are as under:

- Family of Students
- Culture of Students
- Student Temperament
- Student Difference in Academic Achievement
- Inborn Tendencies
- Intelligence of Students
3.3.3.3. **Supervisor or principal / administrative staff**

Teaching practice belongs to school. So administrative staff affects teaching. In most schools the purpose of observation of supervisor/principal is to increase moral and effective teaching. Members of supervisory or administrative staff can guide appropriate materials and media and provides curriculum suggestions. There is also evidence according to both Brookover [1982] and Wise [1987] that, "Teachers' values supervisory feedback and appreciate supervisors, principals' input in diagnosing, prescribing and recommending teaching strategies and skills. The input helps teachers learn to teach and to understand the expectations of the school district."

Sometimes supervisory evaluation involves judgements about the teacher and can put them on the defensive. Several observations and conferences are needed before any formal judgement is made about a teacher's performance. In same cases one or two observations lead supervisor for wrong decisions and it affects negatively on teaching practice.

3.3.3.4 **Emotion of teachers and students**

The importance of emotion in teaching and learning cannot be ignored. Emotion is generally defined as blends of sensations caused by the profound and wide spread changes within the body. It enters in the whole business of teaching and learning. Fear, love, anger, joy, sympathy, confidence, enthusiasm, good will are met in home as well as in schools. In teaching the emotion of fear, anger and love can be used as spears or derives to grater activity on the learner. Teachers' derogatory remarks may arouse anger. Emotion of love, appreciations lead students towards learning. Praise also be utilized for best advantage in teaching practice.

3.3.3.5 **Other important factors**

Raths, Louis. [1969 : 27] listed 10 components of teaching. These components affect teaching practice. These components are as follow.

- Informing and explaining
- Showing how – skills
> Supplementing the curriculum
> Providing children with opportunities to think and to share their thoughts with others
> Helping children to develop values
> Relating school and community
> Creating opportunities for each child to earn status and respect among his peers
> Creating a secure emotional atmosphere to facilitate learning
> Diagnosing and remedying learning
> Recording and reporting

Bloom, Benjamin. [1984 : 4-16] also lists 19 teaching and instructional variables based on a summary of several hundred studies conducted during the past half century. The most effective ones are tutorial instruction, instructional reinforcement... student class participation...

Moreover these there are many inborn tendencies of teachers and students that are important in teaching practice. Some innate tendencies are also important. Imitation and its uses, curiosity, interest and attention of students and teachers' gregariousness (desire of the individual to be with others or other groups). Collecting and hoarding, competition and rivalry, manipulation and its use, individual differences, physical and mental health of teachers and students, teachers' interaction with students, teachers' recyclage etc. affect teaching process.

Not only these factors but sometimes social classes, ethnic background, sex difference of students, internal forces as teachers values, knowledge, self concept and concept of others and external forces as immediate community, the world, nation and reign, teachers, students and professional staff etc. affect teaching practice.

Thus teaching is an act and enterprise both. So many factors affected teaching process.
Figure suggested affected factors of teaching process.

3.3.4 Need of Teaching for Educating:

Education process is related to various activities and modes of thinking. Training, instructing, learning by experience and teaching etc. are obviously included in education. Teaching is one of the activities which is important in education.

Education requires some understanding of principles of the 'reason' – why of things. Teaching try to get a person to believe it for reasons that within the limits of his capacity to grasp our reason. Teaching is an activity which requires that students reveal our reasons and by doing so to submit them to one's evolution and criticism. Teaching also means to acknowledge the reason of the pupils.

Education means to find out good qualities of person and develop it. This is fulfilled by teaching process.
Education does not mean only to learn, to write or read but education aims to develop values as brotherhood, integration etc. One of the aims of teaching is also to develop values in students. One of the purposes of teaching is to help students behave in new ways that are keeping with their own unique characteristic and their evolving values and ideals.

In ancient India the main aim of education was self-realization. So teaching of the Vedas, the Upanishads and life values of the teachers fulfilled the aim of education.

