Educational Psychology (PSY406)

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Lesson 01

TEACHERS AND TEACHING OF EDUCATIONAL PSYCHOLOGY I

There are few questions that should be considered while deciding characteristic of a good teacher. Should a good teacher be a psychologist, or he should be expert in his field and know all information about students? These qualities are enough for a good teacher? Or there are any other factors that they should know or these are enough? Good teaching is, basically, the various functions that good teachers perform. There are four characteristics of a good teacher:

1) He knows his students. He must know all good and bad aspects and about their background and potentials.
2) He knows the learning process. He should know how students learn. What kind of hindrance they encounter during learning process? Whether these factors are inside or outside the student and how these can be overcome to make them to show greater interest in their studies.
3) He motivates students. He helps them to know themselves and their subject and the world as a whole. Learning process is not limited to classroom; a good teacher motivates students to learn outside the class room.
4) He assesses his students properly: Not only academic assessment, but also of their background, emotional intelligence, motivation etc. He must let his students know how they are assessed.

If a person has theses four characteristic, he would be a good teacher. Are these characteristics inherited or learned? These are not inherited but all are learned. So to become a good teacher is easy if you follow and adopt these characteristics.

Self-regulation in Teaching

Subject matter always changes with the passage of time as it is dynamic. A good teacher not only assesses and regulates students properly but also regulate himself that is very important. Educational psychology is not one way stream rather this is two way stream. Another concept in this regard is what is called "self-regulated teaching". It is when a teacher reviews his teaching on a regular basis. Psychologists assume that a good teacher must possess following qualities:

a) A good teacher knows their subject
b) Knows various teaching strategies. As dozens of teaching strategies are available. It depends how he can engage students in the classroom by using most effective strategy. A combination of demonstrating, lecturing and practicing is a good strategy. Any of the strategy must be adopted by keeping in mind the subject and level of experiences of the field.
c) He must know the particular way of teaching.
d) They know cultural backgrounds of their students. This is very important to know as it affects learning process. There are two main cultures in our county: urban and rural cultures. Another example is if a teacher expect students to perform well in studies during Christmas then it would be difficult for Christian students to concentrate because they are in a specific frame of mind. So a good teacher should consider these factors while teaching and giving any important tasks.
e) He should know about the setting of the classroom to make learning process more easy and effective. Should know set up learning situations (Labs etc. and learning in pairs/groups etc.)
f) He should know whether an individual dyad is better or group work will be more effective according to the situation and subjects. Choose appropriate courses for students.
g) Know the goals and purpose of leadership. Some people think leaders are born and some other think are made. But researches have shown in various countries including Pakistan that leaders are made. They have certain visions and this vision can be taught.

Self-Management

Self-Management is another concept that is very important. To know yourself and to manage yourself is self-management. If you are aware of your weaknesses you can learn how to overcome them.

Self-management may be understood keeping in mind the following three points

a) Goal setting is most important ingredient of self-management. Teachers should set goals of his teaching before undertaking a task. The goals must be clearly defined as these are easy to achieve.

b) The second point is monitoring and evaluating yourself while you are teaching or moving towards your goal. It must be done continually.

c) The third point is self-reinforcement: Rewarding you as a teacher. Human beings learn best if they are rewarded.

Fringe Benefits of Self-Regulation

It means added benefits you acquire after self-regulation. Self-management helps to adopt good behaviors that will make you a good teacher. There is a great Importance of Self-regulation/ management as it helps to solve problems for teaching. These benefits will help you as a teacher and students as well. Fringe Benefits including:

- Students can note their own progress or lack of it.
- Can give or receive congratulations
- Keep accurate record of their efforts
- Output increases by 27%
- Student input is maximized

Lesson 02

TEACHERS AND TEACHING OF EDUCATIONAL PSYCHOLOGY II

Research Methods

Educational psychology is the discipline concerned with teaching and the learning process; the application of theories and principles of psychology to teaching. Various methods and strategies to gather data are discussed. There is a great contribution of different psychologists in this field. Russians and Americans have worked a lot on educational psychology. From America, Skinner, a well-known psychologist, has worked in this field and even developed teaching machine for children to learn.

Different researches have been conducted regarding children learning processes. Importance of research can be gauged from the fact that commonsense practices may not always be the best practices; for example: "Spoon Feeding" may not always produce better results in learning. Researches have also proved spoon feeding is not good strategy for learning. They should learn by their own. Different research methods are used for investigating learning process. Many research approaches exist. Following are three major approaches have been widely used to investigate the learning process at different times by researchers:

1) Descriptive Studies
2) Correlational Studies
3) Experimental Studies

Descriptive Studies

Lowest level of research, where just description of observed phenomena is brought forth. While conducting these studies, researchers usually observe the phenomenon that is happening and then describe this pheromone as it exists. Researcher describes but don't manipulate any other factor. Examples of this method are case study, or participant observation. For example, what qualities a child have who is the toper of the class? This in-depth study of that one child is case study example. Another example is in depth study of work of Einstein who discovered the theory of relativity and many researchers have worked on it. Participant observation is another important descriptive method. In this method, researches participate in the study to observe the phenomenon directly. In one of the very well-known research using participant observation, a researcher went to live with prisoners for some time to observe their behavior in this situation.

Correlational Studies

These studies seek to establish relationships between two or more observations; these correlations may be negative or positive.

Experimental Studies

Where independent variable, the variable of interest is seen to affect the dependent variable or the response; other terms in these studies include "subjects", those upon whom the experiment is being conducted. The experimental group; that is being observed: the control group, with whom the experimental group's performance is compared. An experiment may be conducted on only one subject: it is called single subject experimental design; micro genetic studies intensively study cognitive process and change.

The studies may use longitudinal studies when a person or a group is observe or studied over a long time period; or they may use cross sectional studies, when different groups may be studied and compared with each other. Wise teachers, by careful observation in the class, can become good researchers; when teachers adopt problem solving investigations it is called action research.

Lesson 03

TEACHERS AND TEACHING OF EDUCATIONAL PSYCHOLOGY III

Qualifications and Requirements for Teachers and Teaching

Teachers all over the world are required, by law of the land, to have certain qualifications. In order to become a professional teacher a person must fulfill those qualifications and requirements. If he lacks some of these requirements, he can't be a good teacher and cannot prepare a good generation. It has been observed that in rural areas, some of the teachers are not fulfilling these professional qualifications.

Teachers Qualification and Training

In Pakistan, we have laws about teaching but unluckily, these rules and laws are not implemented properly especially in our rural areas. They are teaching without proper qualification and training. In Northern American content and Western Europe, teachers are appointed after proper qualifications and training. They have some set of standards that teachers have to follow. Those requirements, for example in the USA, include the following:

1) Prospective teachers are reflective PR practioners. PR practioners means they critically examine their teaching experiences on continuous basis. While Reflective practice means constant contact with colleagues. They must know what their teaching experiences are and should compare their experiences and knowledge with other teachers so that they can know where they lack and need for improvement.
2) They continually work to upgrade their knowledge and information because information and knowledge is not a static phenomenon. New should know new trends and apply these in the classroom. It means they hold membership of professional associations. It means teachers can read and understand the literate related to their profession.
3) They have the ability to understand literature and apply it. It means they review of professional literature continually. It has been searched that both punishment and reward both effects learning but depends upon many factors. So these kinds of researches a teacher can know by studying theses literature.
4) They are aware of the current debates and issues related to effective teaching practices and research. They should understand what factors can facilitate and hinder learning process of children. A meta-analysis showed what are the common factors all over the world which can help to facilitate learning.
5) They keep up-to-date with innovations in teaching.
6) They are aware of public laws in their field. If a teacher is not aware, like for example it is forbidden in Pakistan to punish children physically. So if a teacher does not know, he will have to face law.
7) They are aware of the changes in laws related to education and teaching. There is nothing static in this worlds, everything is changing with the passage of time including laws and rules. For example, few years ago, physical punishment was considered necessary for children to avoid bad habits and for better learning but now concept has changed. Punishment can be physical and psychological same as reward. Sometimes, psychological reward is more effective than physical. Teachers must be aware about these rules and facts to enhance their skills and students' learning.
8) They are knowledgeable about policy initiatives related to teaching. Should know what people think about punishment and rewards etc.
9) They are aware of the complex nature of the above stated requirements.
10) In the USA for example, all prospective teachers must pass an exam based upon above stated principles and practices. They should have a prove about their knowledge in the form of certification.
11) This examination body in USA is called There the "Interstate New Teacher Assessment and Support Consortium" or INTASC, which forms the basis for an examination to become professional teachers. All examinations are taken by this INTASC. If a teacher gets grade in one of the examination is "C" then it is required to compensate this "C" with another "A" grade, otherwise his certification will be in doubt.

In Pakistan, law requires that a perspective teacher must have a bachelor's degree and a B.Ed. degree to be able to teach in public sector institution. In our country, these laws are not implemented properly but all this is in process. However, unfortunately, no such professional degree may be required to teach in the private sector in Pakistan. Private schools should also follow the rules and laws given by the government while appoint their respective teachers.

Lesson04

COGNITIVE DEVELOPMENT AND LANGUAGE I

A very complex human organism is brain that plays a vital role. Being an educational psychologist, it is necessary to know what brain is and how it develops while studying developmental process. In fact, development takes place all the time in human beings from the time of conception till death. Sometimes this development is fast and sometimes relatively slow. Basically development in the context of educational psychology refers to changes that occur in human beings between conception and death. Human development can be divided into various aspects, namely:

a) Physical Development
b) Personal Development
c) Social Development
d) Social Development

Physical Development
Physical Development related to bodily changes such as muscles in the body's core, legs and arms develop before those in the fingers and hands. Increase of height, physical changes is examples of this development.

Personal Development
Personal Development tells us how personality develops and changes with the passage of time. What kind of skills a child learns by age. The way one sleeps, eats, socializes are examples of this development.

Social Development
Social Development also impact child's personally and development a lot. Like for example, different people around a child help him to learn different skills and habits. And different family system whether joint or nuclear family, effects differently.

Cognitive Development
Cognitive Development involves the development of thinking patterns, mind, values, morality, problem solving strategies, etc. These all are example of cognitive development.

Nothing is static even thinking, it also changes with experiences knowledge, and observation etc. All of these different kinds of developments lead to maturation. There are three general principles of development that a large majority of educational psychologists agree with. They Include:

Principle 01
Continuous and variable rate of development
People develop at different rates and are continuous: there are individual differences across people in terms of development. For example, there are gender differences in physical development.

Principle 02
Orderly development
That development is generally orderly, that development takes in an orderly path: for example, children first sit, then develop an ability to stand and then to walk etc.

Principle 02
Gradual development
That development takes place gradually, not overnight or suddenly. For example, a seed turns into a tree over some period of time; same is the case with a human child.

Brain
There is a difference between brain and mind. Mind doesn't have physical existence but brain has. Like for example, hearing has not existence. Ear is an organ and hearing its function same as brain is an organ and mind is its function.

Structuralism said that brain has different compartments. There are several areas of brain and certain areas are involved in performance of particular functions in learning. For example, the cerebellum coordinates balance like walking and standing. It may also play a role in learning. The hippocampus helps recall recent experiences or information. The thalamus is involved in learning new abilities etc. for instances, if a person gets injured in a car accident and his thalamus is damaged, then he will feel difficulty in learning new things. In the same different drugs affects brain like LSD may affect brain functions especially learning and balance. You must have observed if a person has alcohol consumption, he cannot stand. In Europe, traffic police warden check car drivers, if they have violated the laws and are caught, whether they are drunk or not by asking them to stand up. Because if they cannot control their balance they are suspected for alcohol consumption.

Lateralization

Another important term is lateralization that is used to describe the specialization of two sides of the brain. Brain is divided into two parts called left hemisphere and right hemisphere. Brain begins to lateralize after birth. The left part or hemisphere is the major factor in language while right hemisphere is involved in spatial and visual processing. Certain functions are specific to certain areas of brain but various parts of brain work together to perform complex activities.Mental functions such as higher order thinking are controlled by the frontal lobe of the brain, which is the last part of the brain that develops. Higher order functioning includes logic, thinking, higher level values, morality etc. At the end, it is recommended to repeat your course work or any of the good habits so that your brain get use to of them and it will help you to make yourself knowledgeable and skillful. To improve your skills you must practice them again and again.

Lesson 05

COGNITIVE DEVELOPMENT AND LANGUAGE II

Jean Piaget's Theory of Cognitive Development

Jean Piaget is a great name in psychology and in particular for his description of children's thinking. He put forward the view that there are four stages in the development of a child's thinking and they are:

1) Sensorimotor Stage
2) Preoperational Stage
3) Concrete Operational Stage
4) Formal Operational Stage

Researchers found that a child development and personality is affected by many factors like gender, childhood background, family type, culture, belongingness to any of the country, etc. It has been searched that life expectancy in Asian countries is very low that is one of the tragedies of these areas. Piaget worked on children and tried to find how these factors affect a child. Researches agreed that these stages carry wroth. His theory is widely accepted. He has explained each stage by two ways: In terms of chronological age and secondly in terms of how a child operated during that stage.

The Sensorimotor Stage

This stage begins at birth and continues up to two years of a child's age: this stage is characterized when a child begins to imitate others, and his memory and his thought begin to develop. In the first, the sensorimotor stage children come to know and explain the world by their senses, touch, and taste and smell etc.
That is why you see young children putting objects in their mouths. Besides learning by senses, they also learn by imitation. This imitation is life long process.

The Preoperational Stage

The preoperational stage begins around 2 years and continues up to about 7 years of chronological age. During this time the child gradually develops the use of language, he begins to think in a symbolic form. In the preoperational stage since symbolic thinking develops, we see children thinking and then acting. His think becomes deeper. For example, he can think things like tree apple etc. in symbolic form. But you should know that there is no hard and fast rule that if a child is at 2 years of age, he must has entered at this preoperational stage. May be due to problem, he is stuck to previous stage despite of increasing chronological age.

Concrete Operational Stage

The third, called the concrete operational stage comes around by about the 7th year and continues through the 11th year of a child's age. One important thing at this stage is that child learns to solve concrete problems in a logical fashion. He can, during this stage, classify objects, experiences and can understand the two sides of an object or an experience. He can understand both black and white side, such as he can understand bad and good qualities of a friend etc. This stage is called concrete because now he is strong and logical, things are more clear for a child.
At this stage, children show logical thinking, involving "if- than" pattern of thinking; and show the ability to arrange objects in a serial order. For example, at this stage, a child can understand that if he will not get up early in the morning than he will be late.

Formal Operational Stage

The fourth and final stage of a child's development, according to Piaget is called the formal operational stage, which begins at about 11 years of chronological age and continues up to adulthood. In this stage of development the child/adult can solve abstract problems in a logical fashion: he gets involved/ interested in social issues, and he develops an identity. In the fourth and final stage of development, children develop the ability to note all angles to problems and then can deduce specific solutions.

The fact that must be kept in mind for you as a teacher is that teaching must be in consonance with the developmental stage of a child. You can't teach 3 years old child, who is at preoperational stage of development to categorize objects simply because he has so far not developed the ability to classify.Some teachers andauthors

of children's books simply ignore the scientific findings related to children's development of mental abilities and then fail as teachers and authors. You must guard against their tendency.

Lesson 06

COGNITIVE DEVELOPMEN AND LANGUAGE III

Vygotsky Theory of Sociocultural Theory

One of the most important psychologists in the area of cognitive development was a Russian by the name of "Lev Semenovich Vygotsky", who was born in 1896 and died in 1934, but during these 38 years he produced overs 100 books and articles. Piaget and Vygotsky are both very influential figures in the field of child psychology because they have investigated thinking patterns and development of children in very broad way. His theory is called sociocultural theory. Vygotsky thought that a person's development cannot be understood or explained without reference to their cultural environment and activities. He articulated that children learn by dialogue (exchange of ideas) and interaction. This dialogues is not only verbal but gestures, the way you dressed up, the way you sit etc. (called body language) is also a part of dialogue. He also has emphasized on collaborative learning.

Co-construction

His sociocultural theory emphasizes the development of a child in terms of dialogue and interaction between him and other more knowledgeable members of a society. You must have heard that a child is belonging to a noble family and the other is not. How you come to know? Because of his family environment and cultural values. So these factors play very important role in child's life which Vygotsky have emphasized. It is observed that both joint and single family system effects child's development in many ways. In Pakistan, usually people live in joint family system. Children learn thinking and behaving from these interactions. He uses the termCo-construction to explain the process of learning of children by interacting with each other and members of a society to reach an understanding or to solve a problem. It is important to know that children learn by imitating and these imitations are internalized by children

Imitation and Internalization

Perspective teachers need to know that children learn and develop by imitating others, which they make these imitations a part of this personality or self; that is they internalize it and that such learning does not take place in isolation but in a collaborative learning situation.

Self-talk

Piaget thought that when children carry on "self-talk" it might be considered by some as "egocentric Speech" or meant only for them, a sign of immaturity; whereas Vygotsky on the other hand thought that private speech or self-talk play an important role by making children plan and guide them. For example, if a child talk to himself that he is unable to do best in a test, he will definitely get anxious and will lose marks ultimately. So teachers must therefore not regard self-speech as meaningless speech, but as a rehearsal for action by children; self-speech therefore must not ignored by teachers.

Importance of Positive Self-Talk

Recent researches have emphasized the importance of positive self-talk. Sport psychology and self-talk are related. Researches have proved that players who self-talk show good performance while those with negative self-talk perform worse than their capabilities. It has investigated that people who indulge in negative self-talk feel more mental stress while positive self-talk leads to good health. It shows that self-talk plays very important role in development, psychological symptoms physical symptoms is very important. It is observed that, in America, those people who are suffering from terminal illness like cancer patient involved in self-talk and give them hope by positive self-talk, their life expectancy increased. They live longer time longer than those didn't indulge in positive self-talk. It may be one of the elements to prolong life of those suffering from terminal illness.

So, teachers should not discourage or ignore self-talk of children as it is not meaningless. Infect, it helps them to learn and it has a great link to their performances, mental health and learning process.

Lesson 07

COGNITIVE DEVELOPMENT AND LANGUAGE IV

Erick Erickson and Child Development

One of the famous names in the area of Developmental/ Child Psychology is that of Erik Erickson, a European psychologist, who migrated to the USA to avoid the war and settled there. According to him, there are two stages of development: Physical and psychological. He proposed that a person passes through eight stages of development, that he called stages of psychological development. His stages are clearly identifiable but they may overlap with each other as well.

