M.A. Part-I Education
Paper - II
Advanced Educational Psychology

Dr. Suhas Pednekar
Vice-Chancellor
University of Mumbai,
Mumbai

Dr. Dhaneswar Harichandan
Director Incharge,
Institure of Distance & Open Learning,
University of Mumbai, Mumbai

Anil R Bankar
Associate Prof. of History & Asst. Director &
Incharge Study Material Section,
IDOL, University of Mumbai

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- Role and application of psychology in education
- Understanding learner diversity
- Managing classroom behavior

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MODULE- I
ROLE AND APPLICATION OF PSYCHOLOGY IN EDUCATION

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PSYCHOLOGY AND EDUCATION

Unit Structure:

1.0 Objectives
1.1 Introduction
1.2 Concept of Psychology and Educational Psychology.
1.3 Contribution of Educational Psychology to the teaching process
1.4 Scope of Educational Psychology
1.5 Contribution of various Schools of Psychology
1.6 Let us Sum up

1.0 OBJECTIVES :

After reading this unit, you will be able to

• Define Psychology and Educational Psychology.

• State the key features of Behavioristic School of Psychology.

• State the key features of Humanistic School of Psychology.

• State the key features of Psychodynamic School of Psychology

• State the key features of Cognitive School of Psychology

• State the key features of Neurobiological School of Psychology

• Explain the Scope and contribution of Educational Psychology to the Teaching process.

1.1 INTRODUCTION :

The earliest origin of Psychology is in the writings of the ancient Greek philosophers about the nature of life, particularly to writings of Aristotle. Aristotle was born in 384 B.C., was interested in learning everything he could about the nature of life itself. Aristotle used the term 'psyche' to refer to the essence of life. This

term is translated from Greek to mean "mind". Indeed, the term Psychology comes from Aristotle's word 'psyche' plus the Greek word 'logos', which means "the study of". Thus, Aristotle was the first one launched the study of life that evolved later into the modern Science Psychology.

1.2 CONCEPT OF PSYCHOLOGY AND EDUCATIONAL PSYCHOLOGY :

Definition of Psychology:

Psychology is defined as the science of behavior and mental processes. This definition contains key terms – Science, Behavior and Mental processes. Psychology is considered to be a science because psychologists attempt to understand people through careful, controlled observation. The term behaviour refers to a person's overt actions that others can directly observe. The term mental processes refer to the private thoughts, emotions, feelings and motives that others cannot directly observe i.e. the covert behavior. So today, Psychology is defined as the Science of behaviour and cognitive processes.

What is Educational Psychology?

Educational Psychology is one of the many branches of Psychology dealing mainly with the problems, process and products of education. It is an attempt to apply the knowledge of Psychology in the field of education. Educational Psychology may be defined as that branch of Psychology which studies the behaviour of the learner in relation to his educational needs and his environment. Skinner defines Educational Psychology as that branch of Psychology which deals with teaching and learning.

1.3 CONTRIBUTION OF EDUCATIONAL PSYCHOLOGY TO THE TEACHING PROCESS :

Education aims at shaping the behaviour of the students in a desirable way and bringing about all-round development in their personality. This task is carried out through the process of formal and informal teaching and learning. Educational Psychology helps in the process of teaching and learning by adopting the scientific principle. Educational Psychology helps a teacher in the following way:

➢ A teacher can teach effectively by making minimum use of his energy in terms of time and labor.

➢ The students can learn effectively by spending less of their time and effort.

➢ Helps to carry out the processes and produce the results of education.

➢ It supplies the necessary knowledge and skills, especially for the teacher to realize the objectives of education.

➢ It equips the teacher with essential scientific skills, technological expertise and advice in moulding and shaping the behaviour of the students.

Educational Psychology thus plays the same role as other sciences and technology in helping the teachers and other persons connected with the building of the future of the youngsters in their charge. Thus, Educational Psychology can be described as the science and technology of Education.

1.4 SCOPE OF EDUCATIONAL PSYCHOLOGY :

In Psychology the scope of study and the fields of operation are extended to cover the behaviour of all living organisms related to all their life activities, whereas, in Educational Psychology, the scope of such behavioural study has to be limited within the confines of the teaching-learning process, i.e. studying the behaviour of the learner in relation to their educational environmental, specifically for the satisfaction of their educational needs and the all round development of their personality. Therefore, the subject matter of Educational Psychology must be centered on the process of teaching and learning for enabling the teacher and learners to do their jobs as satisfactorily as possible. The educative process includes the following areas of education of the learner:

1. Teacher:
Teacher's role is very crucial in the task of behavioral modification and personality development of number of children studying in a class. Much depends on the competency and capability of the teacher for carrying out the desired task. For this purpose, the teacher must pay attention to the following aspects which have been included in the text of educational Psychology:

• Personality traits and characteristics of good teachers.

• Duties and responsibilities of a teacher.

- Measures for knowing and doing away with personal conflicts, anxiety and tension.

- Teacher's motivation, level of aspiration, adjustment and mental health.

2. Learner:

Before the learner is taught, his individuality and personality should be known. Therefore, topics like the following should be included which will be helpful in exploring the individual's life, viz;

- Learner's instincts and other innate abilities.

- The learned and acquired abilities.

- Individual differences in terms of abilities and capacities.

- Their interests, aptitudes, attitudes, intelligence and creativity.

- Mental health and personality.

All these are important for personality appraisal.

3. Learning process:

The subject matter of educational Psychology thus covers the topics helpful in suggesting principles, methods and techniques for the selection of the learning experiences appropriate to each development stage of the children. It enunciates how to organize the contents or topics grade-wise for giving them the shape of a syllabus or curriculum; even how to cater to the individual differences and individuality of the children in framing the syllabi or curricula is also taken care by educational Psychology. The subject tries to encompass the essential knowledge and skills for equipping the teachers to plan, select and arrange learning experiences to the children suitable for their age, grade and also meeting their specific individual potentialities. It must include the topics and contents which are specifically meant for improving the processes and products of education mainly centered on the teaching- learning process. As a result its study involves the following topics:

- Psychology of learning

- Motivation of learning

- Factors affecting learning

- Transfer of learning / training

- Sensation, perception and concept formation.

- Interest and attitude formation

- Thinking, reasoning and problem solving behavior etc.

4. Learning Environment:

Educational Psychology helps the teacher and the learners to understand the suitability and appropriateness of a teaching - learning situation for the effective realization of the teaching - learning objectives. Educational Psychology plays its role in deciding the type of learning experiences suitable for the children at each developmental stage by keeping in view the differences in their potentialities. Every environmental situation is not suitable for a particular piece of instruction or the sharing of a learning experience. The effectiveness of a teaching - learning programme depends largely on the suitability of the teaching - learning situations in terms of time, place and other environmental factors. Educational Psychology helps in taking into account the following :

- Classroom climate
- Institutional/ Organizational climate
- Group behaviour and group dynamics
- Role of rewards and punishment
- Guidance and Counseling

5. Learning Resources:

Although Educational Psychology does not connect itself directly with the problem of what to teach or what learning experiences or resources are to be provided for the learner yet it has the full responsibility of suggesting techniques of acquiring the learning resources. Once the task of Educational Philosophy to decide the aims and objectives of a piece of instruction at a particular stage is finished, the need of educational Psychology is felt. At this stage, Educational Psychology helps in deciding what learning resources are desirable at what stage of the growth and development of the learner so that these experiences can be acquired with a greater ease and satisfaction. In this area Educational Psychology has the subject matter which deals with the knowledge and principles of Psychology which facilitates the selection of the desirable learning resources for the learner. Educational Psychology helps in taking into account in organizing the following:

- Print media - books, newspapers, magazines
- Audio - Visual- television, films
- Multimedia – Computers (online & off line)
- Museum, Visits, Exhibitions, etc.