The purpose of education is also to acquire knowledge. In the same way teaching of science lead towards curiosity and acquisition of knowledge. Another aim of education is to make a person productive part of the society. According to this aim vocational guidance is necessary and teaching about vocations fulfill this aim of education. Teaching aims not only to shape beliefs which are supported by the evidences but also at developing the power of students to gather the evidences and assess its adequacy for themselves.

One of the purposes of teaching is to help students to behave in new ways that are in keeping with their own unique characteristics and their evolving values and ideals. Another purpose of teaching is to help students to understand how their values and ideals are related to the values and ideals of society. Teaching is also helpful to gain knowledge, skills and feeling states that students need to function effectively.

Thus teaching has an instrumental role in bringing about education. A teachers' activities in the class and his endeavour to impart the prescribed syllabus, effect education in explicit and implicit manners.

3.4 LEARNING:

Learning is also a part of psychology, the analysis of knowledge and analysis of nature and organization of mental life both are sources and driving forces of study of learning. Almost all our thoughts and behaviour have been learned. It is also important to observe that how teachers use the word learning. It is also true that teachers generally do not have occasion to formulate definition of learning at all. What teachers and other people usually have in mind when
they use. The word learning is not a formal definition but a collection of events they regard as 'instances' of learning. Thus teachers, parents, psychologists and indeed pupils themselves seem to accept the same events as instances of learning. So it is necessary to know about learning as a theoretical aspect.

3.4.1 Concept of Learning:

The study of learning has been at the very heart of psychology, especially American psychology, since its origin about a hundred years ago. Infact learning is a subject about which psychologists have written much but philosophers little.

During the 1870s the great Harvard psychologists James, William. [1890 : 79] discussed the importance of learning and later he called "habit and that enormous fly wheel of society, its most precious conservative agent... It keeps the fisherman and deckhand at the sea through winter, it holds the miner in his darkness... It keeps different social strata from mixing."

3.4.1.1 Learning and knowing

Dictionaries suggest that learn and know are closely related in their primary sense. In short to learn means to gain knowledge through experience but one of the meaning of experience is 'to perceive directly with the senses' which of course initially in the definition of know. But knowledge is defined among other things as learning and as familiarity or understanding gained through experience and learning is defined as acquired knowledge.

Hamlyn [in Peters, Ed. 1973 : 28] said that it is to suppose that learning consists merely in the acquisition of knowledge of a set of facts the contemplation of a set of propositions.

It is also true that learning, not merely as the acquisition of knowledge but also as the extension of the ability to learn, as the education and not merely the furnishing of a mind.

3.4.1.2 Learning is a process

Learning is the process by which human beings acquire a vast variety of competencies, skills and attitudes. Learning begins in infancy. During childhood
and adolescence, a number of attitudes, values and social interaction skills are acquired as well as competencies in various subject area. James also felt that learning during childhood shapes and direct our later lives.

3.4.1.3 Learning – change in behaviour

One important concept of learning is – learning means change in behaviour. Indeed there has been some tendency on the part of recent psychologists to take it that learning embraces any modification of behaviour in an organism as the result of experience or even as the result of stimulation from the environment.

Hilgard and Bower [1977 : 17] also suggest that learning refers to the change in a subject’s behaviour to a given situation brought about by its repeated experiences in that situation, provided that the behaviour change cannot be explained on the basis of native responses tendencies, maturation or temporary states of the subject (eg. Fatigue, drug etc.)

Some believe that definition of learning implied by it is far too wide. It will not exclude for example sudden and apparently irreversible changes of behaviour brought about by certain experiences : it will not exclude.