Developmental Crisis

He also proposed that during a person's life time, each stage of development poses a particular problem, that he termed "developmental crisis". A person, during his development, has to learn to resolve that particular developmental crisis of choosing between negative and positive alternatives, in order to grow and develop. It is very important to resolve these crises in better way, if will not be able to do that then he has to face many p psychological problems like anxiety, uncertainty, lack of satisfaction etc. followings are the stages of development given by Erick Ericson :

Trust versus Mistrust Stage

The first stage is basic trust versus mistrust stage; **t**he age of child at this stage is between births and about a year and half. The infant at this stage is faced with the problem of trust or mistrust with care giver. One of the crises is that he must choose either to trust the care giver or mistrust him. If his family and any other significant members help him, then he would develop trust and knows and have confidence that there are other people who will help him. This satisfaction wills him to develop a good personality. If family doesn't help, discourage then he would develop mistrust that is a barrier in health development.

Autonomy versus Doubt/Shame Stage

The second stage is called autonomy versus doubt/shame; this stage occurs between 18 months to 3 years where the child learns to be independent; failing which he feels the shame in his failure to exercise his independence.

Initiative and Guilt Stage

The third stage between 3 years to 6 years is characterized by initiative and guilt, where the child may take initiatives but may also feel guilty about taking those initiatives

Industry versus Inferiority Stage

The fourth stage extending between 6 years to about 12 years and is called the industry versus inferiority stage. During this stage child must learn to put in effort to learn new skills, failing which he would feel inferior and incompetent

Identity versus Role Confusion Stage

The fifth stage starts at adolescence where a child develops peer relation with others, here he must develop his unique identity, failing which he would be confused about gender, politics and religion. This stage is called identity versus role confusion stage.

Intimacy versus Isolation Stage

The sixth stage, called the intimacy versus isolation stages marked by love relationships with others. In this stage the young adult must develop intimate relations with others or suffer from the feelings of isolation.

Generatively versus Stagnation Stage

The seventh stage labeled the generatively versus stagnation stage, that starts around the middle adult hood years; here the person has become a parent and a guide or a mentor to others, he therefore must find ways and means of supporting and satisfying others of the next generation.

Ego integrity versus Despair Stage

The last and final stage of development according to Erikson's theory is called the ego integrity versus despair stage. In this period, late adulthood stage, the person must reflect upon his past life and accept it for whatever it was worth: Acceptance would lead to lead a sense of fulfillment and satisfaction and a lack of it would result in despair and sadness.

As you must have guessed these stages are not like water tight compartments but may overlap each other. If the demand of each stage is adequately dealt with by the person, he achieves satisfaction, but unsuccessful dealing with it leads to frustration. A teacher while teaching, must keep in mind the development stages of his pupils in mind; the peculiarities of these stages, the particular crises of that stage and he must understand and teach his students in the light of this insight.

Self-concept and Self-Esteem

Another important thing to know at this stage of child development is the idea of self-concept; self-concept refers to what a person thinks of himself. His perceptions about himself; "I am strong, I am a weak man, I am a good student, I am bad at learning maths" etc. are all examples of self-concept.

Closely related to self-concept is the idea of self-esteem, the values that a person attaches to his characteristics and behaviors; "I behave bravely under stress, I get upset over small things, I get nervous before an exams which is a bad characteristics in me", are examples of self-esteem. A student's self–concept and self-esteem influence his choice of subjects, his performance in those subjects and his labor or input in learning and mastering those subjects. A student with high positive self-concept would tend to put in greater effort in learning and mastering subjects as compared to one who has low or negative self-concept and self-esteem.

These may be improved by a teacher, making students to put in more efforts and labor in learning; by teachers training their students as to how to put in more efforts by helping to mold the school environment towards putting in harder work and appreciating hard work on the part of students.

Lesson 08

PERSONAL SOCIAL AND EMOTIONAL DEVELOPMENT I

Kohlberg's Theory of Moral Development

One of the important names in philosophy related to development is that of Lawrence Kohlberg; who like Erikson proposed different stages of a person's development, particularly moral development. Kohlberg views the development of morality at three levels and six stages.

Levels of Development

1. **Pre-conventional Moral Reasoning**
2. **Conventional Moral Reasoning**
3. **Post-Conventional Moral Reasoning**

Pre-conventional Moral Reasoning

The first level with two stages of development is regarded by Kohlberg as the level of what he called Pre-conventional Moral Reasoning. Morality is the sum total of the principals that govern a person behaviors. It is basically concept of what is wrong and what is right what is valuable and what is worthless. He stresses the development of moral standards. At this level and its first stage a person's judgment is based upon personal needs and the rules that others impose on him. Its first stage is when a child is obedient to avoid punishment and seeks rewards from others.

Conventional Moral Reasoning

The second level, called the Conventional Moral Reasoning, is when a person's judgment is based upon other's approval and other people's principles. It is based upon conventional wisdom; wisdom of others around him. Its first stage is becoming a "good" boy or a "good" girl to get other's approval. It second stage is when the child sees that laws are absolute and that they must be obeyed. He adopt the rules that he observers in his/her surroundings.

Post-Conventional Moral Reasoning

The third and final level called the Post-Conventional Level of Moral Reasoning. The child's morality is not developed based on existing conventional moral standards or what society is doing or considers good or bad rather he develops his own. This has further following two stages:

i. **Social contract orientation:** The first stage of this level, called social contract orientation is characterized by the person's/ child's concept of "good", as being determined by social standards, what is "good" is what others and society regards as "good". It is like a social contract as others are giving opinion about anything whether good or bad so he agrees with them. This is basically adoption from social learning.
ii. **Universal Ethical Principle Orientation**: Its second stage, called Universal Ethical Principle Orientation is when a person/ child see and live by universal ethical principles and standards. That is some behaviors are "good" universally and some are not so good. For example, misbehaver is considered universally bad practice.

Kohlberg's theory seems to have a lot of truth in it; however one must remember that there are cultural differences in morality and moral reasoning, across various countries. For example the European/North American Continental moral reasoning may emphasizes individuality, however in the Asian cultural tradition; more emphasis is laid upon collectivism, or a group's point of view. Group cohesion is considered preferable over individuality in our cultures.

Peer Relationships

Another important fact related to moral development is the effect of peer relationships. These relationships play a most important role in a person's social and personal development. Usually children develop moral standards by observing their peer groups and other significant others. Research shows that children who

have had an opportunity to develop close friendly relationships with others having high self-esteem, during their development; end up having higher self-esteem than others.

Self-esteem

Self-esteem is basically the positive regard that one has for oneself. What a person considers himself: Does he has low opinion or negative opinion of him? Those who consider himself good have high self-esteem and vice versa. Research shows that those having high self-esteem can develop close and lasting relationships with others. Similarly, it also shows that those who have the opportunity to develop close early relationships also can develop and maintain intimate and close relations with others. Research shows that those rejected in childhood develop many personal problems. In other words could be considered reactions of their feelings. Self-respect and self-esteem have very close relationship with personal and moral development.

Effects of Low and High Self Esteem

One very alarming thing regarding rejected children is that they have very high dropout from mainstream of educational system. Researchers have also found that children with low self-esteem are more prone to commit more crimes than others. So is very important for teachers to consider those students who have low self-esteem. They have responsibility to help them to raise self-esteem. They should accept them; never reject them because feelings of rejection leads to dropout, criminal acts etc. rejection is that you don't acknowledge their existence. You should punish, but not physical, them if they don't obey or do mistakes. There are lots of methods of punishment. But punishment is very different from rejection. Punishment means you want to correct the child but rejection means you are not attending a child; you are ignoring him/her.

Factors Effecting Person's Moral Development

Many other factors pertain to the different influences on a person's moral development including direct instructions, supervisions, rewards, punishments, the reasons given. Some argue that lets children to grow as they want to grow but this is not a good idea. Children should be taught what is wrong and what is right for them and everything should be in friendly manner and should. Children should be supervision as it is vital for their development. All these factors greatly influence a child's moral behavior. If a child is clearly told about the reasons of punishment and appreciation, it would be an effective strategy. Another important factor in this regard is modeling and children, particularly learn from the role models as they see and observe them. They can learn from models presented on media, teacher, parents can be a model for a child. For example, it is common observation that children imitate parent's behaviors. If he observes helping behavior, there are chances that he/she will learn that positive behaviors so models play very significant in child's moral development.

Lesson 09

PERSONAL SOCIAL AND EMOTIONAL DEVELOPMENT II

Personal and Social Development

Now a day's aggressive behavior and cheating in students is very common not only in our culture but also it is a phenomenon. One survey found that about fifty percent of students, belonging to higher level of education, have found indulged in cheating during exams. Education teaches moral values; if still a student is involved in cheating this is very serious issue as it is against our moral values. Cheating can lead to fraud in other fields in late life, so it is vital to teach students to not pursue this evil practice in their lives. Teachers should encounter the problems of aggression and cheating behaviors of students.

Types of Aggressive Behavior

1) Instrumental Aggression

Psychologists have identified various types of aggressive behavior students. The first form of aggression is called instrumental aggression, which is need to gain an object or a favor; here the intention of aggressor is not to hurt the other, but to gain something. For example, if a child wants to get pen or any book from the other student, so he/she can fight the other one to get it. He/she is not showing aggression to heart another student but just to gain possession of some material thing. So if a teacher has found that a child is aggrieve just to use a beautiful pen of another classmate, so at that time teacher should step in and should teach them to share this with each other. It will remove the cause of aggression.

2) Hostile Aggressions

The second kind in the present context is hostile aggressions here; the intention of the aggressor is to inflict harm on the other person. Hostile aggression may manifest, or take two forms:

a) Overt aggression: exerting aggression, actual physical attack for example slapping the other child.
b) Relational Aggression, where the aggressor threatens or actually damages natural relationships.

Assertiveness and Aggressions

A fact that needs to be noted is that aggression should not be confused with assertiveness; this refers to maintaining ones rights with confidence, the intention is not hurt or damages the other. For example, I am clearing my point to other straightforwardly it is assertiveness. Intention of assertiveness and aggressiveness is totally different. Aggression may leads to antagonism but assertiveness is the behaviors, capacity and ability of person is to share his ideas/opinion in a clear and lucid way.

Home Environment and Aggressions

Another important thing is to focus from where a child learns aggressive and assertive behavior. Home environment is the first and most important place where a child learns many behaviors. And all this is learned by modeling; a child learns from observing the parents, siblings and significant others. Research has also repeatedly shows that modeling plays a very important role in aggressive behavior of children. For example, if a parent is assertive, he/she may learn these behaviors. And those children who observe violence at home tend to become more aggressive than others.

Media Role in Aggression

Media also plays very important role in developing these behaviors. Those children who watch violent program me on television become more aggressive than others. Teachers can undo some effects of learned aggressive behaviors by showing to children that what they watch on television is not real. Films and video games are two other sources that present violence and aggression as games and entertainment. Researchers have found that those who watch aggressive programs are more prone to get more aggressive than those who don't watch. So parents and teachers should ensure

that children and students are not exposed to violent/aggressive films and video games. They also teach them what is what is right and what wrong about these violence games and movies etc.

Cheating Behavior

Another important topic in educational psychology is that of cheating. Research shows that cheating arises as a reaction to situation rather than emanating from honesty in dishonesty. Of course, cheating is some level of dishonesty but it is not a total expression of dishonesty. There are many factors for student to involve in cheating. It depends upon the pressure of achievement, availability of approach and atmosphere of examination of hall etc. Cheating increases when there is pressure on students to do well in academics. Cheating also increases when students know that there are fewer chances of them being caught. If supervisor ensure that there will be strict checking during exams then probability of teaching will be less.

Gender Differences in Cheating

Another interesting fact which researches have investigated that more males than females indulge in cheating. That may be because there are more pressures on males to perform well than on females. Those institutes of finical nature like bank etc. which are heading by females, people have more confidence as compared to those who are working under the headship of male. Researchers have found that females are perceived more finically honest and male are perceived less honest. One reason is that male is expected to be more achievers therefor probability of cheating is more. So, students who gradually secure lower grades tend to cheat more than others. So what a teacher should do to decrease cheating?

Ways to Eliminate Cheating Behavior

In order to discourage cheating teachers may make sure that students are well prepared for tests/exams. This is the responsibility of a teacher that they should not put students in high pressure to perform well, which we know encourages cheating. They should make extra help available specially to low scoring students. Teaching is, infect, a two way process; supervisor must ensure strict control during exams. They should monitor carefully when students are tested and enforce monitoring standards diligently.

Lesson 10

LEARNER DIFFERENCES I

People have born differences in abilities; some has God gifted qualities. Nature has not distributed all abilities equally. However by keeping a focus on people can improve their qualities. Teachers find some students in these differences to have higher abilities and some not to have that level of abilities. Based upon this observations and student's performance in the class some teachers tend to label students. They may label some as intelligent; others not so intelligent and some may be labeled student as stupid by some teachers.

Such labeling can be harmful for students. It could have a very bad influence on students. This harm may come from two sources;

1) One it stigmatizes a student
2) It may become a self-fulfilling prophecy.

Stigma

A stigma is a bad name, a negative label; a name which describes the protagonist in uncomplimentary manner; you may notice that amongst children, amongst adults and amongst public figures also.

Self-fulfilling Prophecy

Second is self-fulfilling prophecy that is a judgment or prediction which comes out to be true. If a teacher regards a child to less intelligent, he pays less attention to him and as a result of receiving less attention the child lags behind in academics thus providing proof to the teacher that the student indeed is not a good student. This is self-fulfilling operation so it should be handled very carefully as it can destroy students' self-esteem and personality. Teachers therefore should avoid labeling their students and keep their mind open. It should be used positively.If they do find some lack in some students, they should provide those students special programs to help overcome their problems instead of labeling. Labeling infect leads of self-fulfilling prophecy that can have negative or positive effect. For example, if a student is branded or label in good way it may leads to higher level of motivation on the part of student. It is a teacher who inspires his students to put more efforts to excel. To avoid negative effects of labeling and self- fulfilling prophecy students' needs to be looked from different angels. And teachers in these cases should define and develop special strategies for the students, and put those strategies in operation.

Intelligence

Students are varied in terms of their abilities like intelligence etc. Intelligence is ability or a set of abilities to acquire and use knowledge for solving problems and adjusting to the world. Psychologists have put different news regarding intelligence. There are different questions that we encounter to answer:

a) Do we inherit intelligence?
b) Is intelligence acquired?
c) What do you think; is this ability god gifted, or do human beings acquire it in in this life times?
d) Or is it his present level of intellectual functioning?
e) Is intelligence to be found in the genes of a person that he inherits from his parental set?
f) Or does he acquire by education and experience.

There is an ample of research that offspring's of intelligent parents are also intelligent and vice versa. Another question to think about is whether intelligence constitutes a person's genetic makeup or not? Genes and chromosomes are the material human beings are made with. Inheritance plays role in intelligence but environmental factors also paly role. Like for example, two groups were made of identical twins; one was stigmatized with less intelligent and the other was stigmatized with higher intelligence. Both were different with reference to their intelligence despite of the fact that they were identical twins. It shows intelligence can be polished and flourished. There are individual differences with reference to intelligence

and other qualities. So a teacher should understand this different and should know how to deal with children of different abilities.

So a teacher can nourish and improve his students by increasing student's motivation to learn and acquire. He can also do by getting them to be more skillful than before and to continuously practice and improve upon their skills. For example, a student can be good in sports that are not good in study or there is a chance a student is good at mathematic and not good at biology so teachers should see which is good for students and should encourage them. Teachers should handle intelligently because they are polishing them.

Lesson 11

LEARNER DIFFERENCES II
(Issues Specific to Children)

Learning Abilities

There are some special problems of children that may lead to certain learning disabilities. As nature does not bestow each student with same level of intelligence and abilities. Those who have lower level of abilities are significantly lower than average student that is considered disability in terms of Educational Psychology. Learning abilities refers to a student's problems with acquiring a use of language; these may show up as difficulties in reading, writing, and reasoning or in learning and reproducing mathematical formulas. Infect, disability is an unequal distribution of nature in terms of acquiring skills. So a teacher should know whether the reason for lower performance of a student is due to any learning disability or any other factors are involved. Actual nature of these disabilities is unknown, but there is evidence that these may be because of:

a) Genetics
b) Complication in growth
c) Problems in birth
d) Brain injury
e) Other diseases

Learning Disabilities

Reasons may vary from child to child but one thing is common that these disabilities are because of some dysfunction in the central nervous system. Such difficulties usually last a person's lifetime. It may be pointed out further that some psychologists believe that such students may have normal intelligence but have some significant academic problems. Because a child is unable to read properly or write properly or is unable to comprehend any concept etc. so these problems have led students to face problems at their school. Infact, the pieces of small issues lead to a big problem. Students with learning disabilities may manifest three major reading habits that can help a teacher to identify and characterize a student with specific learning disabilities, they are

a) Bad reading habits, where a student cries or refuses to read when a teacher expects to read. This might be hint for any disability.
b) Word recognition error, the students may omit or add a word from his/her own side while reading.
c) Comprehension error, a student cannot answer a question from the text. He is unable to comprehend what he has read.

If your student is facing these problems, there are chances that he has some kind of disability related to learning, so teachers should be very cautious about their students. Furthermore students, with learning abilities may manifest all/ most of the following problems;

a) They show a lack of attention
b) They are hyper active, too active.
c) They are impulsive.
d) Their memory appears impaired, what they learn today, they may forget tomorrow.

Slurred Speech

Another important symptom is that their speech may be slurred as garbled. It means a student is unable to speak words clearly. They may have a difficulty in making friends and are usually lonesome. Most of them show reading difficulties. They have problems with mathematics. Their handwriting is practically illegible. Their span of attention is very small. They tend to be passive learners, not asking questions. They cannot work independently. It is important that the teachers recognize and diagnose such students at an early stage; otherwise the students may become victims of learned helplessness.

Labeling

Teachers, Infact, are like physicians who can check whether a student has any problem of writing or reading or any other disability. But teachers should be very careful in labeling a student of victim of any learning disability as it is a very serious issue. Students, with learning disabilities may come to believe that they cannot solve their problems themselves; a sign of learned helplessness. This belief is usually very powerful

and further adds to the disabilities of a student. Such students may compensate the problem by avoiding school and school work altogether.

Seven-step-plan For Disable Students

Students with learning disabilities may be helped by a teacher by first recognizing and then helping the students. Special attention should be paid by teachers to improve the memory of such students. Strategies to capture their attention need to adopted and this can be done by avoiding to presenting too many details at the same time. Teachers need to focus their attention or improving problem solving abilities of such students. Teachers need to work on a one to one basis with such students. A seven-step-plan for students with such disabilities has been suggested; it is as follows:

- Pre reading, before reading a theme is defined for students.
- Reading is than done relate to the defined theme.
- The main theme in reading is discussed.
- Students are then asked to state the theme they have just read.
- They are then asked to apply what they have read.
- Then they are asked to perform some task related to the theme/material they have read.
- They are asked to review what they have read and learned.