Educational Psychology is a continuously growing discipline adding new dimensions to its field of study. However, its scope may be considered extensive in the sense that all that is needed for

providing solutions to the problems and demands of the dynamic educational system must find place in the study of educational Psychology.

Check your progress:

1) Discuss the scope of educational Psychology.

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1.5   CONTRIBUTION OF VARIOUS SCHOOLS OF PSYCHOLOGY :

(a) Behavioristic School of Psychology

Behaviorism as a method of studying behaviour focused its attention totally on the overt or observable behavior. The theory of behaviorism as propagated by Watson was in fact based on the finding of the Russian psychologist Ivan Pavlov (1849-1936), the propagator of the theory of Classical Conditioning. Behaviorism tried to project human beings as little more than rather complex machines which respond in a particular fashion to a particular kind of stimulus. The behaviour of an individual may thus be supported to be controlled by environmental forces, and not by hereditary inducements or innate differences. His strong convictions about the stimulus response automatization and environmental influences made Watson assert boldly in 1926:

"Give me a dozen healthy infants, well informed and my own special world to bring them up in and I will guarantee to take anyone at random and train him to become any type of specialist I might select – Doctor, lawyer, artist…..." (Watson 1924).

The doctrine of behaviorism propounded by Watson and his disciples, thus, ushered a new era in the field of Psychology by making it somewhat materialistic, hedonistic, and objective like most of the physical and natural Science subjected to criticism and has been modified and refined by contemporary Psychology.

> Behavioristic approach is the analysis of how learning occurs based upon rewards and punishment. It studies the objective, observable environmental influences on behavior and treating people with overt problems (observable behavioral problems.

Criticism

- ✓ Watson advocated Science of Psychology that included only overt behavior and made attempt to study mental processes.
- ✓ It gives lot of importance to environment and neglects biological factors in behavior.
- ✓ Behaviorism tried to project human beings as little more than rather complex machines.

Contribution to Education

- ✓ Behaviorism revolutionized all the programs and methods related to Education.
- ✓ Behaviorism advocates the use of reinforcement and rewards (in the place of punishment and unpleasant behavior) as inducement for the acquisition of desirable behavior and for giving up the undesirable behavior.
- ✓ It highlighted the role of motivation and environment in shaping and modifying the behavior of children.
- ✓ Behaviorism gave rise to new ideas and innovations in the field of learning and instruction like programmed learning involving teaching individualized self instructional programmes involving teaching machines and Computer Assisted Instruction (CAI).

Check your progress:

1) "Psychologists should worry only about behaviour that is directly observable." Discuss the psychological perspective suggested in this statement.

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(b) Psychodynamic School of Psychology

Psychodynamic approach is based on the idea that mental disorders stem primarily from the kind of hidden inner conflicts first described by Freud – for instance, conflicts between our primitive sexual and aggressive urges (id impulses) and the ego. More specifically, psychodynamic therapies assume that mental disorders occur because something has gone seriously wrong in the balance between these inner forces, several forms of therapy are based on these assumptions, but the most famous is psychoanalysis, the approach developed by Freud. Freud claimed that the mind is made up of three parts: the conscious, the preconscious and the unconscious. It is the unconscious mind, which determines most of our behavior. He also showed that personality is made up of three parts – the id, the ego and the super ego.

- The Id is the primitive, uncivilized impulses demanding pleasures at all costs.

- The Ego is rational, realistic and consciously cultivated by an individual.

- The Super Ego represents the moral frame of reference and transforms the Id to suit the culture and convention prevalent in society. It is the super ego that places constraints on behavior, and uses the feelings of pride and guilt to achieve compliance.

Psychosexual Stages of Development: Freud held the view that every transition in all the stages from infancy to adult results in specific modes of need-gratification. One has to be constantly changing and modifying the ways of satisfying desires otherwise stagnation on regression may occur.

According to Freud, psychological development takes place in a series of fixed psychosexual stages. The stages are:
- ❖ Oral (0-18 months)
- ❖ Anal (18-36 months)
- ❖ Phallic (3-6 years)
- ❖ Latent (6 years – puberty)
- ❖ Genital (puberty onwards)

Freud gave the following important concepts :
Repression: is a process of pushing the unwelcome thoughts to the deeper region of the unconscious. The repressed thoughts form a cluster to become complexes and erupt upon the surface.

Catharsis: A catharsis is an emotional release. According to psychodynamic theory, this emotional release is linked to a need to release unconscious conflicts.

Libido: Freud uses the term Libido to represent the energy of instincts.

Sublimation: It is a process of channeling aggressive impulses toward socially acceptable and culturally valued activities.

Electra complex: refers to the attraction of daughter to father.

Oedipus complex: refers to the attraction of son to mother.

Freud also analyzed dreams to interpret the thought processes of individuals. According to him dream is a kind of wish-fulfillment to gratify those desires that cannot be done in real life.

> Psychodynamic approach is based on the belief that childhood experiences greatly influence the development of later personality traits and psychological problems. It focuses on conflicts between what people believe to be acceptable behavior and their unacceptable motives (sex and aggression). These motives are what lead to behavior and are hidden in the unconscious, outside of our awareness.

Criticism

- It has been suggested (Jones and Elock, 2001) that psychoanalysis has had a limited impact on scientific Psychology. This is because psychoanalysis is widely seen as unscientific. In addition, Freud's research is seen as being methodologically poor, being based on a small number of individual cases.

- It treats mankind to be selfish, pleasure seeking and animal-like rather than social and humane. This is not the only thing. Man is also a social being and can make sacrifices and live for others.

- It overemphasizes the role of sex in human life. Freud reduces human behavior to the function of a single unitary motive, i.e. the sex motive. The complex human behavior cannot be interpreted in such a generalized unitary fashion. There are so many motives

or urges that play important role in determining human behavior at a particular time in a particular situation.

- It attaches too much importance to the role of unconscious as a determinant of behavior. According to Freud, unconscious mind is responsible for giving birth to many conflicts, tensions and mental illness. This cannot be always true. The unconscious can play constructive role in life in terms of creation, sacrifice and striving for the higher ideals.

- Freud overemphasized the role of early childhood experiences for setting out the course of one's life as well as one's overall personality. However, this is not true as later life experiences in adulthood also play vital role in shaping the personality.