3.4.1.4 Learning is not one activity

Learning is not the label of one specific activity as teaching. Learning is the comprehensive activity in which we come to know ourselves and the world around us. Learning means not merely how to judge, to interpret and to use information but it is learning to recognize and enjoy the intellectual virtues also. Discover is also one way of learning but it is not the only way of learning. Almost all our thoughts and behaviour have been learned. Learning may be adaptive or mal-adaptive, conscious or unconscious, overt or covert. Some psychologists like John B. Watson felt that learning involved the pattering of overt responses. Sprinthall, Norman. A. and Sprinthall, Richard. C. [1990 : 227] believe that feelings and attitudes are also learned just as certain facts and skills.
3.4.2 Characteristics of Learning:

The nature of learning process has been studied by psychologists and physiologists. Many experiments have been performed. Through the experiments and views of psychologists we can draw some characteristics of learning.

(a) Feature of behaviour

All instances of learning involve the learner in a behaviour of some sort: ‘he learns to do something’, ‘learning not to do something’ also describes that someone learns to do something.

(b) The feature of change in behaviour

This feature involved not only the behaviour said to be learned but also some previous behaviour which is superseded.

(c) The feature of situation

Any specified set of circumstances may be called a situation. In any instance of learning the change of behaviour refers to some particular kind of situation.

(d) The feature of response

Certain behaviour is a response to a certain kind of situation only. Thyne, James. M. defines [1970 : 20] “to learn is to adopt a new response to a situation.”

(e) Knowledge

Learning is often considered the acquisition of knowledge. the organism had some specific experience and that changes of behaviour due to learning must be the result of new knowledge.

(f) Experience

Learning must involve experience, a notion which suggests a more active role on the part of the learner.
Some believe that learning occurs through contiguous association of events or ideas. It was accepted by all - Gurthie, Thorndike, Hull Skinnir and Tol·man...

Learning is a continuous process because it begins at birth; it takes place not in some ideal abstract world, but in the local world we inhabit; for the individual it terminates only in death, for a civilization ends in the collapse of the characteristic manner of life, and for the race it is, in principle, interminable.

Learning itself often entails practicing what we have in some sense learned already, and there is probably a component of learning in every notable performance.

Learning is facilitated by motives or drives. Needs, interests and goals are fundamental to the learning process.

Learning is facilitated by law of readiness or mindset.

Learning is facilitated by the law of effect.

Learning is a process by which individual acquire new forms of thinking, feeling and willing.

Learning makes up person's character and personality.

Modifying, adapting and developing person's original nature are important characteristics of learning.

3.4.3 Brief Review of Theories of Learning:

History suggests that research on psychological processes initiated in the late 19th century introduced three different models of psychological reality. Bell - Gredler, Margaret [1986 : 70] indicate three psychological models of reality which related to learning. These three models are as under.
3.4.3.1 Behaviouristic perspective

The behaviouristic model describes the relationship between measurable stimuli and behavioural responses.
(a) Classical Conditioning

One cannot mention conditioned reflexes without thinking of the
distinctive Russian Psychologist Ivan Petrovich Pavlov [1849-1936]. Pavlov
believed that a reflex must have an identifiable stimulus that automatically elicits
the response, even though no learning has occurred. Pavlov also found that
reflex conditioning had some extremely important by products. Once a given
conditioned stimulus is associated with a reflex, other similar stimuli also take on
the power to elicit the response. This is called stimulus generalization.

(b) Thorndike’s Connectionism

The theory of Edward L Thorndike [1874 – 1949] was dominated theory in
America, despite of rise of its many rivals. Thorndike viewed learning as a series
of stimulus response (S-R) connections or bonds. He felt that learning was
basically a trial and error enterprise and he paid little attention to the possibility of
concept formation or thinking. He postulated three major laws of learning (1) the
law of readiness (2) the law of exercise and (3) law of effect.

(c) Guthries Contiguous Conditioning

Some respect system proposed by Edwin R. Guthries [1886-1959] follows
Thorndike and Pavlov. It is an objective stimulus response association
psychology and uses the conditioned response terms coming from Pavlov, while
being practical and relevant in the spirit of Thorndike. But in other respect
interpretations of learning are very different. He postulated one law of learning -
learning by association or as he called it contiguity. According to him certain
stimulus is followed by a response, then the next time that stimulus appears, the
same response will follow. There is to be stimuli and response in sequence.