Public laws exist in the USA and Pakistan that regulate the diagnosis, assessment, and teaching of students with disabilities. A department of special education was created at the Federal and at all provincial levels. Some years ago that department regulates and facilitates guidance and teaching of students with learning disabilities. If they work properly, these kinds of issues can be resolved.

Lesson 12

LEARNER DIFFERENCES III

Not all the students have similar **abilities or disabilities**. Some students may have problems with communication. Research has shown that children between the ages of **6 years to 11 years** from the largest group of children served by special education. It may mean that the problem of speech or communication become apparent during these formative years of 6 to 11 years. Research also shows that such students constitute about 19% of the total members of students who receive psychological services.

It is the duty of a teacher to identify students with learning/communication problems and refer them to specialist; those with virtual problems should be referred to medical doctors and those language or behavioral problem should be referred to psychologists.

Language disorders may arise from many sources, because so many different aspects of the individual are involved in learning language. A child with a hearing impairment will not learn to speak normally. A child who hears inadequate language at home will learn inadequate language. Children who are not listened to, or whose perception of the world is distorted by emotional problems (fear, terror, and lack of routine), will reflect these problems in their language development. Because speaking involves movements, any impairment of the motor functions involved with speech can cause language disorders. And because language development and thinking are so interwoven, any problem in cognitive functioning can affect ability to use language. If a teacher is aware of these sources he would be in a better position to detect these problems in his students in order to refer the children to specific specialists and to control and handle students with such problems as well.

One problem that is specific to such situations in Pakistan is the tendency of the school authorities to refer all children to medical doctors, even when a child may require to be referred to psychologist. This problem becomes even more compound when some medical doctors may attempt to solve a child psychological problems for which a medical doctor is not trained.

Speech Disorders

Students who cannot produce sounds effectively for speaking are considered to have a speech disorder. About 5% of school-age children have some form of speech impairment in USA, the figure in Pakistan may be the same or higher. Articulation problems and stuttering are the two most common problems.

Articulation disorders include substituting one sound for another (*thunthine for sunshine*), distorting a sound (*shoup for soup*), adding a sound (*ideer for idea*), or omitting sounds (*po-y for pony*). Keep in mind, however that most children are 6 to 8 years old before they can successfully pronounce all English sounds in normal conversation. There are dialect differences based on geography that do not represent articulation problem.

Stuttering generally appears between the ages of 3 and 4. It is not yet clear what causes stuttering, but it can lead to embarrassment and anxiety for the sufferer. In about 50% of the cases, stuttering disappears during early adolescence. If stuttering continues more than a year or so, the child should be referred to a speech therapist. Early intervention is critical.

Voicing problems, a third type of speech impairment, include speaking with an inappropriate pitch, quality or loudness or in a monotone. A student with any of these problems should be referred to a speech therapist who are trained in helping children with such problems. Recognizing the problem is the first step. Be alert for students whose pronunciation, loudness, voice quality, speech fluency, expressive range or rate is very different from that of their peers. Pay attention also to students who seldom speak. Are they simply shy, or do they have difficulties with language?

Language Disorders

Language differences are not necessarily language disorders. Students with language disorders are those who are markedly deficient in their ability to understand or express language, compared with other students of

their own age and cultural group. Students who seldom speak, who use few words or very short sentences or who rely only on gestures to communicate should be referred to a qualified school professional for observation or testing.

Another category is gifted students, who are very bright, creative and talented. Some characteristics of such students are as following:

- They learn easily and rapidly.
- Their attention is better than their classmates.
- Their practical knowledge is more and better than others, use a large number of words, they are alert and keen.
- They are highly motivate and creative.

Teachers should make extra effort to support such talented students. These efforts include encouraging abstract thinking, giving indolence to read and write giving them high level reading materials

Lesson 13

CULTURE AND COMMUNITY I

Today in Pakistan, we live in a common melting pot in terms of different cultural dimensions. Pakistan today boasts of power major and another cultural unit.

We can look at in the following manner:

- There is the Punjabi culture.
- The Sindhi culture
- The Balochi culture
- The Pakhtoon culture
- Additionally the culture of migrant's or late settlers.

Each culture has unique identity points, although there are obvious overall similarities. Culture differences may appear at various levels; that is at the micro level (small level) and at the macro level (large level).

Culture may take the shape and form of material culture. Or/ and it may take the form of non-material culture.

Material Culture

Material culture may be manifest in a nation's or groups architecture, the physical environment , the ways the roads, bridges, overhead, under head passes, are made the way foot paths, highways, open spaces, gardens are made are all examples of material culture of a city. Some years ago some friends from abroad had come to Lahore visiting, when they were taken around the city, one of them made a remark about Lahore; she said she found Lahore to be like a beautiful girl who is in deep slumber. The architectural material culture of Lahore to a foreigner appeared to resemble a sleep beauty. So the architectural martial culture has a dynamic identity.

Non-Material Culture

Then there is non-material culture which is expressed in one's language, the customs, traditional ways of behavior and living etc. the way one dress, walks, hand/arms and gestures etc. All of these, according to some are expressions non material culture. Experts also put forward the view that although there might be diversity in cultures, as in case of Pakistan, in terms of punjabi, baluchi, pashtun and sindhi culture, there is also cultural uniformity. It refers to common perceptions, goals and patterns of behavior.

Cultural Conflicts

The differences between cultures may be very obvious, such as holiday customs or they may be very subtle such as how to get your turn in conversations. The more subtle and unconscious the difference, the more difficult it is to change or even recognize. Cultural conflicts are usually about below-the-surface differences, because when subtle cultural differences meet, misunderstandings are common. Thus the members of a different culture may be misperceived as rude, slow or disrespectful.

Cultural Compatibility

However all cultural conflicts may not always lead to wars or battles but may result in cultural compatibility. Cultural compatibility is when diverse cultural units emphasize their differences and work collectively to achieve a common goal. This is indeed the scene in modern day Pakistan.

There are cultural differences in Pakistan, but the overall goal of our culture units in Pakistan is the same, that is the welfare and wellbeing of all compatriots living in Pakistan.

Lesson 14

CULTURE AND COMMUNITY II

Culture, in present context of educational psychology, is defined as the knowledge, values, attitudes and traditions that guide and determine the behavior of a group of people. Culture plays a major part in the psychology of a person, a group or a whole nation. So culture also influences our present concern that is educational psychology.

Social class or socioeconomic status is another factor that influence and determine the psychology of a person or a group. Socioeconomic status (SES) actually refers to level or amount of wealth, power and prestige of a person or a group. So educational psychology must be studied keeping the view the cultural belongingness of a person or a group and belongingness to a particular social class or a social group.

Research shows in this context, that academic success or achievement is closely related to number of factors, among others, including social class. Many factors maintain a cycle of poverty. Poor health care for mother and child, limited resources, family stress, interruptions in schooling, exposure to violence, overcrowding, homelessness, discrimination and other factors lead to school failures, low paying jobs and another generation born in poverty. Let's take a closer look at each of them.

Poor Health Care

The first factor in this regard is poor health of a poverty stricken people; poverty provides less access to good, healthy and nutritional food, leading to poor health, leads to poor academic achievement: Lack of books, reading and writing material add to the problem of poor academic achievement.

Low Expectations-----Low Self-Esteem

The second factor in this regard is related to the relationship between academic achievements and low self-esteem. Because low SES students may wear old clothes, speak in a dialect or be less familiar with books and school activities, teachers and other students may assume that these students are not bright. The teacher may avoid calling on them to protect them from the embarrassment of giving wrong answers or because they make the teacher uncomfortable. The children come to believe that they are not very good at school work.

Learned Helplessness

The third factor in this regard is what is called "learned helplessness". Low SES students (or any student who failed continually) may come to believe that doing well in school is impossible. Many of their friends and relatives never finished school, so it seems normal to quit. This false belief further prevents some students to put in extra work, and thus results in low academic achievement.

Peer Influences

The fourth factor in this context is peer pressure that influence academic performance and achievement. Because poor students move and are friendly with other poor students, their peers and friends also belong to poor backgrounds. They usually therefore disregard and reject other different classes' behaviors and values, including the value of putting in hard work at academics. So poor students (who are willing to work hard academically) learn to reject academic input because their friends and peers pressurize them to do so.

Tracking

The fifth factor in this regard is what is called "tracking". Tracking means, categorizing students according to their abilities. The students who experience tracking have a different academic socialization; that is they are actually taught differently. If they are tracked into "low ability" or "general" classes, they may be taught to memorize and be passive. Poor students usually end up in the lower tracks; they are considered poor academic achievers, not because of the achievement, but because of their poverty.

Childrearing Styles

The sixth factor that shows a relationship between poverty and poor academic success is the difference in child learning styles of different socio economic groups. Research in this regard shows that upper and middle class parents, talk more to their children, provide them more guidance, help them more in school work, plan with them about future, and generally direct their children's attention more than parents of poor classes. All of these activities reflect positively or the academic achievement of their children. Such factors are not operative in poor families.

Home Environment and Resources

The seventh and last factor that may be mentioned in this regard is the availability of resources at home and home environment. Children belonging to poor families have very little or no access to educational aids and toys including books, calculators and computers. This phenomenon further has negative impacts on academic success.

Government surveys shows that our poor students do not access to clean drinking water so access to pens, pencils, calculators and computers is even more difficult.

A learned teacher must be aware of all the above mentioned factors resulting in low academic performance of poor students and must take steps in the class to offset at least some of the factors of poor student's poor academic performance.

Lesson 15

CULTURE AND COMMUNITY III

Girls and Boys: Differences in the Classroom

Years of research on personality has shown that men and women are different in various psychological aspects. Men on average are assertive, aggressive and active; their aggressions are expressed in relationships. Women are more introverted, emotionally sensitive and dependent. There also appear to be some differences in verbal and spatial abilities between the sexes.

The word gender refers to traits and behaviors that a particular culture judges to be appropriate for men and for women.

Gender Role Identity

Gender role identity is the image each individual has of himself or herself as masculine or feminine in characteristics, a part of self-concept. People with a "feminine" identity would rate themselves high on characteristics usually associated with females, such as "sensitive" and low on characteristics traditionally associated with males, such as "forceful". Most people see themselves in gender-typed terms, as high on either masculine or feminine characteristics.

Gender Bias

Gender bias is the difference in view of males and females that often favors one gender over the other.

Gender Bias in the Curriculum

Some school curriculum manifest gender bias. They show preference/ superiority of one gender over the other in Pakistan. There used to be more stories about male characters than about females; in addition, the females tended to be shown in the home, behaving passively and expressing fear or incompetence.

Sex Discrimination in Classrooms

Some teachers also convey and teach such biased views about different genders. Teachers interact more with boys than with girls. Teachers ask more questions of males; give males more feedback (praise, criticism and correction) and give more specific and valuable comments to boys. As girls move through the grades, they have less and less to say. By the time students reach college, men are twice as likely to initiate comments as women.

Pakistani textbooks and other material including videos, computer programs and testing materials often feature and carry those biases. For example: boys and men in such materials are portrayed as aggressive and argumentative, whereas girls and women are portrayed as affectionate and sentimental. So school books and other material are one of the major sources of testing gender differences in contemporary Pakistan schools.

How can you as a teacher eliminate that bias from your role?

1. The first step in that direction is to accept that tendency towards gender bias. Research shows that teachers pay more attention and demand more input from their male students than from their female students.
2. Teachers, after becoming aware of this tendency, must consciously curb and correct this tendency in their classroom practices.

Language Differences in the Classroom

In the classroom, quite a bit happens through language. Communication is at the heart of teaching and culture affects communication. We will examine two kinds of language differences, dialectic differences and bilingualism.

Dialects

A dialect is a language variation spoken by a particular ethnic, social or regional group and is an element of the group's collective identity. The rules for a language define how words should be pronounced, how meaning should be expressed and the ways the basic parts of speech should be put together to form sentences. Dialects appear to differ in their rules in these areas, but it is important to remember that these differences are not errors. Each dialect within a language is just as logical, complex and rule governed as the standard form of the language (often called standard speech). These facts have a profound effect on the educational process as whole. Our students across Pakistan speak different languages and within each language they have different dialects.

Bilingualism

A large majority of our school going children are bilingual, learning, speaking and reading in at least two languages, namely Urdu and English. Being bilingual puts extra burden on the learning capacity of a student. It takes greater attention and input to achieve and maintain bilingualism. Pakistan can be proud of having and fostering different cultural units in its borders. But having differences in cultural units can also create ethnic prejudice. One ethnic group may consider itself superior and impose its superiority on others.

Creating Culturally Compatible Classrooms

The challenge for our teachers today therefore is to create a culturally compatible classroom. A culturally compatible classroom is one where rules, procedures, attitudes and teachings strategies do not cause any conflicts with their students' culturally influenced ways of learning and interacting. Such goals can be achieved by concentrating on the following three aspects of teachings

1. Know your students, their cultural belongingness, and its various manifestations.
2. Respect your students; their cultural heritage, their strengths and weaknesses.
3. Teach your student; keeping the above in mind and teach accordingly to eliminate biases in students: Respect their attitudes and beliefs, identify complex issues for them and focus more closely on them.

By adopting the above stated strategies a teacher can become more effective teacher for his culturally diversify group of students.

Lesson 16

BEHAVIORAL VIEWS OF LEARNINGI

Learning, a most important topic in psychology had bagged early psychologists for a long time; until its mysteries were solved first by a Russian psychologist and then by an American psychologist.

Learning is defined as a process through which experience causes a more or less permanent change in one's knowledge and behavior. This change may be deliberate or unintentional, for better or for worse, correct or incorrect, and conscious or unconscious. To qualify as learning, this change must be brought about by experience, by the interaction of a person with his or her environment. Changes simply caused by maturation such as growing taller or turning gray do not qualify as learning. Temporary changes resulting from illness, fatigue, or hunger are also excluded from the general definition of learning.

One of the earliest explanations of learning was offered by Aristotle; the Greek philosopher of fourth century BC (died 322 BC). His explanation did not come out of experiments, but by personal observation. He speculated that we remember things together (1) when they are similar, (2) when they contrast and (3) when they contiguous. The last principle is the most important because it is included in all explanations of learning by association. The principle of contiguity states that whenever two or more sensations occur together often enough, they will become associated. Contiguity also plays a major role in another learning process best known as classical conditioning by Ivan Pavlov; a Russian psychologist. Who set up a psychological laboratory and out of his experiments on animals came out the first systematic understanding and explanation of how learning takes place. His experiments now are called the classical conditioning experiments.

Pavlov put forward the view that learning takes place by association of automatic responses with new stimuli. In a series of experiments Pavlov began by ringing a bell and recording a dog's response. As expected there was no salivation. At this point the ringing of bell was neutral stimulus because it brought forth no salivation. Then Pavlov fed the dog and the response was salivation. The food was an unconditioned stimulus (US) because no prior training or conditioning was needed to establish natural connection between food and salivation. The salivation was an unconditioned response (UR) again because it occurred automatically. Using these three elements, the food, the salivation and the ringing bell, Pavlov demonstrated that a dog could be conditioned to salivate after hearing the ringing bell. After Pavlov repeated this several times, the dog began to salivate after hearing the ringing bell but before receiving the food. Now the sound had become a conditioned stimulus (CS) that could bring forth salivation by itself. The response of salivating after ringing the bell was now a conditioned response (CR).

Later an American psychologist B. F. Skinner conducted his own experiments further to elaborate the process of learning. He began with the belief that many human behaviors are operants, not respondents. Classical conditioning describes only how existing behaviors might be paired with new stimuli; it does not explain how new operant behaviors are acquired.

Behavior, like response or action is simply a word for what a person does in a particular situation. Conceptually we may think of a behavior as sandwiched between two sets of environmental influences, those that precede it (its antecedents) and those that follow it (its consequences). This relationship can be shown very simply as antecedent-behavior-consequence, or A-B-C. As behavior is ongoing, a given consequence becomes an antecedent for the next ABC sequence. Consequences determine to a great extent whether a person will repeat the behavior that led to the consequences. The type and timing of consequences can strengthen or weaken behaviors.

Skinner identified four conditions of learning; namely continuous reinforcement schedule, intermittent reinforcement schedule, interval schedule and ratio schedule.

Continuous reinforcement schedule is operative when a reinforcer is presented after every appropriate response. That is one way in which learns.

The second is called **intermittent reinforcement schedule**, when reinforcement is presented intermittently, at some responses only.

The third is called **interval schedule** when a reinforcer is presented at definite time intervals.

And the fourth called **ratio schedule** when a reinforcer is provided after a certain number of responses, without reference to time interval. Skimmer believed that we learn by these four procedures.

A teacher should be aware of the basic principles of learning that reinforcement is a major factor in learning. The teacher should also know that time interval and that number of responses also play a part in learning. Knowing these basic facts about learning will greatly facilitate a teacher's work.

Lesson 17

BEHAVIORAL VIEWS OF LEARNING II

Modern educational psychology uses many principles of psychology that have come out of work of experimental psychologists to impart knowledge to students in and outside of class rooms. Educational Psychologists use these principles and techniques based upon these principles to modify change and control the behavior of their students.

We will talk and learn about these principles today, and study how they have been used by educational psychologists all over the world and they learn how far as a teacher can first learn these technologies and then apply and use them in their class rooms to bring about better instruction in their courses.

Applied Behavior Analysis

The first thing that you need to know in this context is the concept of "Applied Behavior Analysis". It refers to the application of behavioral learning principles to change behavior. Ideally, applied behavior analysis requires clear specification of the behavior to be changed, careful measurement of the behavior, analysis of the antecedents and reinforcers that might be maintaining inappropriate or undesirable behavior, interventions based on behavioral principles to change the behavior and careful measurement of changes. In other words what psychologists have learned from their experiments on learning? When that learned material is used to understand and facilitate classroom learning that transfer of learning is called applied behavior analysis.

To encourage behavior is to reinforce it. There are several specific ways to encourage existing behaviors or teach new ones. An important concept in this context is that of behavior shaping.

Behavior Shaping

Behavior shaping is a technique in which a teacher reinforces each small step of progress taken by his students towards a desired goal. What happens when students continually fail to gain reinforcement because they simply cannot perform a skill in the first place? Consider these examples:

- A 4th grade student looks at the results of the latest mathematics test. "No credit on almost half of the problems again because I made one dumb mistake in each problem. I hate math!"
- A 10th grade student tries each day to find some excuse for avoiding the softball game in gym class. The student cannot catch a ball and now refuses to try.

In both situations, students are receiving no reinforcement for their work because the end product of their efforts is not good enough. A safe prediction is that the students will soon learn to dislike the class, the subject and perhaps the teacher and school in general. One way to prevent this problem is the strategy of shaping also called successive approximations. Shaping involves reinforcing progress instead of waiting for perfection.