Contribution to Education

✓ Freud gave an impetus to the movement of early childhood education, incorporating the giving of maximum freedom to children for expression of their biological urges and minimum interference in the course of their natural growth and development.

✓ The discovery of the unconscious and its importance in determining behavior has helped in determining the causes of behavioral deviations. In education, this has helped in understanding the children, and the taking of all possible precautionary measures for preventing their becoming mal-adjusted personalities.

✓ Freud's system of psychoanalysis has called for the provision of proper extra-curricular activities and suitable hobbies etc in the school programmes for the release of repressed or blocked libidinal energy and pent-up feelings.

✓ Freud's emphasis on the role of sex in one's life has brought out the necessity of providing proper sex education to children.

Check your progress:

1) Explain how psychoanalytic approach can be used in explaining the abnormal behaviour of an individual.

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(c) Humanistic School of Psychology

Humanistic Psychology was developed in the 1950s in reaction to both Behaviorism and psychoanalysis. By using phenomenology, inter-subjectivity and first-person categories, the humanistic approach sought to glimpse the whole person—not just the fragmented parts of the personality or cognitive functioning. Some of the founders of this school of thought were American psychologists Abraham Maslow, who formulated a hierarchy of human needs, and Carl Rogers, who created and developed client-centered therapy; and German-American psychiatrist Fritz Perls, who co-founded Gestalt therapy.

Key Features

- ❖ It is explicitly concerned with the human dimension of Psychology and the human context for the development of psychological theory. This is part of the field's "human science" approach to Psychology and involves an emphasis on the actual experience of persons.

- ❖ The theorists focused on the depth of the human psyche, which, they stressed, must be combined with those of the conscious mind in order to produce a healthy human personality.

- ❖ Humanism focused on fundamentally and uniquely human issues, such as self-identity, death, aloneness, freedom, and meaning.

- ❖ The Humanistic approach was distinguished by its emphasis on subjective meaning, rejection of determinism, and concern for positive growth rather than pathology.

- ❖ Humanistic Psychology focused on uniquely human issues, such as the self, self-actualization, health, hope, love, creativity, nature, being, becoming, individuality, and meaning—that is, the understanding of "the personal nature of the human experience".

Humanistic approach emphasizes on individual freedom in directing one's future. This approach developed in part as a result of Maslow's dissatisfaction with psychoanalysis and behaviorism. According to this approach all individuals strive to grow, develop and move toward self-actualization. It stresses on free-will, self-actualization and that human nature is naturally positive and growth seeking.

Criticism

- Often seen as too subjective; the importance of individual experience makes it difficult to objectively study and measure humanistic phenomena.

- Observations are unverifiable—there is no accurate way to measure or quantify these qualities.

Contribution to Education

✓ Humanistic Psychology includes several approaches to counseling and therapy.

✓ Humanistic Psychology theory of Abraham Maslow, emphasizing a hierarchy of needs and motivations.

✓ Humanistic Psychology is centered on the student's capacity for self-direction and understanding of their own development.

✓ Self-help is also included in humanistic Psychology.

✓ Humanistic Psychology tends to look beyond the medical model of Psychology in order to open up a non-pathological view of the person.

✓ Humanistic Psychology offers a new set of values for approaching an understanding of human nature and the human condition.

✓ Humanistic Psychology offers an expanded horizon of methods of inquiry in the study of human behavior.

✓ It offers a broader range of more effective methods in the professional practice of psychotherapy.

✓ Emphasizes the role of the individual; humanistic Psychology gives more credit to the individual in controlling and determining their state of mental health.

✓ Takes environmental influence into account; rather than focusing solely on our internal thoughts and desires, Humanistic Psychology also credits the environment's influence on our experiences.

✓ Humanistic Psychology continues to influence therapy, education, healthcare, and other areas.

✓ Humanistic Psychology helped remove some of the stigma attached to therapy, and made it more acceptable for normal, healthy individuals to explore their abilities and potential through therapy.

Check your progress:

1) "Humanistic Psychology emerged as a protest against both Behaviorism and Psychoanalysis." Comment.

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(d) Cognitive School of Psychology

Cognitive Psychology is one of the more recent additions to psychological research, having only developed as a separate area within the discipline since the late 1950s and early 1960s. It had its foundations in the work of Wilhelm Wundt, Gestalt Psychology of Max Wertheimer, Wolfgang Köhler, and Kurt Koffka, and in the work of Jean Piaget, who provided a theory of stages/phases that describe children's cognitive development. Ulric Neisser coined the term 'cognitive Psychology' and defined it as characterizing people as dynamic information-processing systems whose mental operations might be described in computational terms. Cognitive Psychology has its roots in the cognitive outlook of the Gestaltists. The names of psychologists Tolman and Piaget are also associated with the propagation of the ideas of this school of thought.

Cognitive Psychology mainly studies man's thinking, memory. Language, development,perception, imagery and other mental processes in order to peep into the higher human mental functions like insight, creativity and problem solving. Cognitive psychologists are totally opposed to the stimulus-response approach of the behaviorists.

Key Features

❖ Cognitive Psychology is a discipline within Psychology that investigates the internal mental processes of thought such as visual processing, memory, problem solving, and language.

❖ The school of thought arising from this approach is known as cognitivism which is interested in how people mentally represent information processing.

❖ It highlights the role of man's higher cognitive abilities and capacities to adapt to his environment and lays stress on studying

the cognitive development and functioning of a man through his behaviour.

❖ The cognitive approach attempts to understand the nature of human thought and intelligence.

❖ The term "cognition" refers to all processes by which the sensory input is transformed, reduced, elaborated, stored, recovered, and used.

❖ Cognitive Psychology presents the system's viewpoint to explain the behavioural mechanism. In this system, whatever is conveyed through stimuli in the environment is the 'input'. The cognitive functioning of the human mind is the 'process' and the result of the cognitive functioning is the 'output' or the 'product'.

❖ It is concerned with these processes even when they operate in the absence of relevant stimulation, as in images and hallucinations.

Cognitive Psychology is radically different from previous psychological approaches in two key ways:

• It accepts the use of the scientific method, and generally rejects introspection as a valid method of investigation, unlike symbol-driven approaches such as Freudian Psychology.

• It explicitly acknowledges the existence of internal mental states (such as belief, desire and motivation) unlike Behaviorist Psychology.

Cognitive Psychology studies cognition, the mental processes underlying mental activity, perception, learning, problem solving, reasoning, thinking, memory, attention, language and emotions. As the cognitive approach in Psychology is a relatively modern approach to human behaviour, the focus therefore is on how we think; with the belief that such thought processes affect the way in which we behave (other approaches take other factors into account, such as the biological approach, which acknowledges the influences of genetics and chemical imbalances on our behaviour).

> Cognitive approach focuses on how we process, store and use information. It emphasizes on perception, memory, imagery, concept formation, problem solving, reasoning, decision making and language. It focuses on information processing approach, gathering information, processing it and producing a response.

Criticism

One of the difficulties related to cognitivism has to do with the many different ways in which cognitive Psychology (or cognitivism) is discussed.