Guthrie [1935] also believed that "learning occurs the first time the
stimulus and response become associated". He believed that the teacher should
provide the stimulus and student should respond. Thus in contrast to Thorndike,
Gurthies was an avowed behaviourist.

(d) Hull’s Systematic Behaviour Theory

Clark, L. Hull. [1884-1952] impressed by the appearance of Pavlov’s
conditioned reflex. Hull’s system may be thought of as a herculean elaboration of
S-O-R formula. The stimulus (S) affects the organism (O) and what happens as a consequence, the response (R) depends upon O as well as upon...

(e) Watson’s Behaviourism

The school of behaviourism was born under the impetus of John B. Watson at Johns Hopkins Uni. According to Watson (Quoted in Sprinthall, 1990: 211) introspection is as useless to psychology as it would be to chemistry or physics. The only thing that is really observable and therefore the only thing that really allows for the use of the scientific method is the subject’s overt behaviour. He felt that all learning could be explained on the basis of conditioning, that is, the association of stimuli with responses. Learning is a matter of accumulating a series of stimulus response association. There is no need to study insight or even thinking in the traditional sense. Thus he was ready to take over American Psychology.

(f) B. F. Skinner’s Operant Conditioning

Skinner is most eloquent behaviourist associationists. He rejects mentalistic or cognitive explanations of behaviour. He disagreed with the S-R position and the conditioned reflex description in which the stimulus retains the character of an inexorable force. He agrees with the position taken earlier by John Watson. That is, psychology can become a science only through the study of behaviour. Learning therefore is defined by Skinner (Quoted in Bell – Gredler, Margarett. E. (1986:77]) as the process of behavioral change. In Skinner’s view ‘learning is behaviour’. As the subject learns responses increase and when unlearning occurs, the rate of responding falls. Here is his views about some individual topics of learning. Skinner [1953] believed, “Individual difference in students’ behaviour are the result of (1) the organism’s genetic endowment and (2) a particular history of reinforcement”. He is against ‘trait’ description in studying individual differences. So he would reject ‘personality tests’ and he believed that intelligence tests might be useful for educational decisions.

Skinner’s system was applied to both the laboratory and classroom. In the classroom he described the ‘assign and test.’ He opposed punishment in classroom because it produces unwanted emotional side effects and does not
generate the desired positive behaviour. He believes that classroom teacher is primarily responsible for developing in the learner those verbal behaviours that represent subject matter, skills and knowledge’s.

He noted that the typical classroom is characterized by (1) the infrequency of positive reinforcement (2) the excessive length of time between behaviour and reinforcement (3) the lack of programs that lead the child through a series of successive approximation to the final behaviour. According to him readiness for learning and motivation are two important factors in learning.

3.4.3.2 Interactionist perspective

The interactionist perspective assumes that behaviour, mental processes and the environment are interrelated. This view was first expressed in the functionalist movement. Current perspectives that hold an interactionist view of the role of environmental influences and the individual include Robert Gagné’s condition of learning, Jean Piaget’s cognitive development theory and Albert Bandura’s social learning theory.

(a) Jean Piaget’s Cognitive Development Theory

Although Jean Piaget is the dominant figure in contemporary development psychology, he is not usually recognized as a learning theorist. The focus of his theory is the development of natural thought from birth to adulthood. He believed that organism is not passive agent in genetic development.

According to Piaget [1977 : 3-13] four factors are necessary for the development of cognitive functions. The physical environment, maturation, social influences and the learners self-regulatory processes, referred to as equilibration. His theory of cognitive development redefines intelligence, knowledge and the relationship of the learner to the environment. Intelligence like other living system is the process of adoption to environment. It is continuing process that creates the structure it needs in continuing interaction with the environment. Knowledge is also an interactive process between the learner and the environment.