For example a teacher wants to encourage positive behavior in his students; he can do so by

- Giving rewards for positive behavior
- Giving punishments for negative behavior
- Showing the way/steps to get rewards
- Showing the way/steps to avoid punishments

Behavior Modification

Behavior modification is a term; that sometimes used by psychologists to explain the process of change that is brought forth in the behavior of a subject. In the context of educational psychology, behavior modification is a term used to describe techniques of behavior change used by teachers to manage and administer the behaviors of their students. In class rooms teachers who use such a technique usually do so in the following three steps:

1. Identify and specify the behavior of students that they need to change.
2. Plan a specific behavior change strategy, based upon rewarding desirable behavior and punishing undesirable behavior and put this strategy in operation.
3. See if the change plan has brought about the desirable results.

Token Economy

Another method of bringing about a change in students behavior is what is called "Token Economy" or more specifically a token reinforcement system. This is a system where students earn tokens for good academic work and then can use those token for some rewards they define. The tokens may be points, checks, holes punched in a card, chips, play money, or anything else that is easily identified as the student's property. Periodically the students exchange the tokens they have earned for some desired reward. Depending on the age of student, the rewards could be small toys, school supplies, free time, or other privileges. When a token economy is first established, the tokens should be given out on a fairly continuous schedule, with chances to exchange the tokens for rewards often available. Once the system is working well, however, tokens should be distributed on an intermittent schedule and saved for longer periods of time before they are exchanged for rewards.

Token reinforcement systems are complicated and time consuming. Generally, they should be used in only three situations:

1. to motivate students who are completely uninterested in their work and have not responded to other approaches
2. to encourage students who have consistently failed to make academic progress
3. to deal with a class that is out of control.

Students with mental retardation, children who have failed often, children with few academic skills and students with behavior problems all seem to respond to the concrete, direct nature of token reinforcement.

So, behavior shaping, modification and token reinforcement systems can help teachers in achieving their goals.

Lesson 18

BEHAVIORAL AND OTHER VIEWS OF LEARNING III

In our last lecture, we talked about some strategies that teachers can adopt in the class to facilitate learning of their students. If you remember they included behavior modification, behavior shaping and token economy. Today we shall talk of other strategies that have been devised by educational psychologists based upon principles based upon research in psychology. One of the important contributions in that context is that of a psychologist named Albert Bandura.

Bandura's early work on learning was grounded in the behavioral principles of reinforcement and punishment. However, Bandura challenged and expanded behavioral conceptions of learning. He believed that traditional behavioral views were accurate, but incomplete, because they gave only a partial explanation of learning. Behavioral views overlooked important elements particularly the social influences on learning. Bandura's early work focused on social behaviors and was labeled **social learning theory**; it was considered a neobehavioral approach.

The main focus of the theory is on variables that operate, influence and determine learning. Bandura has focused on cognitive factors, such as our beliefs, self-perception and expectations affect our learning, so his theory is now called a social cognitive theory. Social cognitive theory puts forward the view of "Enactive Learning" and "Vicarious Learning" that play a major part in learning.

Enactive learning is learning by doing and experiencing the consequences of your actions. This may sound like operant conditioning all over again, but it is not and the difference has to do with the role of consequences. In enactive learning, consequences are seen as providing information. Think of learning to ride a bicycle or learning how to swim. You cannot learn to bicycle or swim by reading about them, or by talking about them or by observing others do these things. You can learn to bicycle or swim only by actually doing these things. That is how Bandura thinks human beings learn, by doing things. He calls it enactive learning.

Then there is **vicarious learning**, here learning takes place by observation, when people and animals learn by observations that is an example of vicarious learning. This fact challenges the behaviorist idea that cognitive factors are unnecessary in explanation of learning. If people can learn by watching, they must be focusing their attention, constructing images, remembering, analyzing, and making decisions that affect learning. In our culture girls learning to wear a dupatta by watching elders do and young adults learn to shave and trim their beards by observing their elders do it. Dressing up and personal grooming are learnt by observing others, an example of vicarious learning.

Bandura says that four elements play an important role in vicarious learning. They include attention, retention, production and motivation or feedback.

Attention

In order to learn through observation, we have to pay attention. In teaching, you will have to ensure students' attention to the critical features of the lesson by making clear presentations and highlighting important points.

Retention

In order to imitate the behavior of a model, you have to remember it. This involves mentally representing the model's actions in some way, probably as verbal steps or as visual images or both. In the retention phase of observational learning, practice helps us remember the elements of the desired behavior, such as the sequence of the steps.

Production

Once we know how a behavior should look and remember the elements or steps, we still may not perform it smoothly. Sometimes we need a great deal of practice, feedback and coaching about subtle points before we can reproduce the behavior of the model.

Motivation and Reinforcement

Motivation and reinforcement is the fourth important element involved in vicarious learning of a person. If he is motivated and he gets feedback easily, these factors would reinforce his learning.

Thus attention, retention, production and motivation/feedback are important determinants learning according to Bandura's point of view. Some later research shows that a number of other factors may also influence vicarious or observational learning. They include;

- Goal setting; what goal has the learner set for himself?
- The prestige of the role model that is being observed.
- One's self-efficacy, this is one's opinion of one's self.

Another important consideration in this regard is the contribution of another psychologist, by the name of Barry Zimmerman. He put forward the concept of self-regulation and its relationships with learning. Self-regulation according to Zimmerman is how we activate and sustain our thoughts behaviors and emotions and these factors influence our learning. Self-regulation is the outcome of, or related to number of factors. These factors include

- One's knowledge
- One's level of motivation
- One's volition or will power
- One's family influences, the influence of parents and elders etc.

An important dimension of self-regulation is that it must be carried out by individuals voluntarily and may not be imposed by fear of punishment. Voluntary self-regulation comes about, research shows from at least three sources.

Direct teaching

When students are taught how to regulate their behavior and its benefits and advantages

Observing, watching and imitating a role model

When elders, teachers and other important people in a person's life show self-regulated behavior. Children and students adopt that behavior as role model and do the same things.

Carrying on, practicing self-regulated behavior

The saying that practice makes a man perfect also applies for self-regulated behavior.

So, social learning and self-regulation are two important topics of learning as applied to human beings.

Lesson 19

COGNITIVE VIEWS OF LEARNINGI

One of the important factors that affect learning, both inside and outside of the classroom, is memory. There are a number of theories of memory, but the most common are the information processing explanations.

Early information processing views of memory used the computer as a model. Like the computer, it is considered to perform following functions

- The human mind takes in information.
- It performs operation on it to change its form and content.
- It then stores the information that is has taken in.
- It then retrieves this information that it has taken in, when retrieval is required.
- And finally it generates a response to the taken in information.

In other words, processing involves gathering information, and organizing it in relation to what you already know, or *encoding*; holding information or *storage*; and getting at the information when needed, or *retrieval*. The whole system is guided by *control processes* that determine how and when information will flow through the system.

The Atkinson- Shiffrin model of information processing derived from the ideas of several theorists. In order to understand this model, let's examine each element.

Sensory Memory
Stimuli from the environment (sight, sound, smell) constantly bombard our body's mechanisms for seeing, hearing, tasting, smelling and feeling. Sensory memory is the initial processing that transforms these incoming stimuli into information so we can make sense of them.

Perception
Human beings attach meaning to stimuli that they receive and this process of attaching meaning to sensations is called perception. The perception then forms larger wholes and becomes Gestalts or patterns of memory. There are two kinds of explanations in information processing theory for how we recognize patterns and give meaning to sensory events. The first is called feature analysis or bottom up processing that is, noticing parts of sensation and then making a whole of it. It may also take the form of top down processing, when we give meaning to sensations in view of our already existing knowledge; so what we know affects our perceptions.

Attention
By paying attention to selected stimuli and ignoring others, we limit the possibilities that we will process. What we pay attention to is guided to a certain extent by what we already know and what we need to know, so attention is involved in and influenced by all three memory processes. Lindsay and Norman proposed that the sensory register held information about the stimuli very briefly after the actual stimuli had left.

Let us elaborate on this view; we have different sense organs ear, nose, eyes, tongues and our skin. These organs receive sensations; those sensations may be compared to very mild electrical currents passing from the sense organ to the brain. After having received the sensations the brain "interprets" it gives meaning and that is how sensation becomes perception. So by attaching "meaning" to the sensations, sensation becomes perception. A useful concept in this regard therefore is that of attention and it focus on a stimulus.

Lesson 20

COGNITIVE VIEWS OF LEARNING II

Knowledge and learning are closely related, it is the outcome, the result, the dependent variable of learning. The cognitive approach suggests that one of the most important elements in the learning process is what the individual brings to new learning situations. What we already know "is a scaffold that supports the construction of all future learning". Knowledge determines to a great extent what we will pay attention to, perceive, learn, remember and forget.

General and Specific Knowledge

Knowledge in the cognitive perspective includes both subject specific understandings (math, history, soccer etc.) and general cognitive abilities such as planning, solving problems and comprehending language. So, knowledge is usually divided into two sub classes in the present context.

Domain- specific knowledge is that information which is acquired, stored and used in particular situation. For example knowledge about how motor cars engine works.

Then the sub class/category of knowledge is what is called **general knowledge**, information acquired, stored and used in different kinds of tasks and situations. For example, how to read or write or use a word processor is useful in and out of school.

Another way of categorizing knowledge is as declarative, procedural and conditional.

The first is what is called **declarative knowledge or memory**; that contains verbal information facts, figures etc. It is the knowledge that can be declared such as mathematical symbols, weights, measures and so on. The range of declarative knowledge is tremendous. You can know very specific facts (the atomic weight of gold is 196.967) or generalities (leaves of some trees change color in autumn), or personal preferences (I don't' like rice) or rules (to divide fractions).

The second is called **procedural knowledge/memory**, that contains certain procedures, how can you open a lock of your house, how to drive a car etc. Procedural knowledge is knowledge in action. It must be demonstrated. Students demonstrate procedural knowledge when they translate a passage in Urdu or correctly categorize a geometric shape or craft a coherent paragraph.

The third is **conditional knowledge** that is knowing when and why to apply and use declarative and procedural knowledge. Given many kinds of math problems, it takes conditional knowledge to know when to apply one procedure and when to apply another to solve each problem. It takes conditional knowledge to know when to read every word in a text and when to skim.

Some psychologists also relate another kind of memory/Knowledge is called **episodic knowledge/memory** where in you remember and related some episodes of your past life; for example how did you win that cricket match from your rival team when you were in class eight etc.

Psychologists put forward the new concept of **short term memory**

This was the earlier name of information processing system that we have actually talked about.
The term short- term memory is often used to describe that segment of overall memory storage, where information, material or contents are held for only a short time.

The storage time of short term memory is usually between 15 and 20 seconds. The material gained is kept in this store have for only 15 to 20 seconds and then it fades away and forgotten. Research showed that a part from holding material for a short time period, the short term memory can hold only about five to nine separate items or independent pieces of information. So short term memory does not contain pieces of information.

Then there is the **long term working memory**, which is like a store house of storages and person retrieve information from it whenever he requires it. The progress and development of knowledge in a person adds to the structures and categories in long term memory. These structures can be compared to Cobwebs, they are interconnected. So long term memory provides tools that improve with gain in the knowledge and expertise of a person.

Cognitive psychologists distinguish between explicit memory and implicit memory with the overall category of long term memory.

Explicit memory as part of the long term memory is that part of memory that can be recalled when desired and considered consciously. We are aware of these memories; we know we have remembered them.

Implicit memory as part of long term memory is the memory that we are not conscious of recalling but affects our behavior or thoughts without our awareness. For example a person being a male or a female is not consciously recalled but it influences the way he or she dresses etc.

From the point of view of an educational psychologist and a teacher if a teacher knows these parts and compartments of memory, he/she would be in a better position to gain, store and then retrieve knowledge and information.

Lesson 21

COGNITIVE VIEWS OF LEARNING III

In today's lecture, we will talk about three variables that affect and influence learning. Three concepts are of **attention, perception and schemata**. You are quite familiar with these factors in everyday life but we will learn about them in more systematic and scientific way.

Attention

We do not receive thousands but hundreds of thousands of stimuli during the course of a day. However we ignore large majority of them and register or focus only some of them. The ones that we focus on are the ones that we pay attention to. At this moment when you are looking at your TV screen, there are number of stimuli that you are receiving, you can see this table, the back of the chair, the book shelf, the dress of this teacher, but you are focused at what the instructor is saying. In other words you are paying attention to the lecture and not to the set as a whole; this is process of paying attention. What we pay attention to is guided to a certain extent by what we already know and what we need to know.

If you as a teacher can get your students to pay attention to your lecture you would have succeed in your role as a teacher. How can you hold the attention of your students?

Here are some points to do that:

1. Develop a signal that tells students to stop doing what they are doing and focus on you as a teacher.
2. Avoid behavior that may distract your students, self-touching and grooming etc.
3. Make your presentation/talk/lecture clear for students.
4. Include variety and surprise in your talk/lecture.
5. Asking questions of the students frequently during your talk.

Bright colors, underlining, highlighting of written and spoken words, calling students by name, lighting or pacing can all be used to gain attention. Using most of these techniques will keep the attention of your students focused.

Perception

Perception is a process of attaching meaning to the sensation that we receive. You might hear a sound and then attach meaning to it, saying your friend is calling you. You might hear musical notes and then perceive them to your favorite song.

The gestalt principles are valid explanations of certain aspects of perception, but there are two other kinds of explanations in information processing theory for how we recognize patterns and give meaning to sensory events. The first is called ***feature analysis, or bottom up processing*** because the stimulus must be analyzed into features or components are assembled into a meaningful pattern. The second type of perception, ***top down processing***, is based on knowledge and expectation. To recognize patterns rapidly in addition to noting features we use what we already know about the situation.

So as in daily life, so in class room situation attention and perception play a very important role in student's learning. Teacher, who can capture and hold attention of students, by what we outlined above, can prove to be effective teachers. Teachers who confine their lectures and lesson within the perceptual parameters of their students will prove to be good, effective teachers.

Three important concepts with regard to learning are the concepts of schemata, story grammar and script, all factors that influence attention and perception.

Schemas (sometimes called schemata) are abstract knowledge structures that organize vast amounts of information. A schema is a pattern or guide for representing an event, concept or skill.

Story grammar (sometimes called a schema for text or story structure) helps students to understand and remember stories. A story grammar is a typical general structure that could fit many specific stories. To comprehend a story, we select a schema that seems appropriate. Then we use this framework to decide which details are important, what information to seek and what to remember. Without an appropriate schema, trying to understand a story, text book or class room lesson is a very slow, difficult process, something like finding your way through a new town without a map.

Script: A schema representing the typical sequence of events in an everyday situation is called a script or an event schema. Children as young as three have basic scripts for the familiar events in their lives.

An important concept in this context is that of metacognition. In order to understand metacognition, you need to revise what we learn in our previous lectures.

Metacognition

When we talked about memory we told you that you could divide memory in different categories: those categories include declarative memory, procedural memory, conditional knowledge or problem solving memory. Meta cognition is one's knowledge of these three types of memory that we possesses. This is knowledge about our own thinking and memory. Meta cognition regulates and monitors our learning, reasoning and problem solving etc. So metacognition in reference to class learning can help students to ask themselves questions like, how well or poorly I am doing in class work? What can I do to improve by school grades, how can I get help from my teachers etc. It is obvious that those students whose metacognition, or ability to ask questions and evaluate themselves excel in academics in school than others.

Metacognitive knowledge is used to regulate thinking and learning. There are three essential skills that allow us to do this: planning, monitoring and evaluating. **Planning** involves deciding how much time to give to a task which strategies to use, how to start, what resources to gather, what order to follow, what to skip and what to give intense attention to and so on. **Monitoring** is the online awareness of "how I am doing." Monitoring entails asking, "is this making sense? Am I trying to go too fast? Have I studied enough?" **Evaluating** involves making judgments about the processes and outcomes of thinking and learning. "Should I change strategies? Get help? Give up for now? Is this paper (painting, model, poem, plan etc.) finished?"

Teachers can help students to develop the ability by helping them to do three things:

1. Plan
2. Monitor
3. Evaluate

Students should be taught according to:

1. Plan their work and studies.
2. They must be taught to monitor their work.
3. They must be taught to evaluate their work.

Imparting such skills will help produce better students. You are already familiar with steps of cognitive development. The four stages are:

1. Sensory motor stage
2. Preoperational stage
3. Concrete operational stage
4. Formal operational stage

Keeping these names you need to know that metacognition abilities begin to develop around the age of 5 years, and improve throughout school years. So imparting of metacognition skills may begin at latter part of preoperational stage; preoperational begin between 2 to 7 years. So the later part of preoperational stage, at age 5 and above in the right time period for teachers to begin imparting metacognition skills.

Lesson 22

COMPLEX COGNITIVE PROCESSES I

Teaching Concepts through Discovery

Today we will talk about various strategies of teaching; the first of these is called "discovery learning". Jerome Bruner in the late fifties talked about the importance of understanding by the students of the basic structure of the subject that they are studying. He emphasized the need for active rather than passive learning. Active learning is when students actively seek knowledge, rather than passively listen to a teacher. He also emphasized that reasoning is a basic requirement of learning. This approach is called "discovery learning", when students are active and work on their own to discover the basic principles of the subject they are learning.

Teaching Concepts through Exposition

In contrast to this there is the approach of another educationist, David Ausubel. He put forward the view that students learn by receiving knowledge rather than through discovery of knowledge. This approach is the expository teaching where teachers present material in a complex and organized form for their students, and they move in teaching from broadest to more specific concepts in teaching.

Two types of reasoning may be elaborated and facilitate Ausubel's point of view. The first is **inductive reasoning**; where a person formulates general principles based upon knowledge and details. The second is **deductive reasoning** where a person draws specific conclusion from the general existing knowledge. So induction is formulating general principles. And deductive is drawing specific from the general knowledge or information.

Ausubel believed that learning should progress from the general to the specific, i.e. deductively and not as Bruner believed inductively.

How Do Children Solve Problems?

A problem is where one is trying to reach some goal and must find means to do it. Problem solving is finding new answers to reach a goal or creating new solutions to problems. It is usually defined as formulating new answers, going beyond the simple application of previously learned rules to achieve a goal.

Problem Solving: General or Domain Specific

Some psychologists believe that problem solving strategies are **domain specific**: that is there are different problem solving strategies for different areas or domains. Some other psychologist believes that problem solving strategies are **general**, that there are some general strategies for problem solutions, those can be applied to different problem solving situations.