Contribution to Education

Because cognitive Psychology touches on many other disciplines, people in a number of different fields often study this branch of Psychology. The following are just a few benefits from studying Cognitive Psychology:

✓ The core focus of Cognitive Psychology is on how people acquire, process, and store information.

✓ There are numerous practical applications of cognitive Psychology, such as ways to improve memory, how to increase decision-making accuracy, and how to structure educational curriculums to enhance learning.

✓ It is beneficial to students interested in behavioral neuroscience, linguistics, industrial-organizational Psychology, artificial intelligence and other related areas.

✓ Teachers, educators and curriculum designers can be benefited by learning more about how people process, learn, and remember information through cognitive Psychology.

✓ With the work of Jean Piaget and other influential cognitive psychologists, educators and psychologists have gained deeper insight into student learning and the ways in which the testing of misperceptions help young people refine their thinking and eventually arrive at more objective truth. Under behaviorism the appropriate response to mistakes and un-truths was to use extinction to get rid of the wrong behavior. In Cognitive Psychology those mistakes can be by themselves important steps to gaining a deeper and more accurate understanding of life. This has a great impact on the ways in which educators approach teaching, and helps teachers to redefine the objectives of classroom activity and important ways.

✓ Engineers, scientists, artists, architects and designers can all benefit from understanding internal mental states and processes.

Check your progress:
1) Critically examine the Cognitive Approach and its contribution to education.

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(e) Neurobiological School of Psychology

Neurobiological approach is basically a sub- branch of biological perspective towards Psychology. Psychologists have long been interested in the relationship between our psychological nature and our biological nature, particularly our brains. Spanish scientist Cajal first identified neurons- the cells that make up the brain and nervous system – in the early 1900s. His view that the brain was made up of a network of interacting neural cells laid the foundation for our modern understanding of the role of the brain in Psychology. Thus the areas of emotional and motor memory, vision and higher mental processes are the examples of this new understanding. Progress in all of these areas has been swift and impressive, but much needs to be done to reveal the mechanism of the cognition at the local circuit and molecular levels. This work will require new methods to control gene expression in higher animals and in studying the interactions between neurons at multiple levels.

Psychologists who approach the science from a biological perspective are interested in the areas of the brain that play roles in emotion, reasoning, speaking and other psychological processes. In human beings, feelings triggered by the neuro-chemicals are displayed as emotion cues. E.g. the human emotion of love is proposed to have evolved from the neuro-chemicals (paleocircuits) which facilitate the care, feeding and grooming of offspring. The English word 'emotion' is derived from the French word _emouvoir_. This is based on Latin _emovere_, where _e-_ means _'out'_ and _movere_ means _'move'_. The related term "motivation" is also derived from _movere_. An emotion is a mental and physiological state associated with a wide variety of feelings, thoughts and behaviour. Emotions are subjective experiences, often associated with mood, temperament, personality and disposition. Based on the discoveries made through neural mapping of the limbic system, the neurobiological explanation of human emotion is that emotion is a

pleasant or unpleasant mental state organized in the limbic system. Emotions occur due to neuro-chemicals which step- up or step – down the brains activity level as visible in body movement, gestures and postures.

Key Features

- The Neurobiological Approach in Psychology is defined as viewing behaviour as the result of nervous system functions and biology.
- It is a more scientific way of looking at Psychology.
- It is the study of the relationship between human behavior and the nervous system.
- The Neurobiological Approach which seeks to specify the neural and endocrine events that underlie behaviour and mental processes.
- The Neurobiological Approach focuses on how the body reacts to the environment, the obvious physical changes and processes the body creates under specific conditions.
- Thus, their understanding of personality disorders and anti-social behaviour would be that there is something wrong with the physical part of the brain, perhaps a chemical imbalance or nerves that are not firing correctly.
- Neurobiological psychologists would treat these disorders with medication.

> Neurobiological Approach emphasizes is on sensation, perception, learning, memory, language, sexuality and abnormal behavior. It focuses on genetics and biological processes in the brain and other parts of the nervous system.
>
> It studies the structure and function of nerve cells, the brain and the nervous system and how this contributes to behavior.

Criticism

The field of neuro-Psychology, which studies the brain and the connected nervous system, has been an outgrowth of this contemporary focus on biological explanations of human thought and behavior. The disadvantage to this perspective is that it does

NOT explain Psychology thoroughly. Each individual's emotions and thinking processes involve more than "brain waves" or "chemical triggers in the blood," such as the reality of external environmental events that trigger the anger in the first place.

Contribution to Education

✓ This is a scientific approach to learning that relates behavior to the electrical and chemical events taking place inside the body.

✓ It emphasizes the need to understand activities within the brain and nervous system. Together their effect upon behavioral and mental processes.

✓ Cotton (1995) argues that this approach is very helpful for understanding learning. In particular, it emphasizes the need to be aware of the sensitivity of, for example, the ears, eyes and noses.

✓ It also enables the teacher/lecturer to decide on how to attract and maintain attention, since it provides an understanding of how the brain functions – including channels of communication and processing of information.

✓ Useful knowledge about information processing which is central to other approaches to learning (e.g. the cognitive approach) is based on physiological data.

✓ Additionally, most of the advances in the scientific understanding of memory, brain processes and resulting behavior are also of direct use to other approaches to learning.

Check your progress:

1) Explain how the study of Neurobiological Approach contributes in studying the behaviour of the learner.

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1.6   LET US SUM UP

✓ **Behaviouristic approach** was founded in the last 19th Century hitting its peak in the 1920's through the 1950's. Important contributors include Ivan Pavlov (1905), John Watson (1920's),

and B.F. Skinner (1950's). It is based on the idea that all behaviour is learned and that humans are a product of the learning environment.

✓ **Psychodynamic approach** is the first modern school of Psychology to emerge and it emphasized the importance of unconscious forces in the behaviour of humans. Important contributors include Sigmund Freud. Psychoanalysis is a deterministic model and has significant problems with regard to observation and whether or not the theory can be tested, i.e., "Is the theory falsifiable?" Freud has had a profound influence on the entire field of Psychology, sociology, criminal justice, and modern life in general!

✓ **Humanistic approach** to Psychology is a very broad field that encompasses many psychological theories. Important contributors include Carl Rogers and Abraham Maslow. They all, however, emphasize the importance of free will and the human condition. One major contribution is the development of psychological techniques. These theories are in stark contrast to both behaviourism and psychoanalysis.

✓ **Cognitive approach** of Psychology emphasizes the importance of mental activities, symbolic processing, learning, memory, thinking, and perception in normal and abnormal states. Important contributors include Ulric Neisser, Max Wertheimer, Wolfgang Köhler, and Kurt Koffka, Jean Piaget, Albert Ellis, Albert Bandura, Robert Sternberg and Howard Gardner.

✓ **Neurobiological approach** is the most recent school of Psychology and suggests that all behaviour is rooted, in some way, to the functioning of the nervous system. Important contributors include Johannes Muller, Karl Lashley, David Hubel, James Olds, Roger Sperry and Candice Pert (1st female). If we understand the nervous system then we can understand how all behaviour emerges! This field is growing so quickly that it is difficult to keep up with the literature. Neurobiological approach appears to be replacing traditional Psychology programs.