According to him children learn how to learn by generating problems, investigating questions and examining their answers. The facilitation of new
learning that results from similarities to prior learning is an important classroom issue. According to Piaget [1973] the skill of problem solving cannot be directly taught... Instead the rules of experimentation and therefore the rules for problem solving must be discovered or reinvented by each student.

Unlike education approaches that focus on teacher-student interaction, Piaget [1973] emphasize the importance of peer interactions. Only through this type of interaction does the student acquire the capacity of viewing issues from other perspectives. Furthermore in exchanges with others, students examine their own thinking, explore other alternatives and reorganize their views and conclusions.

We can see his view about a child in his own quotation. Piaget says [1963: 172] “The child grows intellectually not so much like a leaf, which simply gets larger everyday as like a caterpillar that is eventually transformed into butterfly.”

(b) Robert Gagne’s Conditions of Learning

Prior learning theorists developed explanations of the learning process in the laboratory and extended the findings to the human situations but Robert Gagne began with the complexity and variety that characterizes human learning and developed a system to account for that variety. His analysis yielded five categories of varieties of learning that are distinguished by different performances and different requirements for learning. The five varieties are

1. verbal information
2. intellectual skills
3. Cognitive strategies
4. attitudes
5. motor skills.

In his view learning is an important casual factor in the individual’s development. The other important contribution of learning to development is that learning is cumulative.

Thus a major goal of Gagne’s theory is the planning of effective classroom instruction. The best known contribution of his theory is that it operationalizes the concept of cumulative learning and provides a mechanism for designing instruction from simple to complex. In addition this theory provides a cohesive framework for the range of findings about the nature of human learning. More recently the theory provides a mechanism for implementing the concepts identified by information processing theory.
(c) Albert Bandura’s Social Learning Theory

Social learning theory began with the belief that important psychological processes and issues had either been overlooked or only partially studied by other theories. According to social learning theory major importance is the ability of individuals to abstract information from the behaviours of others, make decisions about which behaviours to adopt, and later to enact the selected behaviour.

Albert Bandura’s social learning theory seeks to explain learning in the naturalistic settings. Unlike the laboratory setting, the social milieu provides numerous opportunities for individuals to acquire complex skills and abilities through the observation of modeled behaviours and their behavioural consequences.

Thus the assumption on which social learning theory is based on the (1) the nature of the learning process in the naturalistic setting (2) the relationship of the learner to the environment and (3) a definition of what is learned.

Learning according to Bandura is represented by a three way interaction between the environment, the individual’s internal events that influence perceptions and actions and the individual’s behaviour.

In the social learning perspective, both behaviour and the environment are modifiable and neither is the primary determinant of behavioural change.

According to Bandura, Albert. [1977 : 11] in the social learning view people are neither driven by inner forces nor buffeted by environmental stimuli. Rather, psychological functioning is explained in terms of a continuous reciprocal interaction of personal and environmental determinates.

3.4.3.3 Cognitive perspective

The cognitive model focuses on the mind and the mind’s operations. In this model, behaviour and the role of the environment are incidental to understanding of cognitive processes. Structuralism is the earliest example of this perspective and theories of information processing are the most recent.
At the beginning of the 20th century psychology was a new discipline faced with the problem of defining a mission, a scope of study and methodology for research. Two perspectives - structuralism and functionalism - proposed competing roles for the new science. Both the goal of identifying the elements of mind (structuralism) and the goal of investigating the organism's adaptation to the environment (functionalism).