There is truth on both sides of these views. It appears that people move between general and specific approaches, depending on the situation and their level of expertise. Early on, when we know little about a problem area or domain we may rely on general learning and problem solving strategies to make sense of the situation. As we gain more domain specific knowledge (particularly procedural knowledge about how to do things in the domain) we consciously apply the general strategies less; our problem solving becomes more automatic. But if we encounter a problem outside our current knowledge, we may return to relying on general strategies to attack the problem.

Strategies of Problem Solving

Algorithm is a step by step procedure for solving a problem. Algorithm is usually used in domain-specific, which is in a particular subject area. In solving a problem, if you choose an appropriate algorithm and implement it properly, a right answer is guaranteed. Unfortunately, students often apply algorithms haphazardly. They try first this, then that. They may even happen on the right answer, but not understand how they found it. For some students, applying algorithms haphazardly could be an indication that formal

operational thinking and the ability to work through a set of possibilities systematically, as described by Piaget, is not yet developed.

Many problems cannot be solved by algorithms. What then?

Heuristics are some general strategies used in attempting to solve a problem. Heuristics may be attempted in general problem solving strategies.

Working backward strategy: where one students with goal moves backwards to solve a problem. It is sometimes an effective heuristic for solving geometry proofs.

Another strategy is "**analogical thinking**" where one limits the solutions for problems that are similar to one's at hand.

In addition to those verbalization is another technique of solving problems. It consists in putting the problem in clean unambiguous words. You may have discovered the effectiveness of **verbalization** process accidentally, when a solution popped into your head as you were explaining a problem to someone else.

A teacher can use all of the above mentioned techniques to impart knowledge. He can also teach these strategies to his own students to solve their own problems.

Recommendations
As a teacher,you should know about the

1. Availability of various strategies
2. What strategy should be adopted at what time

Lesson 23

COMPLEX COGNITIVE PROCESSES II
(Learning Strategies)

This lecture is about the differences between how an expert solves problem, learns and retrieves solutions, and how does a non-expert, a novice does these things. In fact, problem-solving involves at least two levels of intentions: an expert solves problem in a distinctive and expert manner as compare to non-expert. By adopting the procedure of problem solving, any novice can become an expert. Research has shown that experts have rich storehouses of three kinds of knowledge, namely:

(a) Declarative knowledge: is about facts and figures.
(b) Procedural knowledge: is about different procedures adopted in different life situation
(c) Conditional knowledge: tells how things operate.

These stores houses help a person to become an expert and distinguish him/her from the lay person. Along with the knowledge of these three houses, experts usually organize their knowledge in a way that can truly help to solve the problem. Another important point is that experts organize around a central principle. They pay attention to smaller specific details and then they can move towards the larger whole and using that larger whole to understand the central principle. This is a psychology of an expert.
Opposed to that approach, the non experts or novices firstly lack those three big store houses of knowledge and in addition, they organize and pay attention to smaller, specific details rather than the whole central principle of what they are learning. So, making use of that know-how you can as a student become an "expert learner" or "expert student"? You can become an expert student by adopting "learning strategies" and learning tactics" and their use as an experts do to organize information:

I. Build storehouse of knowledge
II. Pay attention to details
III. And organize in a wholesome manner

Learning Strategies for Student-Experts
Learning strategies are the overall plans for learning. And learning tactics are the specific techniques of putting the overall plan into operation. Teachers should also provide additional information to their students to become expert students. One should keep in mind that not only words are transferring information but information can also be provided non-verbally. As information is a continuous process. Coronation day.

Additional knowledge and Motivation
Research has shown that students, in order to become "experts" must adopt different strategies for different times and subjects. It also shows that students should be given and gathers additional knowledge, to become expert students. They should be motivated to learn even outside the classroom. Motivation is very important; they should be motivated to apply the techniques of expert learning, Students should be clearly taught and must know these techniques of expert learning. Students, for example should focus attention, adopt self questioningand relate what they are learning to what they have already learnt. Teachers should provide an opportunity to relate their present knowledge to their already existing knowledge.

Summarizing the Material
Another important technique in this regard is to decide what is important that should be learnt, and what is less important that may require less attention. Once these important and less important elements have been identified then the learnt materials should be made into summaries. Summaries involve the following important steps and procedures

a. It should be short and easy to learn.
b. It should identify and clearly state the big ideas or the central ideas of the material.
c. It should not contain redundant information. Redundant information may be related to the topic but is indirectly related to the central idea.

Highlighting the Selective Material

Another technique on the way to become expert student is using procedures of Underlining and highlighting. Some points are very important so they can be highlighted by using highlighter or by underlining the statement. In highlighting and underlining the following must be kept in mind by the students:

(a) They should highlight /underline in selective manner. Too much material must not be highlighted or underlined; only important/selective material should be highlighted.
(b) Students should transform information into their own words.
(c) Students should make diagrams on their own that illustrates what they are learning.

Notes Taking

Another technology in becoming an expert student is to take notes of lecturers. Research shows that taking of notes in themselves, is a process that facilitates learning, even when the notes may not be studied after words. It is like revising the lesson. It helps to store key ideas and central concepts therefore it helps and facilitates learning. They should pick up the key words/key phrases while listing the lecture; it will help you to remember the material or long time. While taking notes personal codes and other personal inputs may be used that helps learning. Like for example, to save the time and to grasp the full idea, you can write attn. instead of attention while talking notes. This is an example of your personal codes. Researchers have found that taking notes keeps the students focus in boundaries so attention does not distract and it helps to foster the learning process. Those students who adopt all/most of the above mentioned techniques tend to become better, "experts" students as compared to others.

Lesson 24

COMPLEX COGNITIVE PROCESSES III

Learning Process

We learn every day; it is not just something we do in school or in formal settings. What you learnt as a young person in school you have probably forgotten it. Does that mean that your previously learning is lost, your input wasted? On the surface it appears to be so, but it's not true. Learning is never wasted as it is transferred. For now we know that whenever something previously learned influences our current learning, we know that transferred has occurred.For example when a student learns a mathematical principle and uses that principle in learning physics that is an example of transfer. When you learn to ride a bicycle and then learn riding a motor bike, we know that transfer has taken place that helps you to ride a motorbike.Transfer can be defined, therefore as the influence of previously learned material on the new material that is being learned.There are so many examples in everyday life about transfer of learning.For example, learning of Persian as language will facilitate your learning under as a language.Studying in a co-educational institution and learning to Socialize and work with opposite ---- in an academic set up helps to socialize and deal efficiently with opposite sex in later life etc. Another interesting fact is that learning to teach and deal with nursery level children is transferred to one's own children, and their up buying. Managing your own home accounts is influenced by what one has learned at one's job, managing accounts of a firm etc.

Hindrance in Learning Process

This fact should keep in mind that transfer of learning does not always facilitates present learning in view of the past learning. The transfer can both, facilitate as well as hinder present learning. Transfer can be hindered by two important factors:

1. Functional fixedness
2. Response set.

Functional Fixedness

Learning is hindered when the learner does not consider unconventional uses for materials at hand.Functional fixedness is the inability of person, or a learner to use tools and objects in a new and a moral way.It is the lack of flexibility in using tools of learning.

Response Set

Response set on the other hand is the rigidity of response.It is the tendency to response in a familiar way.If a person consumes to react and response in the old, familiar ways, he/she is said to showing a response set.
Functional fixedness, the inability to use objects and tools, including knowledge in a new way and response set the rigidity of response pattern are two most significant barriers in the ways of transfer of learning from one situation, or one domain to another situation or domain.Some psychologists distinguish between two levels or kinds of transfer:

1) Low Road Transfer

Low road transfer is the spontaneous, automatic transfer of highly practiced skills with need or no need for reflection or thinking in the transfer.You have learned to drive a car, now you transfer that learning to driving a truck.Hardly any reflection on your part would be required to transfer that learning form one situation to another.

2) High Road Transfer

This is an acquisition of knowledge in one field and then drawing or abstracting knowledge and then using that obstructed know in a different situation.For example you have learned to deal with children at home, and you use some of that knowledge to deal with children as a nursery class teacher.Obviously you cannot use all the knowledge gained at house, but only the derived abstracted knowledge in your role as a class teacher.

Over learning

It is another important method of learning and retaining.Over learning is practicing a skill beyond, over and above the point of mastery in that skill.Research shows that over learning helps the learner in two important

ways.Firstly it helps to retrieves information.And secondly this revival process becomes way efficient and quick. So over learning, learning beyond mastery level is another way of efficient and quick retrieval.

SOCIAL COGNITIVE AND CONSTRUCTIVIST VIEWS OF LEARNING I

Learning is a lifelong process that begins from the day we our born and lasts throughout life. Different theorists have discussed about learning in different ways. Albert bandura in one of the great psychologists who had contributed much in the field of educational psychology particularly focusing on learning processes. There are two important theories of how we learn:

1) Social learning theory.
2) Constructivism or constructivist theory of learning.

Social Learning Theory

Social learning theory emphasizes the learning of human beings by observation of other human beings. This view point was forcefully put forward by Albert Bandura, when he demonstrated that people learn by observing others and the consequences that people observe in others. His work has based upon social behaviour of people and labeled Social Learning Theory in the late seventies and early eighties.

Bandura distinguishes between acquisitions of knowledge; that is learning and performance based upon that acquired knowledge. He proposes that we acquire knowledge based upon on observation of others and then our performance or behaviour is based upon this acquired knowledge. Therefore he suggests that we all know more than what we show by our behavior or performance. Bandura put forward the views that our beliefs, our self perception, and other cognitive factors influence our learning.

Types of Learning

According to bandura, there are two types of learning:

a) Enactive learning and
b) Vicarious learning

Enactive learning is about learning by doing. For example, swimming can be learned only by doing,; you cannot do only by reading the book. Another example is that psychologists treat phobia, by using enactive learning procedure. While vicarious learning is learning by observing others. Bandura believes that we learn by various learning. He had emphasized that there are four factors which facilitate and are operative in observational or social learning:

1) Paying attention: Social learning is not possible unless a person pay attention to the phenomenon.
2) Retaining information: After paying complete attention, retaining the information is the second factor that is another important factor
3) Producing behaviors: Relevant behavior is produced based upon attention and retention of the information
4) Being motivated: If a student is not motivated they cannot learn. So it is one of the imperative factors to enhance learning process.

Thus according to Bandura, the operative factors that make a person learn include: - his motivation, his behaviour or doing things, his retaining of information and his paying attention to what is being learned. Research shows that social or observational learning is affected by number of other factors as well. Some of these factors are:

a) The level of development of a person is related to his/her learning.
b) The prestige or competence of the model that is being observed. For example teacher is the model; students follow their teachers and see them as a model.
c) The level of self-efficacy is also related to learning
d) The expectations of the learner. For example, if student thinks that it will help him in future, it will facilitate his learning.
e) The goal that learner has set for himself of learning and achievement. Goals can be satisfying or non-satisfying. Those goals that are achievable and challenging actually facilitate learning.
f) The consequences that the learner expects from learning also greatly effects learning. For example, if a girl believes that after learning driving, she will be able to drive anywhere. So these consequences facilities quick learning.

So a good teacher takes all of the above mentioned factors in view while teaching and then becomes a more learned and better teacher than before. You must remember however that there is no single theory of learning. Other major contributors in education are Lev Semenovich Vygotsky, Barlett, Bruner, Dewey and Gestalt psychologists etc. They have focused on Constructivist view of learning which emphasizes the learner's contribution through individual and social activity. Constructivists' view emphasizes the active role of the learner in understanding and makes sense of information that he receives. They believe that human beings are not passive learners; they add and subtract learned information. Constructivist view talks about two forms of constructivism; i.e. Psychological and Social constructivism.

1) Psychological Constructivism

Psychological constructivists are concurred about an individual builds up his cognitive and emotional apparatus. They are interested in looking attain individual, how he gains knowledge, his beliefs, expectations and self-concept. This approach is also called "first-wave constructivism", associated with the names of such psychologists as Piaget and others.

2) Social Constructivism

Social constructivism, also sometimes called "second wave constructivism" is associated with the name of Vygotsky and others. They emphasize social interaction and cultural context of the learner as some of the factors that influence learning of a person. For example, during fasting if you start teaching student, it would be difficult to learn so it may hinders performance and learning. These factors should keep in mind to facilitate learning. As you can see now psychologists have considered both the individual/psychological as well as social/cultural factors playing their roles in a person's learning. A teacher who keeps both of these categories of factors in mind while dealing and teaching his students will prove to be more successful than other teachers, research tells us.

Lesson 26

SOCIAL COGNITIVE AND CONSTRUCTIVIST VIEWS OF LEARNING II

The first view of learning was put forward by a psychologist, Bandura. According to him, human beings learn as a result of social factors. Bandura recognized the influence of social factors, or society on the learning of a person. The major variable of learning in social learning theory is modeling which bandura has emphased. When a child born, he sees around him significant others especially parents. He learns by observing them; they are the models for a child. But modeling should not be understood as it is understood in the world of fashion design today.

Modeling

In the Bandura's view of learning modeling is a special term. It is used in the present context to describe, changes in behavior, thinking or emotions that occur through observing another person, called a model.Modeling has been used in the past to teach a variety of subjects and skills. For example, ithas been applied and used in teaching of sports, dancing, cooking and other skills. They watch models and they learn by these models. Skillful, knowledgeable teachers know that students look up to their teachers as models; therefore some teachers use their own persons as models to teach students in the classrooms. Teachers can use their own behaviors as models for students for learning.Take the example of enthusiasm; those teachers who are themselves enthusiastic about their school subjects present a good model for their students to be enthusiastic about those subjects.On the other hand those teachers, who are not so enthusiastic about their own subjects of teaching, present a bad model for students to copy and imitate.

Research has shown that modeling can be effective way learning when "good" models are copied and reinforced.Research also shows that practicing the role of a good model helps learning, such that the more the practice the higher the learning of a good model.It has been shown by research that teaching of new behaviors can be easily done by presenting a role model.New behaviors are easily leaned by someone if he sees, observes, and models his behaviors in accordance with the behavior of the model.For example, if we see in everyday life, a daughter learns a new recipe by watching her mother's cooking who is the role model for her.

How to Become a Better Learner

Research has shown that low achievers in school can improve their achievement level considerably if they see, and imitate high achieving students.Emotional reactions are also learned by/copied by modeling. If a teacher wants his student to learn more efficiently, therefore, in view of research on modeling shows that he should: -

a) Show his enthusiasm for his subject.
b) Point out the role models from the class for students to imitate their behaviors and learning strategies. For example, if high achiever students are identified as role model to low achievers, they can learn and improve their performance by imitating them. Teacher should help students to become better learners. If teacher is enthusiastic, it will facilities their students' learning as well.

c) Reinforce desirable modeling behavior. For example, desirable behavior is finishing homework in time. If a student shows desirable behavior, you should reinforce his behaviors; it will enhance the probability of this behavior in the long run.

Ripple Effect

Ripple effect is the spread of certain behaviors because of imitation and is, actually, the outcome of modeling by a large number of people in a group or a class. For example, you have taught an idea to student and he has further explained it to other students.

Constructivism

Constructivism is a view that emphasizes the active role of a learner in learning. It is making sense of the information that a learner receives. It means you are not like a tape recorder that is receiving information from the teacher or anyone and saving it. Rather you are dynamic creative human being who adds, connects, and disconnects etc. the received information in a meaningful way.

First-wave Constructivism---Individual Contribution

Modern theorists talk about individual or psychological constructivism. Individual constructivists are interested in individual's knowledge, beliefs, self-concept, and how these variables affect our learning and knowledge. For example if you have negative self-concept; means you consider yourself bad person who cannot perform well, it becomes a part of individual constructivism. While some psychologists also believe that knowledge comes from reflecting, coordination. This is called first-wave constructivism that emphasizes individual meaning making. It refers to individual contribution. For example, Newton has observed a phenomenon and gave a law of gravity that was his individual contribution.

Second Wave Constructivism--Social Contribution

Second wave constructivism as explained earlier, is learning that happens in cultural context, and social interaction. The proponent of this second view is Vygotsky.According to him, we learn as a result of social interaction and our cultural sources play and role in our learning. For example, if you go to a new country, you learn new things due to different culture and social setup. So, learning is a lifelong process and does end anywhere; reflection and social interaction are two of the important ways that help us to learn. Putting and understanding learning in social and cultural context is second wave constructivism.

Lesson 27

SOCIAL COGNITIVE AND CONSTRUCTIVIST VIEW OF LEARNING III

Instructional Techniques

There are four different valid ways in which teachers may instruct their students. You can choose one or combination of more than one methodsin your class**.**

1) **Inquiry Learning**
2) **Problem Based Learning**
3) **Instructional Learning**
4) **Cognitive Apprenticeship**

Inquiry Learning

The first of these techniques instructional methods is called Inquiry learning..Inquiry learning consists of a teacher presenting a problem or a puzzling situation to students. He then asks students to gather data related to the problem.And then based upon that gathered data, find the answer to the problem.Here is an example of inquiry learning.Follow the instructions, see the situation and then suggest solution for the same.Put a small piece of paper on a table. Now blow it softly with your breath: It rises from the surface:

Problem Based Learning

Problem based learning consists of the methods that provide the learners with realistic problems that do not necessarily have "right" answers.For example the teacher may present the problem of energy shortage in Pakistan and ask for solutions.Obviously there is no one solution for it. The students then are encouraged to study the problem and suggest different solution that may solve the problem.

Instructional Learning

The third method is consists of dialogues or conversations between teachers and students that promote learning which also called instructional conservation. Obviously learning is not confined to class rooms and lectures; it continues after class and lectures. So what students learn from teachers in mutual interaction, dialogue exchange of ideas is called Instructional Learning. It is said when people went to meet Dr. Allama Muhammad Iqbal, he used to teach them through conversation. Another example is that students are walking with the teacher after lecture and they are discussing any topic. This is an example of instructional conversation that helps students to learn outside of the classroom. Tea houses culture is also a form of this learning. This is the responsibility of a teacher to identity students who do not ask question in classroom, involve in this sort of conversion to help them to learn more. Such as, you can involve students in constructive conversation during sports to encourage them etc. There are some things which cannot be learned without practical knowledge.

Cognitive Apprenticeship

The fourth method in the present context is called Cognitive Apprenticeship. This consists of a relationship in which a less experienced learner gains knowledge and skills under the guidance and supervision of an expert.In Pakistanilabor scene, we witness the operation of this method when we see young boys working at tailoring shops or motor workshops, learning to cut cloth, and stitch clothes under the guidance experienced tailors.