Check Your Progress :

1. Describe the salient features of the different schools of Psychology.

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THEORIES OF LEARNING
2A: BEHAVIOURIST THEORIES
2B: COGNITIVIST THEORIES

Unit Structure

2.0   OBJECTIVES :

After reading this unit you will be able to:

- Explain classical conditioning theory of learning and operant conditioning theory of learning.

- Differentiate between classical conditioning and operant conditioning theory of learning.

- Describe the principles of Gagne's theory of learning, Ausubel's theory of meaningful learning and Bruner's theory of learning.

- Explain information processing theory of learning and use of metacognition in learning.

2.1   INTRODUCTION :

Learning is universal in nature. All organisms both human and animal learn according to their capacity. But human being can learn any types of act, may be simple or complex, because human being is endowed with mental qualities like intelligence, reasoning, thinking, problem solving etc. Learning is a life long process, we learn from birth to death. Then what is learning, how it occurs, what are the suitable conditions for learning etc are pertinent questions that need to be answered in order to understand learning. Different

Schools of Psychology answered these questions differently. They proposed different theories of learning. The theory of learning can be classified into;

1. Behaviorist theory of learning; Classical conditioning, Operant conditioning etc

2. Cognitivist theory of learning: Gagne's theory of learning, Ausubel's theory of meaningful learning and Bruner theory of learning etc

3. Information theory of learning; metacognition etc

2.2 (A) BEHAVIORIST THEORIES OF LEARNING :

A) CLASSICAL CONDITIONING

This theory was developed by Ivan P. Pavlov (1849-1936), a Russian physiologist around the turn of 19th century. He was initially interested in studying the process of gastric secretion in dogs and received the Nobel Prize for this work. In studying the dog's digestive process, he noted that the dog salivating not only at the sight of food but also at the sight of bowl, the experimenter and sound. Pavlov at first called these responses as Psychic secretions that is distinguishable from original ones. Realizing the significance of such event, he changed the focus of his research from physiological to psychological process.

PAVLOV'S EXPERIMENT:

It is better to clarify basic terms such as Unconditioned stimulus (US), Unconditioned response (UR), Conditioned stimulus (CS) and Conditioned response (CR) used by Pavlov in his experiment before explaining the experiment. Salivation in response to food placed in the mouth is a natural, unlearned response-in short, a reflex. Thus this response was called Unconditioned response. The food is called unconditioned stimulus as it elicited the unconditioned response. When Pavlov repeated presentation of the bell followed by food led the dog to salivate in response to the bell alone, this salivation was called a conditional response. The model of classical conditioning is given below.

1. US (food)…………UR (saliva)

2. CS (sound of bell)
   US (food)…………UR (saliva)

3. CS (sound of bell)……CR (saliva)

In this experiment subject is first presented sound of bell followed by food, which evokes the inborn salivary response. After repeated presentation of the sound of bell followed by the food, the sound it self is adequate to elicit the salivary response. The bell is refereed as a conditioned stimulus and salivation in response to the bell is called a conditioned response.

Classical conditioning may be defined as a process in which a neutral stimulus by pairing with a natural stimulus acquires all the characteristics of natural stimulus. It some times called as stimulus substitution as new stimulus previously a neutral one is substituted for the stimulus which originally elicited the response.

Another types of conditioning called higher order conditioning goes one step further as presented below.

1. US (food)………..UR (saliva)
2. CS+US (bell+food)….CR (saliva)
3. CS1+CS2 (bell+light)…CR (saliva)
4. CS2 (light)……………..CR (saliva)

Principles of Classical Conditioning: During this experiment Pavlov observed various principles or phenomena of conditioning. These are presented below.

Extinction: If the sound of bell which has been eliciting a salivary response is rung repeatedly without presentation of food, the amount of saliva secreted in response to the sound of bell decreases gradually each time, until finally there is no salivation to the conditioned stimulus. When the conditioned response disappears, extinction occurs.

Spontaneous recovery: An extinguished response usually returns though at a lowered strength, after an interval of time during which the conditioned stimulus is not presented. This is called as spontaneous recovery.

Stimulus generalization: It is a process in which a conditioned response to a stimulus is generalized to similar category of stimuli.

Differential conditioning: The subject may be trained to differentiate between the conditioned stimulus and similar stimuli. For example, a bell of a certain tone is the CS. When the bell is sounded, food immediately follows, but when other sounds occur,

such as horn, their no food. At first the dog salivates to all such sounds but soon it learns to salivate only to the bell. Salivation to other sounds is extinguished. When extinction occurs for stimuli which are not the CS, we say differential conditioning has developed.

Educational implications: Pavlov brought a revolution in the field of psychology. His theory has generated world wide research on conditioning. The conditioning was accepted as theoretical framework and practical technique of solving variety of applied problems. He reported 'capacity to learn depends on the type of the nervous system and repetition of the activity under reinforcement'. For learning to occur, one must have some drive that motivates for action.' The principles of classical conditioning can be used in following areas.

1. Good habits such as cleanliness, respect for elders and punctuality etc can be developed among children by conditioning.

2. Similarly bad habits of children can be eliminated by conditioning.

3. The principles of classical conditioning are used in deconditioning emotional fears in mental patients.

4. It can be used to develop favorable or unfavorable attitude towards learning, teachers and school among students.

5. The principles of classical conditioning are used to teach alphabets and fundamental principles of arithmetic by using some concrete materials.

B) OPERANT CONDITIONING

B F Skinner (1904-1990) of Harvard University developed theory of Operant conditioning. He conducted number of research on reflexes of rats and pigeons. Finally he selected eating as the subject of his experiments because of its simplicity and easiness. He developed his own apparatus and method of observation to study and analyse behaviour in objective way.

He recognized two types of conditioning; Respondent conditioning and Operant conditioning. When reinforcing stimulus paired with a neutral stimulus that acquired properties of natural stimulus is know a respondent conditioning. When a response occurs spontaneously in the absence of any stimuli is known as operant conditioning. His conditioning is referred as operant conditioning

which is defined as any learning which is based on response contingent reinforcement and does not involve choice among experimentally defined alternatives. It based on the fact that behaviour operates upon the environment to generate its own consequences. If the consequences are rewarding the response will be repeated and will grow in strength. This relationship between response and reward is the essence of operant conditioning. It is also known as instrumental conditioning because the organism's response is instrumental in gaining some reward.

SKINNER'S EXPERIMENT:

A laboratory rat is placed in the conditioning apparatus known as Skinner box, which leaves it free to roam within the confined area. Usually it moves about in an exploratory manner. Eventually it presses a bar which triggers a food delivery mechanism, and a pellet become available. After gaining this reward, the subject continues it apparently random activity, sniffing, stretching, and cleaning it self but sooner or later it presses the lever again. This bar-press activates the food delivery mechanism and again the rat receives reward. As time passes, the bar pressed more frequently, and then a pint is reached where the rat press the bar consistently in order to receive the reward.

Principles of Operant Conditioning:

Like classical conditioning, Operant conditioning operates on different principles such as shaping, extinction, spontaneous recovery and reinforcement.