(a) Gestalt Theory

A group of psychologists led by Max Wertheimer got together around 1910 at the University of Frankfurt and began the school of psychology known as Gestalt psychology. It was a major opponent to behaviourism. It emphasized the learner's mental activity in the perception and solution of difficult problems. Gestalt psychologists, through their emphasis on insight, established the beginnings of a cognitive psychology. Gestalt psychologists recorded subject's reactions to complex unstructured problems. The structuralist's method of introspection had been discarded and new methods of laboratory research for the new science had been developed. Gestalt theory emphasized the importance of mental processes. The basis for Gestalt theory is that subject reacts to "unitary meaningful wholes". In the Gestalt view describing perceptual organization is the key to understanding learning. Gestalt psychologists were primarily interested in perception and in problem solving processes. According to theory what was learned was a product of and determined by the laws of perceptual organization, what was performed depended on how current problem solving processes analysed the present situation and made use of traces of past experience.

Wertheimer was concerned with how the learner achieved understanding and insight when confronted with a problem. He felt that rote memorization did not lead to real understanding.

Köhler, also of the cognitive Gestalt school. His studies on apes led him to conclude that learning was a result of a series of insightful solutions, not blind trial and error. Köhler's perceiving reality is a very important facet of Gestalt. They believed that the whole is more than the sum of its parts. So we must study the whole, the totality, the entire configuration and use the German word the Gestalt.
The Gestaltists felt that the study of the associations formed between tiny elements whether they are elements of consciousness or stimuli – response connections, is misleading. It is misleading because elements often act and look differently when they are taken out of context.

Wertheimer and later Kohler and Lewin felt that learning could not be dissected into little stimuli – response association. They believed that without insight or real understanding the information would be virtually useless. According to Gestalist, if you want children to learn nonsense go ahead and conditioned them; but if you want them to learn meaningful relationships, then a different approach is needed – a cognitive approach. Here is a view of Gestalt psychologists on some problems of learning.

1. Capacity: - Increasing capacity for perceptual organization or the ability to understand problems leads to increase in learning ability.

2. Motivation: - They differed from Thorndike regarding reward and punishment. They believed that after effects did not act ‘automatically and unconsciously’ to strengthen prior acts. Reward and punishment acted to confirm or disconfirm attempted solutions of problems.

3. Understanding: - They believed that problems are solved to be sensibly, structurally, organically rather than mechanically, stupidity or by the running off of prior habits. Insightful learning is thus more typical appropriately presented learning tasks than is trial and error.

Thus according to Gestalt theory, a change in the perceptual process is the basis for learning. Kohler advocated that a principle he called isomorphism was central to the understanding of Gestalt Psychology. This is the principle that the understanding brain fields correspond in their dynamic aspects to phenomenal experience. If there is perceived separation in space there will be separation in centers of excitation in the brain; if there is perceived movement, there will be some sort of movement of excitation patterns in the brain. It is not ‘copy’ theory; that is the neural representation need not be direct but it must be dynamically equivalent.

In short the Gestalt Psychology kept alive the research on mental activities and contributed to the later development of cognitive psychology.
(b) Lewin’s Theory

Unlike the other theorists of this period, Kurt Lewin was interested primarily in motivation. The focus of his theory is the interpretation of the changes that result from psychological forces. Theoretical analysis begins with the situation, referred to as the individual’s life space, and proceeds to identify the interacting psychological forces that influence behaviour.

The basic concept in Lewin’s theory is that “to understand or predict the psychological behaviour, one has to determine for every kind of psychological event (actions, emotions, expressions etc.), the momentary whole situation, that is, the momentary structure and state of the person and of the psychological environment. In other words, behaviour is a function of the person and psychological environment.

(c) Tolman’s Theory

E. C. Tolman produced a theory called purposive behaviourism. It was called purposive because Tolman insisted that, far from being random and chaotic, learning was goal-directed. He did not emphasize stimulus response connections. He saw learning as a result of bonds forms an association between some new stimulus or sign, and a previously encountered and therefore meaningful stimulus or significate. His behaviourism is therefore an S-S (sign – significate) psychology rather that a Watsoninan S-R psychology.