Practical of These Learning Methods

After having learnt about the four methods instructional learning let us now attend to some practical usage of those methods.Regarding the first method namely "inquiry learning" you may observe, collect data and write a small 200 words report on how do pigeons communicate amongst themselves.Regarding the second method, namely "problem based learning", you may gather information on why is there power shortage in Pakistan and then suggest ways how power shortage in Pakistani cities be alleviated, reduced, or helped.Regarding "instructional conversation" you may approach your teacher, involve him/her in conversation regarding how he/she studied his/her course work as a student, and how he/she may guide you to plan your study course. And regarding cognitive apprenticeship you may choose a hobby you are interested in, gardening, making small model aircrafts; then choose a gardner, someone interested in and

proficient in gardening, or aero modeling: Attach yourself to him/her and actually carry out gardening or model aircraft building under her/his guidance and command.

After having understood and actually carried out all four of the above mentioned teaching methods you would have learned a host of modern teaching techniques that you can use in your daily practical life, and bring to the old teaching system up-to-date modern knowledge.

Lesson 28

MOTIVATION IN LEARNING AND TEACHING I

There is a relationship between learning and motivation. Motivation is what energizes a person, directs a person's behavior towards a goal.Psychologists distinguish between intrinsic motivation and extrinsic motivation.Intrinsic motivation refers to acts and activities that are rewards in themselves. It is related to personal factors and stems from a person's needs, his interest.Extrinsic motivation on the other hand is related to external, environmental factors such as rewards, social pressure, or punishment.We are intrinsically motivated, driven by such personal factors as our needs, interests and our curiosity. For example, solving puzzles, enjoying swimming are an example of internal motivation. And we are also driven by the outside of the self, external factors such as rewards, punishments or social pressure. For example, to avoid punishment, student completes his homework daily in time.

Locus of Control

Locus of control or locus of causality refers to whether a person's behavior is caused by internal or by external factors.If we take a bird's eyes view of different points of view regarding what motivates people, four major approaches appear as explanations.Let us view these four major points of view of what motivates a person.

Behavioristic Approach and Motivation

The first of these is the behavioral point of view of motivation. This view explains behavior of a student in a class room as the result an incentive. An incentive is an object or an event that encourages or discourages behavior.Thus according to this point of view motivation in students is dependent on incentives, objects or events that encourage or discourage behaviors.Providing grades, stars and stickers etc. to students are incentives, to motivate them. Ignoring, or awarding low grades are punishments for students that motivates students to avoid certain type of work.So,behavioral approach explains student's behavior as related to rewards and punishments.

Humanistic Approach and Motivation

The second approach in understanding behavior is what called the Humanistic Approach.This approach suggests that human needs exist in the form of a hierarchy such that there are lower level needs, essential for survival; and higher level needs for intellectual achievement; and finally the need for giving expression to one's highest level of self; or self-actualization.According to this theory, motivation comes from fulfilling lower level needs and when the lower level needs is satisfied then one is motivated to fulfill higher level needs.

Cognitive Approach and Motivation

The third approach to the understanding of motivation is what is described as Cognitive Approaches to motivation. This view emphasizes the fact that human behavior is determined by our thinking and not only by need satisfaction or rewards and punishments.This view emphasizes that human beings do not only respond to physical needs or conditions, but also to the interpretation of these needs.One cognitive explanation of motivation emphasizes that we try to make sense of our own and other people's behavior by searching for causes and explanation for such behavior.Seeking causes for human behavior is considered the major reason of human motivations in cognitive approach to motivation.

Socio-Cultural Approach and Motivation

The fourth theory in the present context is called the Socio Cultural view of motivation.This view emphasizes the role of participation and interpersonal relation as the major cause of human behavior.People engage in social activities to build and maintain their personal identities and their interpersonal relations with a community; that is what social cultural theorists believe.

So psychologists have explained human motivation in four different views, namely behavioral view, humanistic view, cognitive view and social cultural view. Each view has an element of truth in it.Now in view of the above discussion you can see as a teacher that your students can be motivated and their motivation comes from two broad categories of factors, they are:

a) The internal factors such as interest; beliefs, self-fulfillment, and
b) External factors such as rewards and punishments

A good teacher is one who knows all these operative factors in the class room, and then she/he manipulates these factors, of internal motivators and external motivators to impart knowledge to his/her students.For example she /he may plan and use student interest in sports to teach them the value of cooperation for winning in sports.Or use rewards for students for doing homework and avoid punishments.

Lesson 29

MOTIVATION IN LEARNING AND TEACHING II

Success in teaching is related to number of factors such as motivation, teaching strategies etc. One another important factor is called goal orientation or goal achievement.A goal is an attainment that a person is striking to achieve. Without goal, any effort is meaningless. Goal directed behavior is the behavior that seeks the satisfact6ion of a goal.Goal setting in learning and teaching improves performance.

Importance of Goal Setting

It improves the performance because of following reasons:

a) Goal settings directs/focuses attention
b) It mobilized effort.
c) It increases persistence; to remain focused and continue put in efforts even in the face of obstacles.
d) It helps develops new strategies of effort

Characteristics of Goals

Research has shown that goals have the following characteristics that make a goal more motivating:

a) Clearly defined goals. For example, a student set a goal for five hours reading.
b) Specific goal. Not clearly defined but are specific and are not vague
c) Reasonable goals. For example, if a teacher ask student to write a sentence two thousand times, it will be a un-reasonable goal.
d) Moderately challenging as opposed to too easy or too difficult to achieve.
e) And those attainable in a reasonably short period of time, rather than long terms.

Keeping the above in mind teachers should set goals for themselves and for students that have the above stated characteristics.One important variable that motivates people including students is the fear of failure.People, including students want to avoid failure, that fear motivates them.Psychologists have identified there levels of such tear:

1) The first is low fear of failure, where students keep their learning goals challenging and moderately difficult.
2) The second level is high fear of failure, where learning and performance goals are very high and difficult to achieve.
3) And the third level is failure accepting where students, expect to fail and are depressed even before they actually fail. Here their performance goals are very vague and in some cases not even defined.

Research has also shown that student's interest and their emotions play a most significant role in their learning.If a student is fearful, board, or excited those states of mind affect his learning.Another operating variable in student learning is emotion, or arousal.Arousal involves psychological as well as physiological reactions.There are changes in blood pressure, heart rate and breathing rate.And we feel alert, wide awake and even excited.The state and level arousal effects learning, such that optimal learning takes place at optimal arousal, meaning not too low level of arousal and neither too high a level of excitement.So interest and emotions play a significant role in students learning.

Self-concept and Self-efficacy

Another factor that is related to student learning motivation is self-concept.Self-concept refers to a person's belief about himself.One important part of one's concept of self is self-efficacy.Self-efficacy is the belief that a person has about his/her personal competence in a particular situation.For example if you are driving a car and get a flat tire and know that you can change it or get help to have it changed; this view shows a high level of self-efficacy.One must remember that self concept and self efficacy are not the same. They are different.Self-efficacy refers to the competence to perform a specific task.Whereas self concept is a more generalized perceptions and views of one 's self.And opposed to these two, self-esteem is the value that we attach to ourselves our abilities and our behaviors.All their variables, namely self concept, self efficacy and self esteem affect a students learning and motivation in general and to learn in particular.

Self-determination is the desire to live according to our wishes and desires rather than according to external pressures.People including students constantly struggle against external pressure and want to live by self-determination.A class room environment and a teacher's attitude that encourages self determination to more helpful for learning.Self-determination and autonomy is related to greater students' interest, creativity, and conceptual rather than rote learning.Therefore all teachers should strive towards autonomy and self-determination in class.

Learned Helplessness

Learned helplessness is an expectation or feelings, due to previous experience that all of one's efforts will lead to failure.People who have developed learned helplessness believe that events and outcomes in their lives are out of their control and uncontrollable.Learned helplessness in students can cause three types of problems for them:

1) Problems of lack of or low motivation for learning, putting in effort etc.
2) Problem of low effort to carry out clear and unambiguous thinking.
3) And problems of negative emotions of despair, hopelessness, pessimism etc.

Such people who have developed helplessness may also suffer from anxiety, depression, and listlessness.So teachers must be aware of how students can be motivated, or the one hand, and how the factor of self concept operates, and how helplessness may over take them. And then should help their students through such problems.

Lesson 30

MOTIVATION IN LEARNING AND TEACHING III

Student Motivation

Motivation is one of the key factors in motivation. Almost, all students are motivated in one way or another.Some psychologists have identified six factors that motivate students to learn.

Nature of Task

The first motivating factor in this regard to the nature of task, on the work the students are expected to carry out.Research shows that if task that they are assigned is structured and specific, then it motivates students. And conversely if it is vague and haphazard it de motivates students. Clear goals are motivating, as opposed to the vague ones.

Autonomy

The second motivational factor that may encourage students is autonomy. It means that once they are clearly given the tasks to fulfill then they must also be given freedom or autonomy as to how to fulfill those tasks, or carry out activities to achieve the goals in for those tasks.The third factor that increases student motivation to learn is recognition. When students are recognized and rewarded for task accomplished, and learning carried out, this reward or recognition encourages and motivates students to undertake further work, which motivates them.

Groups

Another, the fourth factor is grouping that tasks place or is deliberately created by a teacher to carry out a task.For over one hundred years different experiments carried out in different countries, all over the world has shed higher on the influence of group on the performance of its members. And in all those experiments and observations it has repeatedly been shown that working in groups influences a person's performance, including his learning.Thus working with other students, friends, peers, and other important class mates motivates students, among other factors.Hawthorne experiments are one the example in this regard. When students work with in cooperation with other students particularly when they like or admire others that they work with, students motivation increases.

Evaluation Process

The fifth factor in this context that increase /influences student motivation to learn is the evaluation process carried on by the teacher.If the evaluation and grading is carried out in objective and standardized manner, that motivates students as opposed to grading and evaluation based up teachers or evaluators subjective judgment and haphazard marking standard.When students are encouraged to set up and participate in the evaluation process, this practice motivates students to learn better than before. So evaluation must not only be standardized but should also have input by the students.

Time Management

The sixth and last factor that psychologist have identified to influence student motivation to learn is time and its management.If you as a teacher look at the syllabus and the time period that you may have to cover that syllabus. You concise would realize that there is not enough time in view of the quantity of the matter that is to be taught.The best way to adjust time and material is to adopt what is called block scheduling.

Block scheduling

Block scheduling involves dividing the work in to chunks or blocks, and then devote a preset time period to each block or chuck of work. Thus finishing each block of work within assigned time period. Following the block scheduling the entire work can be finished within the assigned time.Student motivation in general will be helped if you as a teacher ensured four of the basic requirements.

- One, provide an organized class environment, where a teacher supportive, tasks are moderately challenging.
- Two, build student confidence by making learning goal specific and clear.
- Three, show the real value of student learning, connecting learning with students needs and activities.

- Four allow and guide students to stay on focus, teaching than how not to let their attention and focus waver.Ensuring all/most of the above will make you a good teacher.

Lesson 31

CREATING LEARNING ENVIRONMENTS

Classroom Management

Classroom management refers to maintain a positive and productive learning environment.These are the techniques that you as a teacher may rise to create a healthy learning environment, free of behavioural problems. This is done by the teacher or a administration.Self-management on the other hand is the management of one's own behaviour and to accept responsibility for one's actions.In class room management, the teacher demands obedience and regulation of behavior from students.In self-management the student himself controls and directs his behavior.

Self-control

Self-management involves self-control on the part of the students.Self-control involves fulfilling and satisfying one's own needs without interfering with the rights and needs of others.Encouraging and teaching self-management to students may require some extra time and extra effort on the part of the teachers.Once inculcated it proves beneficial for students in later life.If you time yourself in the classroom you would notice that much time is lost in interruptions, disruptions, late starts, and transitions from one topic to another, all of this lost time. Slots and time can be salvaged if you as a teacher improved your time management.

Better Time Management

Allocated time: One way to better time management is estimating the amount actually spent on learning. This is called allocated time.Allocated time is the time period that a teacher sets aside for learning.

Engaged time:Then there is engaged time; this refers to the time period specifically spent in actively learning.

Time on task: You may also become familiar with what educational psychologists call "time on task", this is the time period that is spent on actively engaged in learning a specific task at hand.Time spent on various ways in learning may or may not lead to real learning.

Thus academic learning time refers to the time students spend on really learning and understanding.One research undertaken by Weinstein and Mignano shows that of the one thousand and one hundred hours of class time, about one thousand are spent on attended time; about five hundred are spent on actual academic time, about four hundred hours are spent on engaged time and about only three hundred hours are spent on academic learning time, when students actually succeed in learning a task.Class management in possible and improves when school and class rules and producers are clearly stated by administration.And when these procedures and rules are conveyed to students and are understood by them. This is western countries; research, in Pakistan it has observed that less than the mentioned time is spend in our schools for learning.

In this regard, Weinstein and Mignano, important researchers in the field of education, have suggested the following strategies to improve learning and motivation:

a) Administrative routine, such as when and how attendance will be taken who shall be the monitor of the class etc.
b) Student movement, how and when students, may enter of leave the classroom.
c) Housekeeping, how and where personal items of students will be stored.
d) Routine for accomplishing lessons how the home work assignments be collected and returned.
e) Routine for interaction between students and teacher will be clearly spelled out and explained to students.
f) Procedures for talk between students should be clearly explained.

How to Improve Your Class

Keeping the above in view it is suggested that in order to better manage your class you should carry out the following activities:

a) Divide and convey how students are expected to enter and leave class room.
b) Determine procedures to up keep disks and class room equipment.
c) Establish a clear signal to the start of teaching.
d) Set and convey procedures for students to ask questions, make comments.
Determine how assignments will be given, and collected. It should be made understood; it will improve class management which will, in return, improve learning and motivation.

All these will also enhance self-discipline, class-discipline, and group-discipline in students that is one of the essential parts for better learning environment. Clearly setting these routines and produces will greatly improve class management and will thus facilitate over all learning and teaching.

Lesson 32

MOTIVATION IN LEARNING AND TEACHING

Classroom Arrangement

One of the important factors that influence learning in class is the classroom arrangement.Classroom arrangement refers to two basic ways of organizing the space in the class. These two spaces are:

1) Interest areas and
2) Personal territories

The usual space division involves that the personal territories are placed in the center of the room with interest areas in the back or in the periphery of the room.Personal territories allow students to interact with other students in the class.Interest area being in the periphery allows students the opportunity to look at and interact with auxiliary materials, including charts; diagrams black/white boards etc.Interest areas may be guided by a number of factors that teachers may keep in mind. They include such factors as encourage students to plan for self selected goals, achieve these goals etc.Personal territories can also influence student learning.Personal territories are the areas where students sit and interact.

Research shows that those students who occupy front seats participate more actively in the class and in teaching.And those who occupy back seats tend to get less involved in class work.Back seat occupiers also tend to indulge in more day-dreaming in the class room as opposed to front bench occupiers.

Action Zone

The concept of action zone is important in this context.Action zone is the area in the classroom where student teacher interaction, and student participation is greatest in the class.To increase action zone and make learning most effective in class, it is suggested by experts that a teacher should:

a) Move around in classroom rather than stay at one place
b) Establish eye contact with all students
c) Direct questions to all students
d) Vary seating of students from time to time

Effective Class Management Strategies

Psychologists have studied various ways in which motivation in learning and teaching may be enhanced.They suggest three ways that may be used in that context.Jacob Kounin suggests after close observation, the following are the more important factors in class management leading to effective teaching and learning:

a) The first of these is "withiness".Withiness means that the teacher conveys to students that he/she is aware of whatever is happening in the class room.
b) Timing errors may involve waiting for long periods before intervening.And targeting errors means blaming wrong students for mischief.
c) Over lapping means that teachers can and supervise many activities at the same time.They are looking after, for example, of the work of many students at the same time.
d) And group focus means that teachers can and do involve many more students all at the same time.
e) Keep many students involved in appropriate class activities helps improve students focus on learning, helps students become more motivated.It helps avoid narrowing teacher focus on one/two persons.
f) The last and another effective method of maintaining good learning environment is managing the student movement and managing the lesson movement in class and during study time.

Managing student movement means keeping a check on when the student may or may not move about from one place to another in the class. And lesson movement relates to the pace of teaching. This involves keeping the lesson at a flexible and appropriate pace and making smooth transitions from one part of the lesson to another.One danger in this regard is the problem of slow down, that is taking too much time with some topic and making it boring for the students.

Lesson 33

CREATING LEARNING ENVIRONMENT

Planning Strategy

Physical environment effects one's learning; as there are many factors that disrupt or facilities learning. Research in the past has identified many strategies that are available to teachers to get students to complete their works. Along with disciple, one of the most important and basic strategy is planning for the completion of a task.Teachers have found that planning helps to divide time, and assign material in that time, to be taught, helps to clarify teaching and instructional goals.They consider therefore planning of time to be of almost importance.Planning, they have experienced, can help them to devoir time to different subjects, on the basis of difficulty of the subject; i.e. more time to relative difficult subjects and relatively less time to relatively easier subjects.

Planning can be done at several levels, on a yearly basis, term basis, month basis, week basis and daily basis.The important thing is to keep in mind that all of the levels must be coordinated for an overall goal to be achieved.Planning reduces uncertainty from teaching and clearly sets objectives, goals and standards to be achieved and maintained.Planning help to reduce, though not completely eliminate uncertainty form work.However it must be stressed that planning must allowed flexibility.

Over Planning

Some variations, delays and over stepping in teaching will inevitably be experienced which is natural.Over planning involves very strictly adhering to a pre set routine of teaching, with very little thought to student reaction and understanding of the subject. It must be avoided.

Knowledge of the Subject

In order to plan, teacher must have a thorough knowledge of the subject, as well as the students.She/he must know the details and other various parts of the subject that he/she is going to teach, as well as the mental level, personality interests and motivations of their students. Only a good planning can result in good teaching.

Planning can be done by the teachers, but psychologists suggest a collaborative effort by both the teachers and the students. Teacher/planner must remember that planning is a certain process it needs to be changed, updated, and modified from time to time. However, there are chances that a teacher may have planned a lesson but some problems may arise in delivery of the plan.So maintaining a good discipline in class is a great importance.

Maintaining Discipline

The key to maintain disciple in the class is to know what is happening in the class and then prevent it before it blows out of proportion.Some educational psychologists have suggested the following ways for teachers to get the students to finish their work on time and maintain disciple:

- ✓ Remind the students of the work plan, and the importance of getting it done on time.
- ✓ Remind them of negative effects that will follow if the work is not done or completed.
- ✓ Give them verbal hints to complete the task.
- ✓ Clearly direct those not attentive to attend to work, showing them the procedure of how to do it.
- ✓ Clearly but calmly ask about their disruptive behavior and show them how to get involved in finishing the planned work.
- ✓ Make eye contact with all students, especially those who may not work or may indulge in wayward activities, and make sure they desist from non productive activities in the class.
- ✓ Teacher must show respect
- ✓ If someone still persists, offer him/her a choice, either he/she stops or will have to talk to the teacher after the class.