Shaping: It refers to the judicious use of selective reinforcement to bring certain desirable changes in the behaviour of the subject. The basic process in shaping is successive approximation to the desired behaviour. The experimenter shapes or moulds the behavior of the subject by suitable using reinforcement. Successful shaping involves generalization, habit competition and chaining.

Extinction: It is withdrawing the reinforcer when the appropriate response occurs. Complete absence of reinforcement result in extinction of response.

Spontaneous recovery: As in classical conditioning there may be spontaneous recovery if the subject removed from the conditioning situation for a time and returned to it. It is almost similar to classical conditioning of Pavlov.

Reinforcement: It is central to operant conditioning theory. A reinforcer is any event which changes subsequent behavior when it follows behavior in time. B F Skinner used reinforcement as a procedure for controlling behavior. It is event that enhances the rate of responding in subject. Reinforcer is of three types such as positive reinforcer, negative reinforcer and punisher. Positive reinforcer refers to any stimulus that enhances or strengthen the responses in organism. Food is positive reinforcer for hungry man. The things like food, water, praise, money social approval are example of positive reinforcer. Negative reinforcer is a stimulus that learner will readily terminate if given the opportunities to do so. When negative reinforcer used, the response to be learned serves to terminate the aversive stimulation. Social disapproval or condemnations are examples of negative reinforcer. Punisher is an aversive stimulus which follows a response and frequently serves to suppress. Negative reinforcement and pusher are different from each other. A negative reinforcement precedes the response and forces its occurrence to terminate whereas the punisher follows the response and decrease the like hood of the recurrence of the responses.

Educational Implications:

B F Skinner conducted extensive research on animals relating to operant conditioning and advocated that result of these research studies has significant implication for education of human being.

1. The principles of operant conditioning can be used to eliminate the fear from the school environment by using positive reinforcement. Teachers can appropriately use reinforcement in classroom which can increase achievement of students.

2. The correct response of students should be reinforced immediately as immediate reinforcement strengthens the reoccurrence of the behaviour.

3. The greatest contribution of Skinner is **programme learning material**. The programme learning material can be used to teach different school subjects. It helps student to proceed at their own pace which makes learning joyful. It also reinforces the responses of the child as exercise and answers are part of programme learning material. It helps a teacher in individualizing the instruction.

Difference between Classical and Operant Conditioning

Classical conditioning	Operant conditioning
It was developed by Ivan Pavlov is known as respondent conditioning	It was developed by B F Skinner is known as operant conditioning
The occurrence of CR is reflexively forced by US	The response is more voluntary and spontaneous
The US occurs without regard to the subjects behaviour	The reinforcement is contingent upon the occurrence of response
The association between stimulus and response is on the basis of law of contiguity	The association between stimulus and response is on the basis of law of effect
Controlled by autonomous nervous system	Controlled by central nervous system
Reinforcement comes first to elicit the response	Reinforcement is provided after the response is made
The essence of learning is stimulus substitution	The essence of learning is response modification
The classically conditioned reflexes may have zero strength initially	The operant can not have zero strength as it has to occur at least once before it can be reinforced

2.3   (B) COGNITIVIST THEORY OF LEARNING :

A)   GAGNE'S THEORY OF LEARNING

Robert Gagne (1916-2002) is American psychologist who builds his learning theory upon Behaviorism and Cognitivism theory. For him, learning is some thing that takes place inside and an individual's brain can not be observed directly. It is inferred from ones observable behavior or from change in ones capacity to perform certain actions. Thus essence of learning is simply the development of capacity for change in the performance and the altered despoliations like attitude, interest or values to which we call a modification of behavior through learning.

His theory of learning deals with conditions of learning; external and internal. The internal conditions deals with previously learned capabilities of the learner, what learner knows prior to instruction? The external conditions deal with stimulus that presented externally to learner. He propagated four phase of learning i) receiving the stimulus situation ii) stage of acquisition iii) storage and iv) retrieval.

Gagne feel that learning can not be explained comprehensively with the help of learning theories alone. He accepts principle of classical conditioning and operant conditioning for simple type of learning; but they are not sufficient for explaining concept learning and problem solving.
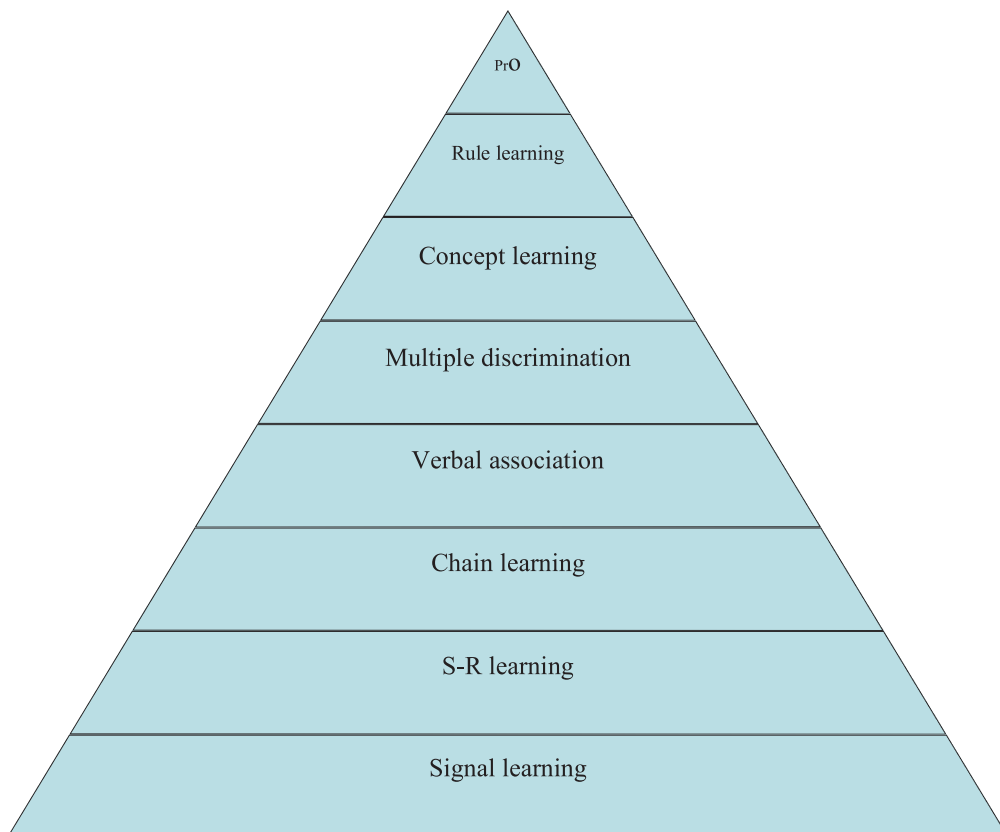
Forms of Learning

Gagne believes that learning conditions are basic to understand the concept of learning. He assumes that there is a continuum of learning conditions and behaviors. Teaching acts are also on a continuum from memory to reflexive level. To him, teaching means arranging conditions for learning at each stage of learning. Eight different types of conditions in which human learning takes place have been identified. He identified following eight types of learning.