Tolman postulated his famous H-A-T-E variables [heredity, age, training, endocrines] as of crucial importance in understanding and predicting behaviour. Tolman never translated theory into practice. So he was ignored by the field of education. According to Sprinthall [1990 : 221] “the teacher might learn from Tolman that a rat at a choice point in a maze hypothesizes a solution before acting, but this hardly helps the teacher in the classroom.” Tolman failed to develop his theory to its fullest potential. He didn’t do enough experiments to make his cognitive position firm enough to generate precise predictions.

As Winfred Hill [1971 : 129] a modern expert in the field of learning, has said of Tolman, “His system is more a road sign or a pious hope than it is an accomplished fact.”
(d) Information Processing Theory

The communications research of World War II and computer stimulations of human intellectual capabilities introduced a new paradigm to the study of mental operations. This paradigm is reflected in the information processing descriptions of mental operations. According to this paradigm the human memory is an active organized system that selects the information to be processed and then transforms that information into meaningful codes for later use. Information processing is currently one area of research within the larger domain of cognitive psychology. The theory attempts to correlate the psychologist's understanding of thought processes with what is known of computer operation.

The core of the theory comprises the processes by which individuals perceive, encode and then store information in long term memory for later use. The theorists agree that codes are stored informally in some type of cognitive structure. The prevalent view is that this structure takes the form of semantic networks, in which verbal elements are linked to each other.

According to Ausubel [1968] Psychological meaning is the relationship between the symbols, concepts and rules to the students' cognitive structure. But developing psychological meaning in the comprehension of knowledge and in solving problems depends on student interaction with the subject matter.

This theory is helpful to identify the importance of designing instruction for the processes involved in transferring information from input signals to meaningful codes. But sometimes related classroom applications must be inferred indirectly because learning is not the primary process under investigation.

Thus information processes is a process by which information from the environment are transformed into cognitive structure.

(e) Bernard Weiner's Attribution Theory

The theory developed by Bernard Weiner links two major areas of interest in psychological theory: Motivation and attribution research. Early theories of motivation, like theories of learning were developed primarily from the stimulus-response perspective that was dominant from mid-1930s to the mid-1950s. The
shift from a stimulus – response perspective to a cognitive perspective began after World War II. This shift ushered in the perspective referred to as attribution theory.

The term attribution refers to an individual's perceived causes of an event or an outcome. The research focus is the way in which individuals arrive at causal explanations and the implications of those explanations. In other words the theories focus on the ways in which people answer the question ‘why’.

The basic assumption of the theory relate to two general concepts. They are the nature of the causal inferences (attribution) and the relationship of those inferences to behaviour.

The major components in the theory are (1) the likely explanations given for success and failure outcomes (2) the characteristics of these causal inferences and (3) the role of affective reactions in subsequent behaviour. Typical explanations given for success and failure are ability, effort, task difficulty, luck, others and mood or illness. These causal inferences vary on the dimension of locus of causality, stability and controllability.

According to Weiner [1979 : 3] a central assumption of attribution theory... is that the search for understand is a basics 'spring of action'. Attributions are complex sources of information about outcomes.

3.5 TEACHING-LEARNING INTERDEPENDENCE:

The process of teaching-learning is as old as human beings on earth. It has been carried out by human beings and even by animals. Some changes have undergone from non formal to formal, but both are related with each other.

We say teaching means shaping behaviour or transmission of information or shaping of belief but all these definitions concern with learning of students. We say learning is product or not product but process but it depends on teaching.

Some concepts about teaching and learning lead us to believe that both are interdependent.
3.5.1 Origin of Words ‘Teach’ and ‘Learn’:

Learn comes from middle English, ‘Lernen’, meaning to learn or teach. ‘Lernen’ is derived from Anglo-Saxon Leornian, the base of which is ‘lar’, the root of ‘lore’. Lore originally meant learning or teaching, but is now used to mean that which is taught especially traditional facts and beliefs. Thus the words ‘learn’ and ‘teach’ are derived from the same source (Oxford Universal Dictionary – 1955). According to Smith, B. O. [in Husen, T. (1985 : 5097)] ‘I will learn you typewriting’ is correct English. In this derivation ‘learn’ is associated with the content of instruction.