Conflict between a student and a teacher may lead to penalties being imposed by the teacher. This conflict between teacher and student may be resolved talking to a student privately.It can be done by catching

students before a problem blows out of proportion.It can be resolved by following a consistent approach in solving problems of students. It can be resolved to teach students to take the responsibility of their own behavior and need it. Teacher must convey clearly to the students that are reasonable for their acts and teachers should anticipate any behavior problems and should tackle in time before it arises to the conflict level. However as a last resort the conflict problem may be referred to the head/supervisor/Principal for his/her input.

Lesson 34

TEACHING FOR ACADEMIC LEARNING I

Educational psychologists have long debated on the "goals" of teaching: Should the goals of education be improvement in behaviour, or a higher vision, or what: After much debate and thought, educational psychologists have outlined three types of goals or objectives that they feel adequately fulfill the proper requirement, definition and the end result of education. These three objects pertain to :

1) What is to be taught?
2) What changes or improvements are expected in the behaviour of the people who are taught
3) And what changes or improvements are expected in the thinking of the people who are taught.

Objectives for Learning
Specifically the objectives for learning are stated and defined as:

a) Instructional objectives
b) Behavioral objectives and
c) Cognitive objectives

Instructional objectives
Educational psychologists define instructional objectives or the goal of instruction as the "intended learning outcomes, or the types of performance that students are expected to demonstrate at the end of instruction to show that they have learned what they were expected to learn". Instructional objectives are a clear statement of what students are intended to learn through instruction: For instance they should learn and recite the table of 7 or the alphabets.

Behavioral Objectives
Behavioral objectives are lists of acts or behaviour that students are supposed to show at the end of instructions. Behavioural objectives are instructional objectives stated in terms of observable behaviours or acts. For example students can draw a triangle or a square with a pencil on a plain paper.

Cognitive Objectives
And cognitive objectives are goals in thinking or comprehension that students are expected to have gained or achieved, as a result of instruction. Instructional objectives are stated in terms of higher level thinking operations: These objectives emphasize that students understand what they have learnt by applying or using the knowledge or information in various ways that they have acquired from the instructions. Psychologists consider a good instructional objective the one which satisfies three criteria: -

1) The objective describes what the required behavior from a student is.
2) The objective describes and lists the conditions under which the described behaviour will occur.
3) It clearly states the criteria for acceptable performance.

The three part learning objective therefore consists of:

1) A student's behavior.
2) Conditions under which the behaviour will be performed and
3) The criteria that will be used for judging the performed behaviour.

Some psychologists recommend and use a two steps approach in defining and stating instructional objectives. That two step approach is to first state in general terms, the objective for instructions. And then in the second step a teacher provides examples and lists behaviours that illustrate the instructional objective. For example a student has carried out a small survey of different kinds of trees that he observed in and around the school. Under the two step approach he first presents his general objective before the class. And then gives details and specific description of the survey, describing different kinds of trees in and around the school. This approach moves from the description the general to the description of the specific. Educational psychologists have found both of these approaches, the three objectives approach and the two

step approach in defining instructional objectives, as quite useful in imparting instructions to students. They leave it up to the class teacher concerned, to adopt and follow one approach or the other.

Different Ways of Learning

One important way of learning or a variable in instructions is seatwork. Seatwork refers to the independent work that students do in the class. Another learning tool is homework, the work assignment that they carry out at their respective homes, where a little or no supervision of work is available to them. Another way of learning is questioning; the teacher questions and the students answer, and learn in this process. And another instructional option available for instructions is of holding group discussion. Group discussion is a conversation in which the teacher does not have a dominant role, but students pose and answer their own questions. So seat work, homework, questions, and group discussion are other instructional options that are available to a teacher to achieve educational objectives.

Lesson 35

TEACHING FOR ACADEMIC LEARNING II

Characteristics of Effective Teachers

One of the important topics in educational psychology relates to effectiveness of a teacher. In other words who is an effective teacher? Are effective teachers born or are they made by knowledge, skill, and practice? When educational psychologists probed the answer to those questions, they came up with some interesting answers. Research and probing showed that effective teachers have some personal qualities that not-so-effective teachers lack. Researchers have identified three of these qualities of effective teachers.

1. Knowledge of the teacher
2. His clarity of thought
3. His warmth for others

Teachers' Knowledge

Do teachers who know more about their subject have a more positive impact on their students? When we look at teachers' knowledge of facts and concepts, as measured by test scores and college grades, the relationship to student learning is unclear and may be indirect. Teachers who know more facts about their subject do not necessarily have students who learn more. But teachers who know more may make clearer presentations and recognize students' difficulties more readily. They are ready for any student questions and do not have to be evasive or vague in their answers.

Clarity and Organization

The second quality of an effective teacher in his clarity of presentations. Research shows that those teachers who make clean presentations and give clear explanations, tend to be more effective in imparting knowledge as compared to other teachers. Research shows that the students of such teachers learn more from such teachers than others. Such teachers are also rated higher than others by their students. So, teacher's knowledge and his clarity and organization of the lesson tend to make them more effective in their roles as teachers.

Warmth and Enthusiasm

The third important characteristic of an effective teacher is his warmth and enthusiasm.Research shows that warm and friendly teachers are generally well liked by students, thus affecting student's involvement in the class and the subject.Warm and enthusiastic teachers tend to get more attention of students and thus tend to become more effective as teachers than others.So knowledge, clarity of expression and enthusiasm are some of the characteristics of effective teachers.

Constructivist Approach

Traditionally teachers set the course of work and impart knowledge to students.However the new way to impart knowledge is to adopt what are called "constructivist approaches", where planning for teaching and imparting knowledge is shared and negotiated.In this approach, teachers and students make collective decisions about the contents, activities, and approaches in teaching.Some psychologists have clearly stated the objectives for such collective decisions on contents, activities and approaches in teaching.The teacher emphasizes the consultation of primary sources, handling of multiple points of view in teaching, becoming close to students and posing questions and solving problem for his students.

The next step in the planning process is to create a learning environment that allows students to move toward these goals in ways that respect their individual interests and abilities. The teacher spends less time planning specific presentations and assignments and more time gathering a variety of resources and facilitating students' learning. The focus is not so much on students' products as on the processes of learning and the thinking behind the products.

Based upon the above, psychologists have come up with six strategies that can make teaching effective:

1. The lesson plans should be well and carefully organized.

2. A teacher should anticipate some difficult parts of the lesson and be ready to resolve the difficulties.
3. Explanations of the lesson should be clear and unambiguous.
4. A teacher should make connections between previous learning and present learning of the students.
5. A teacher should give clear signals to students when transitions are made from one topic to another topic.
6. The teachers should be enthusiastic about teaching and communicate his enthusiasm to his students.

When clarity of expression, high level of relevant knowledge, good lesson organization, warmth and enthusiasm are combined with collective decision making, such approaches make a teacher more effective, as opposed to someone who does not adopt these strategies and approaches.

Lesson 36

TEACHING FOR ACADEMIC LEARNING III

Learning to Read and Write

Educators have long debated the question of meaning based versus sound based teaching approaches.

Meaning based teaching emphasizes that teachers should not dissect words and sentences but should focus on conveying the meaning of the text to the students.

Sound based teaching emphasizes the approaches in teaching that relate to sounds of the words.

Educational psychologists have now however agreed that the best approach in teaching is to make use of both approaches, of phonics and whole language.That is adopting the approach of producing the correct sounds of the words that are taught and also to impart meaning of the words at the same time.

Comprehension Monitoring and Reading: Reciprocal Teaching

Reciprocal teaching is a method based upon making students understand and think deeply about what they read.Educational psychologists agree that in order to make students understand and think deeply four strategies may be adopted by a teacher.

1. The content of a lesson must be summarized for students and then taught.
2. Then students are asked questions about the summarized contents that have been taught to them.
3. Then student's questions are answered and difficult complex parts of the lesson are clarified.
4. And finally anticipating or predicting what will come next in the lecture.

So summarizing, questioning, clarifying and predicting are the four steps in reciprocal teaching.
Research has shown that reciprocal teaching helps students achieve better understanding of their subjects and particularly helps below average students to improve their grades in educational institutions.

Learning Mathematics

In teaching of mathematics educational psychologists emphasize antinomy, reflection and reviewing etc.

Antinomy refers to, in this context, student's commitment to their answers that is they must be able to explain their answers to questions related to the lesson.

Reflection means students can understand and explain the lesson in different ways, what they did, and why did they do that.

Reviewing means going over the solution again and finding the answer to be correct.

So promoting independent ways to provide answers, developing reflection and reviewing the solution are important ways of teaching.

Learning Science

In learning science conceptual change is a method that has been found to be effective. Conceptual change refers to helping students understand rather than simply memorizing concepts. This is done with special reference to teaching of science subjects and involves students going through six stages.

1. Initial discomfort with their own ideas and beliefs.
2. Recognizing and explaining away in consistencies between their ideas and evidence presented to them.
3. Attempts to adjust measurements or observations to fit personal theories.
4. Doubts about new learning.
5. Vacillation and

6. Finally conceptual change that is understanding the concept rather than just memorizing its contents.

Psychologists recommend five guidelines for their types of teaching.

1. Encourage students to voice their own ideas.
2. Help students to see the differences between difficult ideas.
3. Encourage students to test their own responses.
4. Explore student's ideas.
5. Ask students for the first fictions of their ideas.

Adopting conceptual changes makes a better approach in teaching, research shows.

TEACHING FOR SELF-REGULATION, CREATIVITY AND TOLERANCE I

Educational psychologists emphasize self-regulation as a major variable in teaching and learning.

Self-regulation is the process we use to activate and sustain our thoughts, behaviors and emotions in order to reach out goals. In other words what we do to attain our goals in life, including self-learning, learning of new skills, sustaining old skills, self-control and motivating ourselves to attain what we want to attain, is self-regulation.

Psychologists, after experimentation and observation, have identified four factors that contribute to self-regulation. These four factors include: -

1. Knowledge
2. Motivation
3. Volition or will power
4. Family's influence

Let us look at them in some detail.

Knowledge

In reference to **knowledge**, research has shown that a student's self-regulation is influenced by this knowledge of his own self, the subject matter that he is studying or is supposed to study, the strategies that are available to him to study, and matter the subject, and the context where they will need to apply the subject that they are learning.

Motivation

A second factor that influences self-regulation is **motivation** of a student. Research shows that self-regulated students value their learning. They know that by learning about the task at hand they can gain many benefits for them. So they are more interested and determined to discipline themselves and apply themselves to learn.

Will power or volition

Self-regulated students are people who apply high level of **will power or volition** to keep focused at the task at hand and gain maximum benefits from their effort. They know how to protect themselves from distraction and keep themselves focused on the task at hand.

Family's influence

And finally a **family's influence** affects the self-regulated behavior of students. Parents who themselves are self-regulated; bring forth children who show self-regulation. Parents, who encourage self-regulation in their children, facilitate self-regulation in children.

So in summary, it can be stated that self-regulation can be taught by direct teaching, by providing good self-regulated models, by practicing self-regulated behavior and by encouragement and support from parents, family members and teachers.

Creativity

Creativity is defined as the ability to produce original and appropriate work.

Psychologists agree that creativity is domain – specific, that is a person may be creative in a particular area or domain and not necessarily in all aspects of life. Research has shown that creativity in a person, including a teacher or a student, is related to a number of factors that include personality factors, motivations of an individual, his past or back ground experiences, and the social environment in which he works.

Creativity is observed to be related to divergent thinking. Divergent thinking is coming up with many different possible solutions to a given problem, or in a situation. Psychologists have observed that there are three aspects of divergent thinking. They include: -

1. Originality: Divergent thinking is new or original.
2. Fluency: The number of different ways of thinking.
3. Flexibility, The number of different categories of responses.

So students who show different ways of solving a problem, who come up with a number of different responses and who show many categories or groups of responses, show divergent thinking, a sign of creativity.

Brain Storming

Brain storming is the process of generating different ideas without stopping to evaluate the practicality of those ideas. Evaluation, discussion and criticism in a brain storming session are postponed for later. Divergent thinking and brainstorming are usually lead to creativity.

Educational psychologists recommend and emphasize the following to encourage and foster creativity in students:

- Accept and encourage divergent thinking.
- Tolerate dissent, by making sure that nonconforming students get an equal reward and encouragement in class room.
- Encourage students to make their own judgments.
- Emphasize that everyone is capable of being creative in some form.
- Stimulate brain storming and encourage unusual solutions and ideas.

Measurement of Creativity

Measurement of creativity may be difficult; however some psychologists have developed two types of creativity tests; one verbal and the other graphic.

1. In a **verbal test**, for example, a person is instructed to think as many uses of an object as possible.

2. In the **graphic test**, a person might be given a drawing and asked to generate as many different shapes from it as possible.

Assessment of creativity from students may be gauged from the observation of curiosity, high energy and concentration, play fullness, risk taking, willingness to fantasize, intolerance of boredom and daydreaming. All of these are indicators of creativity in students.

Lesson 38

TEACHING FOR SELF-REGULATION CREATIVITY AND TOLERANCE II

Emotional Intelligence

One important concept in recent theories of psychology, which has a great braining on educational psychology, is the concept of Emotional intelligence.

Emotional intelligence has been defined in different ways.

One definition of emotional intelligence is that it is the ability to process emotional information accurately and efficiently. It was psychologist David Goldman who popularized the idea of emotional intelligence or EQ for short. Some psychologists also defined EQ as the ability to understand one's own emotions, the emotions of other around the person, and there to use this information for the welfare and benefit of all concerned.

What is EQ? Psychologists have identified four broad abilities to be the constituent's parts of EQ.

These four abilities includes: -

1. Perceiving emotions
2. Integrating emotions
3. Understanding emotions
4. Managing emotions

Let us explain these four abilities in some detail.

Perceiving Emotions

Perceiving emotions means recognizing emotions. When someone perceives emotions he/she can make good choices and select appropriate behaviors in view of that perception of emotions.
One the other hand if he/she does not perceive and recognize emotions then he/she is liable to make poor choices.

Integrating emotions

Those who can integrate their emotions into their thinking and behavior cope with life more adequately than others.

Understanding Emotions

Those who understand their own emotions and the emotions of others around them respond more adequately and successful than others.

Managing Emotions

And final those who can manage emotions, particularly negative emotions, such as anger, disgust, and hate etc do not become overwhelmed by negative emotions and can cope with themselves much better than others.

Management of emotions may further be explained in terms of four reactions.

1. First proper management of emotions involves focusing one's energies in the proper, appropriate goals and directions.
2. Secondly management involves to persist in doing the right, appropriate thing in spite hindrances, barriers and difficulties.
3. The third thing in that regard is to control ones impulses that may way lay a person form his/her goals.
4. The fourth thing in managing emotions is to be able to delay immediate gratification of one's wishes, desires and impulses.

Those who focus, persist control impulses and delay immediate satisfaction of impulses show high level of emotional management.

Social Skills

Social learning or learning of social skills are very important in learning in schools.Social learning is also related to listening.Research shows that listening is valuable in the class in social relationships and on the job.

Psychologists have identified various techniques of listening which helps in learning, such as

One: You should look at the person you are listening to make eye contact.
Two: Be quiet when you are listening.
Three: Think about what is being said.
Four: Say yes or no, nod your head when you agree or disagree with what is being said.
Fifth: ask appropriate questions about what you are listening to.

Lesson 39

TEACHING FOR SELF-REGULATION, CREATIVITY AND TOLERANCE III

Violence in schools among other factors has diverted the attention of educational psychologists to focus on how compassion and tolerance may be fostered and developed in schools.Educational psychologists have been successful in identifying factors that lead to an absence of compassion and tolerance in schools, and breed violence in schools and society.

Some of the factors that may lead to absence of compassion and toleration include:

- Emotional pathology of students
- Easy access to weapons
- Lack of surveillance/supervision in schools
- Violence depicted in the media
- Violence depicted in the video games

There has been shown to be a direct relationship between violence depicted in media and violence shown by younger generation in real life.There is also a high relationship between children/students viewing violent video games and their violent behavior.

1. One way to curb violence therefore is to curb violent video viewing.
2. Another way to avoid and control violence in schools to teach students the value of compassion and tolerance.

Some psychologists put forward the view that compassion and tolerance should be taught in schools. They feel that compassion and tolerance come from character education.Character education aims at building certain positive qualities in students.These qualities include honesty, wisdom, kindness to others and self-discipline.To achieve these in students, some educational psychologist believe students should be taught moral reasoning, should be imparted with relevant broad knowledge, empathy, that is feeling for others, self-respect, kindness, and to have supportive and democratic attitudes.

This is all the more relevant to Pakistani school education scene, because Pakistan boasts of many diverse cultural units, including Punjabis, Baluchis, Sindhis and Pathans.So since Pakistan is proud to be a multicultural society, in any classroom in Pakistan, one would find cultural diversity amongst students. Thus there is greater need for compassion and tolerance in Pakistani school educational scene.

Strategies for Cooperation

Compassion and tolerance can be taught by direct means, where material related to tolerance is directly taught.It can also be taught by indirect means. We now turn to different strategies that build in structures to both social and cognitive learning.

Jigsaw: One direct method, as developed by some psychologists, is called the "Jigsaw".Jigsaw is a method to develop cooperation and thereby develop tolerance in a diverse classroom situation where each student in the class is responsible for teaching one section of the lesson to another student.Each student therefore has to cooperate with another classmate of different mistral background in order to learn the whole lesson. In this way, students confront complex, real life problems and not simplified worksheets. They learn by doing and teaching others. The students must take positions and argue for them. They may encounter different representations of the same information, i.e., graphs, databases, maps or interviews and have to integrate information from different sources. The students have a good chance of learning how to do library research by actually doing it.

Reciprocal Questioning: Reciprocal questioninginvolves a small group of three/four students asking each other relevant questions about the lesson, thus learning and cooperating at the same time. It requires no

special materials or testing procedures. After a lesson or presentation by the teacher, students work in pairs or triads to ask and answer questions about the material. The teacher question stems then students are taught how to develop specific questions on the lesson material using the generic question stems. The students create questions and then take turns asking and answering. This process has proved more effective than traditional discussion groups because it seems to encourage deeper thinking about the material.

Scripted Cooperation: Another strategy in this context is called "scripted cooperation" wherein students work together on almost any task, including reading a selection of text, solving math problems or editing writing drafts. In reading, for example, both partners read a passage, and then one student gives an oral summary. The other partner comments on the summary, noting omissions or errors. Next the partners work together to elaborate on the information, i.e., create associations, images, mnemonics, ties to previous work, examples, analogies and so on. The partners switch roles of summarizer and listener for the next section of the reading and then continue to take turns until they finish the assignment.