1. Signal Learning: It is like classical conditioning of Pavlov. A response is to be conditioned to a stimulus through the conditioning process.

2. S-R Learning: It is like instrumental conditioning of Thorndike and Skinner. In such learning response is conditioned through reinforcement.

3. Chain Learning: Chaining means connecting a set of S-R in sequence. A number of correlated subject matters can be chain together. There are two types chaining (a) Motor chaining –connecting motor response (b) Verbal chaining-chaining two or more previously learned S-R s.

4. Verbal association learning: Chaining is verbal or through language. For example, one object is shown as ball. The next time if he sees the particular object he will be able to say ball. Verbal units must be presented in proper sequence. Cues may be used to learn verbal chains.

5. Multiple discrimination learning: Stimulus evokes a number of responses. The learner discriminates responses that are similar and draws inferences from similar response. That is when behavior shows a specificity of response to one given stimulus to the exclusion of others, we may say that the child is able to discriminate. It involves higher mental process. It is the basis upon which one learns to think and solve problems.

6. Concept learning; It refers to common response to a class of stimuli. We deal with classes of objects as the stimuli. We learn generalization with in classes and discriminate between classes.

7. Rule learning: It involves recalling the concepts and changing the concepts. It means chain of two or more concepts joined by a rule. It depends on learning of concepts and other form of learning. Principles show a regular relationship among two/more concepts.

8. Problem solving: Thinking is involved in it. Principles are combined according to higher order rule. It comes at the highest of the hierarchy of the learning process. It depends on rule learning.

Gagne advocated different types of learning. These learning are arranged from simple to complex. The signal learning is simple one while problem solving is complex one. His theory of learning is other wise know as **hierarchy theory of learning.**

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                    PrO
                  Rule learning
                Concept learning
              Multiple discrimination
             Verbal association
            Chain learning
           S-R learning
          Signal learning
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Educational Implications:

The learning theory of Gagne involves all types of learning that occurs in formal education from signal to problem solving. Children likes and dislikes can be acquired through signal learning.

They acquired many S-R responses before entering schools. S-R verbal or motor chain learning are common phenomena in school learning. Learning to write letters and words, learning meanings, repetition and memory are examples of chain learning. Discrimination learning has started already before entering school. At school, this learning can be applied in learning sound of letters and words. Concept learning is very important in school. It is involved in learning all most all subjects. Rule learning or principle learning is important especially in subjects like math, science, geography and grammar. Gagne's model of cumulative learning can serve as a guide to curriculum planning. The class room instruction must proceed from simple to complex. The teacher should arrange the learning experiences and choose the appropriate learning strategies for different types of learning.

B) AUSUBEL THEORY OF MEANINGFUL LEARNING

David P Ausubel (1918-2008) an American psychologist developed a theory of learning popularly known as theory of meaningful learning. His work focused on verbal learning. He deals with nature of meaning, and believes the external world acquires meaning only as it is converted into the content of consciousness by the learner. He is a cognitive theorist. He explains how the learner incorporate new information into their cognitive structure. For him existing cognitive structure is the main factor influencing learning and retention of a new material. He has been interested with question like how child acquire knowledge. Either he receives some knowledge that is presented to him or gets some knowledge independently by him through discovery. Ausubel advocated four types of learning such as Reception learning, Discovery learning, Rote learning and Meaningful learning on basis of how knowledge is available to learner.

Reception Learning: When child merely receive knowledge that is presented to him via textbooks, reference materials, various aids etc is known as reception learning. Here child only receives knowledge as it is presented to him.

Discovery Learning: When child gets other information about the subjects independently by himself along with information presented to him is called as discovery learning. Here the learner relates the information obtained through discovery to information already presented to him by the instructor.

Rote Learning: When learner simply remember the information presented to him without understanding is known as rote learning.

Meaningful Learning: When learner tries to memories information with understanding is called as meaningful learning.

Ausubel advocated that learning can be divided as reception and discovery on basis of how knowledge is presented to learner and rote and meaningful learning on basis of how learner incorporate the knowledge into cognitive structure. Hence four type of learning emerge; Meaningful reception learning, Rote reception learning, Meaningful discovery learning and Rote discovery learning, Out of four types of learning, rote learning is meaningless, it should be discarded. Thus there will be two type of meaningful learning such as meaningful reception and meaningful discovery.

Subsumption theory:

Gagne explained his theory of learning by Subsumption theory. To subsume is to incorporate new material into ones cognitive structure. When information is subsumed into the learner cognitive structure, it is organized hierarchy. New material can be subsumed in two different ways and for both of these; no meaningful learning takes place unless a stable cognitive structure exists. The existing structure provides a framework into which the new learning is related, hierarchy to previous information/concept in the individual's cognitive structure.

When one encounters completely new unfamiliar information then rote learning takes place. This rote learning may eventually contribute to the construction of new cognitive structure which can later be used in meaningful learning. The two types of Subsumption are
i) Correlative subsumption: When new material is an extension or elaboration of what is already known.

ii) Derivative subsumption: When new material or relationship can be derived from the existing structure, from this type of subsumption completely new concept can emerge and previous concept can be changed/expanded to include more of previously existing information.

Educational Implications:

Ausubel gives emphasis on meaningful learning and discards rote learning. The schooling process has to be changed to develop

ability among students to learn meaningfully. The students should understand the information presented to him by the teacher before retaining or memorizing. The teaching learning process in school should be changed to deemphasize rote learning. The learner should be encouraged to create concept of their own by relating information presented to him with the previous experience or searching present experience. The teacher should present material to learner in proper structure, systematic and meaningful.

His notable contribution to classroom practice is the **advance organizer**. Advance organizer is a tool/mental learning aid to help student integrate new information with their existing knowledge, learning to meaningful learning as opposite to rote reception. It is means of preparing the learners cognitive structure for the learning experience about to take place. It is a device to activate the learner the relevant schema/conceptual patterns so that new information can be more really subsumed into learners existing cognitive structure. It was important for teachers to provide a preview of information to be learned. Teacher could do this by providing a brief introduction about the way that information that is going to be presented is structured. This would enable students to start with a 'Big Picture' of the upcoming content and link new ideas, concerns, vocabulary, to existing mental maps of the content era. He developed the idea of advance organizer that to be presented to learner before presenting whole materials. An advance organizer is an introductory material at the beginning of a chapter or passage which provides a structure for reading later materials and thus facilitates learning of the later materials. it is an introductory offering an outline of what is to follow.

Ausubel is a proponent of didactic, expository teaching method. It encourages learner rapid learning and retention. He emphasized on active nature of reception learning. The need is to require learners to be active by understanding, completely missing word, by rewording sentences by giving additional examples.