Thus origin of word suggests that in past learn is used as meaning of teach also.

3.5.2 Teaching and Success:

This concept suggests that learning is implicated in teaching. The history of teach and learn hints at a kinship between the two that foreshadows the practice of some authorities today of using them as if they were inextricably related.

Teaching entails learning. According to Dewey [1934 : 35] “Teaching is to learning as selling is to buying.” This statement is generally taken to mean that since there is no selling when no one buys, there is no teaching when no one learns. Teach means not merely that some interaction is taking place, but also that the learner is acquiring what is being taught. Sell and buy are both achievement verbs. To sell is to exchange, to give up something for a return. To buy is to get something by exchange or by paying money. Thus teaching is normally expected to result in learning.

To learn something is to come up to some standard, to succeed in some respect so the achievement must be that of the learner in the end. Teaching is related to ‘task’ and ‘achievement’. Both uses of teaching are directed to the achievement use of learning.

Hirst Paul H. [in Peter R. S. Ed. (1973 : 177)] also said, “successful teaching would seem to be simply teaching which does in fact bring about the desired learning.”

This concept suggests that learning is dependent on teaching.
3.5.3 Learning is Stimulated by Teaching:

The function of teaching is to provide the best stimuli so that the best learning may take place. Teaching is the stimulus and learning is the response or reaction.

3.6 FUTURE PERSPECTIVE OF TEACHING-LEARNING PRACTICE:

Education increases knowledge, skill; develops and unites persons, groups and nations.

A person who does not learn to unite with a person in his own village, how he/she can have harmony with other countries which are far from him/her. Teaching learning process will have to perform an important role to create harmony. Dellar's report [1995] present a comprehensive view of the teaching-learning process as an important practice in the future world. Here is a short summary of these views.

We are victims of some conflicts in this 21st century and we try to come out of this stress with the help of teaching learning practice. The conflicts which we experience today are as follows:

(1) The conflict between the global and the local. Teaching learning process should lead a person towards world-citizenship.

(2) The conflict between the universality and the individuality.

(3) Tension between short term and long term expectations.

(4) The conflict between tradition and modernization

(5) The conflict between necessity of competition at every level and equality of opportunity.

(6) Person's conflict between explosion of knowledge and limitations to acquire it.

(7) Conflict between spirituality and materialism.

Teaching-learning practice should face all these challenges and try to create a word order which is far from all these tensions. The aim of teaching-learning process is to help a person to experience his creative capacity.
As a productive member of society or family it is necessary to expand scientific and technological knowledge. Teaching-learning practice will create this capacity in a person. Education should contribute to develop economical and social prosperity.

Education should be of such type that students can develop curiosity and get pleasure.

There is no activity which can be used in place of teaching-learning practice. There is no option of relationship between students and teachers. Today this relationship is nailed on the stage of power. It is necessary to develop it on the basis dialogue. It is responsibility of teacher to impart knowledge to students which is accumulated by the mankind.

Today society faces a risk of a world war and it is heading towards third world war. At this time, moral and cultural aspects are necessary in teaching-learning practices.

Teaching-learning practice does not mean to do only work but we should accept it in this way that it can command on whole life. Through the teaching-learning process, person should obtain knowledge to face problems created in personal life and professional life.

Four basis are important in education. These four basis of education must be included in teaching-learning practice. They are as under:

1. Learning to co-operate
2. Learning to have information
3. Learning to work
4. Learning to be

In short teaching-learning should lead a person towards creation and improvement of knowledge and proper use of it. But it does not mean that new syllabus should be introduced. Co-ordination of teaching and learning can lead towards moral and cultural, scientific and technological and economical and social understanding. Syllabus should be provided in such a way that a person can develop curiosity and desire for education. To develop this type of education society, parents, teachers, principals all have an important role to play in teaching-learning practice. Students' co-operation is also anticipated.