Conflict and Negotiation

Research shows that if students see their schools as places where some students are treated differently than others, then they are discouraged.However when they see personal improvement taking place, where they feel respected, where they feel they are supported by teachers, and when they are given more responsibility by teachers, students are encouraged they are then prepared to cooperate with others and work as a group or community.All groups may experience conflict, so is it within classroom and within schools.

Educational psychologist suggests five ways of dealing with conflicts in this regard.

1. Students jointly define the conflict. Separate the person form the problem and the actions involved, avoid win-lose thinking and get both parties' goals clear.
2. Exchange positions and interests. Present a tentative proposal and make a case for it; listen to the other person's proposal and feelings; and stay flexible and cooperative.
3. Reverse perspectives. See the situation from other person's point of view and reverse roles and argue for that perspective.
4. Invent at least three agreements that allow mutual gain. Brainstorm, focus on goals, think creatively and make sure everyone has power to invent solutions.
5. Reach an integrative agreement. Make sure both sets of goals are met. If all else fails, flip a coin, take turns, or call in a third party, a mediator.

Educational psychologist hold the view that when the above is done a community can be established of students and conflicts can be resolved by following these steps.

- Recognize and respect each other's rights.
- Do not accept violence in any form.
- Clearly define violence of students and others.
- Put strategies and programs for correction of the wrong in to action and operation.

All of the above strategies, research shows help in creating a learning community in the class and the school which then improves creativity and brings about tolerance in school and the class.

Lesson 40

STANDARDIZED TESTINGI

All teaching involves evaluation.**Evaluation** is decision making about student performance and about appropriate teaching strategies in the context of educational psychology.**Measurement** on the other hand is evaluation in quantitative or numbers terms, the numeric description of an event or characteristic. Measurement tells how much, how often or how well by providing scores, ranks or ratings. Measurement also allows a teacher to compare one student's performance on one particular task with either a standard or the performances of the other students.

Evaluation and measurement require the use of numbers and simple and basic statistical techniques.So we need to get familiar with certain statistical terms and techniques in this context.

Standardized Tests

For the purpose of evaluation or measurement, educational psychologists use standardized tests.Standardized tests are tests given under uniform conditions and scored according to uniform procedures to a large number people in a country. Standard methods of developing items, administering the test, scoring it and reporting the scores are all implied by the term standardized test.

What Do Test Scores Mean?

The test publishers provide one or more ways of comparing each student's raw score (number of correct answers) with the norming sample. Let's look at some of the measurements on which comparisons and interpretations are based.

Measurement of Central Tendency and Standard Deviation

A **mean** is simply the arithmetical average of a group of scores. To calculate mean, all the scores are added and divided by the number of people who were tested. This procedure yields a single figure, the mean of the group. The mean offers one way of measuring central tendency, the score that is typical or representative of the whole distribution of scores.

When you have a large number of scores, there is the middle point or middle score of those large numbers of scores.The middle score in a series of score is called the **median**.

In that large number of scores, there might be some scores that occur more frequently than others. The score that occurs most frequently in a series of scores is called the **mode**.

The **standard deviation** is a measure of how widely the scores vary from the mean. The larger the standard deviation, the more spread out the scores in the distribution.

Types of Scores

Percentile rank scores: Another meaningful number in a set of large measurements is the percentile rank. Percentile rank is the percentage of those in a given sample who score at, or below an individual's score.A percentile rank of 50, for example means that a student has scored as much or better than 50% of students in a group or a class.Similarly a percentile rank of 90% means a student has scored as much or better 90% students in a group.

Standard scores: Another useful concept in this context is that of standard scores, these are the scores based upon standard deviation.A very common standard score is called the **z score**.A z score tells us how many standard deviations above or below the average, any given raw score is placed.

Because it is often inconvenient to use negative numbers, other standard scores have been devised to eliminate this difficulty. A ***T* score** is the standard score with a mean of 50 and a standard deviation of 10. Thus a *T* score of 50 indicates average performance.

And last useful concept in this regard is the concept of **stanine scores**.This name comes from "standard nine".Stanine scores are the whole number scores, form one to nine, each number representing a wide range of raw scores.So these can help to categorize a given set of scores into different categories.Each stanine score represents a wide range of raw score thus making categorization of score easy, making teachers and students view another student's score, in more general terms.

We talked about mean, mode, median and standard deviation in relation to student's scores. These calculations not only help categorizing a student on the basis of his scores but also help in giving a single, clear description of a group of students.Percentile ranks, Z score, T score, and stanine score make comparisons among students score more easy and meaningful.

Lesson 41

STANDARDIZED TESTING II

Interpreting Test Scores

Before any test or measurement can be used in the class for the purpose of assessment, the user must make sure that the measure fulfills a number of conditions. Because in this regard one of the most common problem is the misinterpretation of scores.

Three factors are important in developing good tests and interpreting results: reliability, validity and absence of bias.

Reliability

Reliability refers to a high positive correlation in test and retest scores.This may simply be understood in the following manner: -

Suppose you weigh yourself on a weighing machine on Monday morning and your weight comes out to be 120 pounds.Then you weigh yourself again on the same machine on Tuesday at the same place and in the same manner: And your weight comes out to be 400 pounds.Is your weighing machine reliable?Of course not, because a person cannot gain 300 pounds in twenty four hours.However if you weigh yourself on a machine on Monday and your weight is shown to be 100 pounds and then on Tuesday it also shows your weight to be 100 pounds, the weighing machine is reliable because it is showing consistent scores.

Reliability refers therefore to the consistency in test scores.Reliability of a measuring device can also be tested by another method.You may weigh yourself on one weighing machine; your weight comes out to be 100 pounds.Now you might weigh yourself on another weighing machine which has already been tested and found to be reliable.On the second machine your weight comes out to be the same as on the first machine that is 100 pounds.Now because the second machine has proven to be reliable, and your weight on both the machines is same, therefore the first machine is also reliable.This procedure is called alternate form reliability. When you compare and contrast one measuring device with another already proven to be reliable measuring device.

In educational testing, experts also use another method of testing reliability of a test.Let us assume that a test has one hundred items in it.Experts may administer the test to person and then compare his score on first fifty items with his score on the last fifty items.If the scores on first fifty items and the score on later fifty items are very close, or similar, the measuring device is considered reliable.

Validity

Another criterion of a good measuring device is its validity.Validity refers to the degree to which a test measures what it is supposed to measure.If test items are relevant, the test is valid.Experts usually talk about content related validity, criterion related validity, and construct related validity.These are different ways that experts adopt to check the validity of a measuring instrument.

Absence of Bias

Expert also expect that a measuring device must be free of any assessment bias.Assessment bias refers to qualities of an assessment instrument that offend or penalize a person or a group because of gender, race or ethnicity.Therefore experts use tests or measures which do not have any assessment bias.

Types of Standardized Tests

Several kinds of standardized tests are used in schools today. There are three broad categories of standardized tests: achievement, diagnostic and aptitude (including interest).

Achievement Tests: What Has the Student Learned?

The most common standardized tests given to students are achievement tests. These are meant to measure how much a student has learned in a given content area such as reading, comprehension, language usage,

computation, science, social studies, mathematics and logical reasoning. Your students' examination reports during a school or college terms are examples of achievement tests.

Diagnostic What Are the Student's Strengths and Weaknesses?

If teachers want to identify specific learning problems, they may need to refer to results from the various diagnostic tests that have been developed. Most diagnostic tests are given to students individually by a highly trained professional. The goal is usually to identify the specific problems a student is having. Individually administered diagnostic tests identify weaknesses in learning processes. Diagnostic tests may assess or recall, the sequence of symbols, coordination in eye and hand movement, recognition of details in a picture and the like.

Aptitude Tests: How Well Will the Student Do in the Future?

Aptitude tests are meant to measure abilities developed over many years and to predict how well a student will do in the future at learning unfamiliar material.

Lesson 42

STANDARDIZED TESTING III

Preparing for Tests

Those students who prepare themselves to take tests for the purposes of examination and promotion tend to perform better than those who do not take time out for such preparation.Proper preparation includes a number of things that a student may undertake to perform well in a test.

- One such undertaking is getting familiarity with the test material.Those students who are familiar, with the subject matter and have tackled similar materials in preparation, tend to perform better than others.
- The other related matter apart with familiarity with subject in this regard, is being familiar with the testing procedure.There are different testing procedures used by different teachers in different subjects.If the student is well aware and familiar with those procedures apart from his familiarity with the subject matter, then that procedural familiarity will help student perform well in a standard test.
- Research shows that those students who have an extensive experience in taking standardized tests, perform better in such test than others, all other factors, such as preparation, ability etc, being equal.
- Research also shows that a high degree of self confidence helps student perform better in tests.Conversely those students who have low confidence become fearsome, or those who panic in an exam, tend to performance poorly.
- Familiarity with similar questions as included in the exam helps students to perform better than not having familiarity with type of exam questions included in an exam.
- It is also shown during different experiments that brief orientation about how to take a test, and how to take an exam helps students to perform better than before.
- A different set of training regimen may also help students to perform better in exams. One such training module helps to improve general cognitive or thinking skills of students.Those with a trained thinking skills perform better than others.
- Again training in problem solving is another way to improve test scores.Another way to improve performance in exams is to teach or prepare students to carefully analyze questions at hand.This is done by teaching students to carefully consider all aspects of a question and then choosing the answer to it.
- Another technique is to see the relevant details and the irrelevant details of a question, and then address only the relevant ones.
- Another important strategy in this regard is to avoid impulsive answers and to focus on relevant materials to answer.
- And finally checking and rechecking the answer is an important strategy to improve examination performance.

Portfolios

A portfolio is a systematic collection of work, often including work in progress, revisions, student self-analyses and reflections on what the student has learnt. Written work or artistic pieces are common contents of portfolios but students might also include graphs, diagrams, snapshots of displays, peer comments or audio or videotapes, laboratory reports and computer programs, anything that demonstrates learning in the area being taught and assessed.

The following steps may show how a portfolio may be created.

1. A student should be involved in selecting the pieces that will be included in the portfolio.
2. It should include information that shows the student's self reflection and self criticism.
3. It should include a student's, activities and his/her learning.
4. It should show self-growth, improvement in academics, and his school performance.
5. Student should be encouraged and taught to make maintain his portfolios.

If all of the above are undertaken, preparing and keeping portfolios becomes in an important and useful activity in school learning.

Lesson 43

CLASSROOM ASSESSMENT AND GRADINGI

Planning for Testing

Research has shown a number of things about testing students for their academic achievement. Research has also clarified three useful things about testing.

1. Frequent testing encourages retention of information on the part of the students.
2. Tests promote learning if they are given soon after the students have learnt something new.
3. Cumulative testing is a key to effective learning.

Cumulative testing refers to the fact when testing involves presently learned material and previously learnt material.

Unfortunately, the curriculum in many schools is so full that there is little time for frequent test and reviews.

Categories of Tests

Teachers have two broad categories of choices available to them for testing students.

1. Objective testing
2. Essay testing

Objective Testing

Objective testing in relation to teaching in class means that the testing material is not open to many interpretations. It is therefore not subjective, or open to different kinds of answers. Multiple choice questions, matching exercises, true/false, short answers and fill in the blanks are all kinds of objective testing. Scoring of these tests is relatively straightforward compared to the scoring of essay questions because the answers are more clear-cut than essay answers.

Multiple Choice Tests

Multiple choice tests can assess not only recall or recognition, but they also require a student to apply what he/she has learned. When writing a multiple choice test the aim of the teacher is to measure a student's achievement, and not his test taking or guessing skills.

Prerequisites for Objective Test Construction

Teachers must keep the following in mind when making up multiple choice exams.

1. Students should not be tested for their guessing skills.
2. Questions should be simple and clear.
3. The problem in the questions should be stated in positive terms and not in negative terms.
4. Students should not be expected to make very fine choices and distinctions in answer choices.
5. A teacher should avoid exact wording as found in the text book.
6. Categorical words such as always, only, never, should be avoided.
7. The teacher should avoid the over use of such phrases as "all of the above", "none of the above".

Essay Testing

The other choice in testing available to the teacher is using the essay type exam. Essay type exam requires a student to create his/her own answers. However this kind of testing poses a difficulty to the examiner that involves judging the quality of the answer.

Prerequisites for Essay-Type Test Construction

In essay type question, the student should be clearly know what elements he is expected to cover in the answer. The student should know how extensive their answer should be and about how much time they should spend on each question. Time factor in an essay type exam is of crucial importance. Thus students should be given ample time to write the answer. However teachers must keep in mind that time pressure increases a student's anxiety. Therefore adequate time with frequent reminders during an exam must be given to the students.

Educational experts agree that combining essay type with short answer, objective type materials may help students to do well in exams.

Evaluating Essay Tests

One problem with essay type exam is the problem of subjectivity in scoring. It was found in various researches that this problem of subjectivity in scoring was not confined to some subjects, but various subjects. The main difficulties were the individual standards of the grader and the unreliability of scoring procedures.

Subjectivity in scoring can be avoided by: -

- Constructing a proper, good answer.
- Remembering that a good, model answer is one that contains clear statements.
- Marks may be given to good organization of the answer.
- A teacher can have the exam double checked by another teacher without telling him the grades/marks already assigned by him.
- A teacher should make sure that while checking the papers he does not know to whom the paper being checked belongs. Anonymity of the examinee ensures fairness in marking on the part of the teacher.

Lesson 44

CLASSROOM ASSESSMENT AND GRADING II

Educational psychologists agree that assessment of students is one of the most complex tasks of teaching. Teachers in assessing their students need to know a number of things.

1. What the students have learned.
2. What can the students do with their gained/learned knowledge?
3. Teacher should be knowledgeable about the subject matter he/she is assessing students.
4. Teacher needs to be familiar with the purposes of assessment.
5. Teacher needs to know how to assess.
6. Teacher should know the value of assessment in the overall educational effort.
7. Teacher should be familiar with different assessment techniques, i.e., essay type, MCQs, short-answers etc.
8. Teacher must know how assessment affects students.

All of above requires a keen and sensitive mind on the part of the teacher. And it requires an up-to-date knowledge of assessment techniques.

Feedback

Feedback or knowledge of results is a very important factor in teaching. Feedback shows to the students why the students are wrong, if they have erred in answering a question. Showing or pointing out the reasons of students mistakes sensitizes students towards committing mistakes and helps them in future to avoid making mistakes/errors. Experts are often asked what are the most effective ways of providing feedback to students.

Strategies of Effective Feedback

There are some strategies of effective feedback. Feedback should

1. be provided in written comments.
2. be personalized rather than impersonal.
3. include constructive criticism, should not criticize for the sake of criticism, but with the purpose of effecting improvement in the performance of a student.
4. contain specific comments on errors committed by the student.
5. point out and comment upon faulty strategies adopted by students for writing the answers.
6. contain suggestions on how to improve.
7. include comments on positive aspects must also be a part of the feedback.

Grades and Motivation

Educators now agree that assessment should be done in such a way that it motivates students to learn, to know and not only to achieve high grades.

Educators have also been interested in knowing if there is a difference between working to achieve a grade, and working to know. The answer lies, they feel, in the fact how a teacher grades his students. If the teacher only tests superficial, simple knowledge of his students, without making an effort to check the depth and details of knowledge of his students, then students are less motivated to learn and more motivated to achieve high grades. The aim of the teacher should also be motivating students to learn and not only to score higher grades.

Fear of Failure

Research shows that high grades may encourage students where as low grades discourage them to put in extra effort at work. Research also shows that fear of failure affects motivation and student input, but fear of failure can have both negative and positive effects, depending upon the personality of students and situational factors. Fear of failure can motivate students to put in extra effort to avoid failure and it can also, in some cases, be counterproductive and de-motivate students to work harder.

Improving Academic Achievement

Experts recommend different ways of improving academic achievement of students: They include:

- Teachers should avoid high praise for work of students that strictly confirms to text book answers.
- Give the students a fair chance, especially in the beginning of a course, to be successful.
- Make the grades as meaningful as possible.
- Create a balance between oral and written feedback.
- Judge students and award grades on more than one criterion.

When teachers undertake all of the above they help students to be highly motivated and to learn purposefully.

Lesson 45

CLASSROOM ASSESSMENT AND GRADING III

While assessing students a teacher has two types of standards to follow and emulate. He can choose anyone of the criterion to assess and grade students. The first one of those two is what is called norm referenced grading.

Norm Referenced Grading

Norm referenced grading refers to the fact when a teacher assesses his students in relation to one another. A student compares and contrasts anyone students score in an exam with the score of another student. If a student studies very hard and almost everyone else does too, the student may receive a disappointing grade, perhaps a C or D. However one big disadvantage of this type of grading or scoring that it damages relationships between students. Some students may become resentful to other students with whom their score or grade is being compared and contrasted.

Grading on the Curve

Some teachers may also use what is termed as **grading on the curve**. This is a variation of norm referenced grading that compares a student's score on a test with the average group or class score. It fixes the average score and then compares a given student's score against that average score.

Percentage Grading System

Teacher can assign grades based on how much knowledge each student has mastered, what percentage of the total knowledge he or she understand. To do this, the teacher might score tests and other class work with percentage scores (based on how much is correct, 50%, 85% etc.) and then average these scores to reach a course score. These scores can them be converted into letter grades according to predetermined cutoffs. Any number of students can earn any grade. This procedure is very common. You may have experienced it yourself as a student.

While grading, teachers must keep in mind the influence of what is called **Halo effect**. Halo effect refers to a general tendency on the part of a teacher to grade or assign marks on a test to a student based upon the teacher's impression of the student rather than his actual performance on a test. Halo effect may be positive or negative. It is positive when more marks are given on the basis of impression and it is negative when marks may be deducted on the basis of negative impression of a student. The teacher needs to be careful and try to avoid both of these tendencies.

Once the students are graded these grades have to be conveyed to the parents, teachers, and other students.

Beyond Grading: Communication

While communicating the teacher must keep the following in mind.

- The student's files/report cards must be appropriate.
- The reports cards must be accurate.
- The report cards must be supported by evidence.
- The report cards must be appropriate, such that the result must be communicated in non-technical easy terms for parents to understand.
- Notes attached to report cards.
- Phone calls that may convey important news and views to parents and guardians.
- The result may be put on school or class web pages for parents/guardians.
- Student portfolios may be exhibited for parents/guardians to see.
- Result can be conveyed through open houses.
- And finally in special cases school teachers may carry out home visits to student's houses, when some disability may prevent parents/guardian to meet with teachers.

Important Things about Conveying the Results

Experts recommend that while conveying results the teachers should

- Plan ahead for such communication
- Begin communication on a positive note
- Listen to parents/guardians carefully
- Plan and carryout follow-up contacts
- End on a positive statement

The more a teacher follows the above recommendations the more helpful and successful he will be.