C.   BRUNER'S THEORY OF LEARNING

Jerome Bruner (1915) an American psychologist developed theory of cognitive development, learning and instruction. According to him cognitive development involves an increasing independence of the response of the learner from the particular stimuli. It implies a great degree of cognitive processing and mental representation beyond the immediate sensory data. His idea of cognitive development based on the premises that a person's

knowledge of world is based on his constructed models of reality. He gives emphasis on language for cognitive development. Bruner advocated three stage of cognitive development such as

Enactive stage: In this stage the infants action is response to stimuli define the stimuli. That means infant knows the stimuli only by acting on it, otherwise it does not exist. Cognitive development occurs through activities of infants. This stage corresponds to Piagets sensory motor period.

Iconic stage: In this stage child represent world through images. Repetition of action may lead to the development of an image of the action. It is governed by perceptual organization. The transition from action to image is usually seen by end of first year of life.

Symbolic stage: In this stage child represent the world through symbols. That is child can represent the knowledge in symbolic form and can understand certain abstract concepts. The child in this stage engage in language and mathematics. For development of symbolic quality, language is important.

BRUNER'S VIEW ON LEARNING:

According to Bruner learning involves active processing of information and that is constructed and organized in a unique way by each learner. Knowledge about the world is not simply poured into the individual, instead the individual attend selectively to the environment, process and organize the information they take in and store the information with their own unique models for future use. Learning involves three simultaneous processes.

Acquisition: The child acquires new knowledge or information by incorporating it according to the existing mode of representation. It lead to modification or expansion of existing mode.

Transmission: The new knowledge or information acquired by the child is manipulated or modified to meet new task.

Evaluation: Finally child evaluates how successfully he has manipulated the information.

Readiness: He advocated that readiness is essential for learning. It is not some thing that comes through maturation. Rather it can be learned and there fore can be taught.

Motivation: Ideally interest in the material to be learned is the best stimulus to learner, rather than external goals as grade. Motive for learning must be kept active; they must base on as much as possible upon the interest of learner. It must be kept broad and diversive in expression. Similarly motivation is also required for learning to occur. Learning which occurs as a result of natural curiosity, the urge towards mastery and competence and modeling after another is satisfying or self rewarding.

Discovery learning: It is an enquiry based, construction learning theory that takes place in problem solving situations where the learner draws on his/her own past experience and existing knowledge to discovery facts and relationship and new truth to be learned. Student interact with world by exploring and manipulating objects, wrestling with questions and controversies or performing experiments. As result student may be more likely to remember concept and knowledge discovered on their own. Bruner proposed discovery learning in which children are engaged to explore and learn on their own by the methods of discovery. It does not mean finding out something which was not known before rather refers to what one discovers for oneself. According to him discovery is a matter of rearranging or transforming the evidence in such a way that one is enabled to go beyond the evidence so assembled to additional new insight. It involves construction as well as testing hypothesis. Bruner mention four advantage of discovery learning; it increases intellectual potency, it increases intrinsic motivation, it teaches the techniques of discovery and it result in better retention of what is learned. He said teacher should encourage learners to explore, enquire the surroundings and there by learn.

Intuitive and analytical thinking: Intuition (the intellectual techniques of arriving and plausible but tentative formulation without going through the analytical steps by which such formulations would be found to be valid/invalid) is much neglected but essential feature of productive thinking.

Educational Implications:

Bruner gives stress on readiness of learner in learning process. Teacher must concern about the experiences and contexts that will make child willing to learn. Teaching learning process should take into account nature of the learner and predispositions in the learner.

The role of structure in learning and how it may be made centre of teaching. The teaching and learning of structure, rather simply mastery of facts and themes is centre.

The goals of education should be clear and related to the life of learner as it creates intrinsic motivation that activates the process of exploration. The learner must know the goals because it urges to learn.

He gives utmost importance to child in learning process. There fore knowledge must be related to the previous experience of the child. It must also designed in such a way that within the grasp of the learner at his stage of development. the subject matter must be so selected that it must be appropriate for children at different levels of development. Subject matter can be represented in three ways such as by set of actions, by set of images and by set of symbols.

The teaching learning materials (curriculum, textbooks) should be properly sequenced for effective teaching. It can be order from easy to difficult, simple to complex, known to unknown concrete to abstract. A good sequence is that which progresses from enactive through iconic to symbolic representation.

Bruner advocated **Spiral curriculum**. It is based on the idea that any subject can be taught effectively in some intelligently honest form to any child at any stage of development. A curriculum as it develops should revisit this basic ideas repeatedly, building upon them until the student has grasped the full formal apparatus that goes with them. Instead of moving through the materials in a lockstep fashion (mastering a step and then proceeding to a new one) the same material can be presented or taught at different levels with addition of more details. Here learner will get a chance to broaden and deepen their knowledge.

He also emphasizes on reinforcement. Reinforcement is necessary for learning to occur. Reinforcement should be given at the right time. It must come when it is useful or relevant not too early and not too late. He believes that strong intrinsic reward can lead a learner to learn.

The process of teaching and learning is that a combination of concrete, pictorial then symbolic activities lead to more effective learning. The progression is; start with a concrete experience the move to picture and finally use symbolic representation.

2.4   INFORMATION PROCESSING THEORY OF LEARNING :

Information processing theory of learning is a new innovation in education. It explains learning in terms of functioning of a computer. The term information processing is used in communication technology. All communication system based on five elements such as i) source of information ii) the transmitter to encode the information iii) the channel that carry the information iv) the receiver to decode the massage and v) the destination. So in information processing information is encoded, transmitted and decoded. Presently this theory is widely used in all branches of science and teaching.

Information theorist are especially interested in internal, self generated cognitive changes, they also want to find out how external influences like design of learning environment and tasks, teaching techniques and cultural values and practices affect learning and thinking. They view mind as a complex symbol-manipulating system through which information flows, much like a computer. Information from environment is encoded or taken in by the system and retained in symbolic form. Then variety of internal process operate on it, recording it or revising its symbolic structure into a more effective representation and then decoding it or interpreting its meaning by comparing and combining it with other information in the system. When these cognitive operations are complete, individuals use the information to make sense of their experience and solve problems.

Most information processing theorists adopt a computer like view of cognitive system called store model of human information processing system. The store model of the information processing system assumes that we hold or store information in three parts of the mental system for processing; **the sensory register, working or short tem memory, memory or long term memory**. In each, mental strategies can be used to manipulate information, increasing the efficiency of thinking and the chances that information will be retained. Strategies also permit us to think flexibly, adapting information to changing circumstances. The central executive is the conscious reflective part of working memory. It coordinates incoming information already in the system, allocates attention to cognitive tasks and oversees the use of strategies.

This theory of learning is similar to functioning of computer. In a computer system three important parts are-**input, processing**

and output. Human learns as information processing system. Let us see how information process in computer. Information given to computer via input device are called Input. Computer process it by use of software and finally gives output via output device. The processing involves analysis, calculation, alternation, comparison etc for arriving output.

Similarly human brain is called as data processing machine. Child receives information from our environment through our senses. This information is sent to the brain through nervous system- brain records and transforms this information just as computer does. This process is called as information processing. Kathleen O'Connor has described information processing as 'all organisms have genetic constitution and they live in an environment from which they receive information and in which they act. Creatures transform energy from stimulus objects in to neural energy and thus receive the coded information from the world. If the receipt and organization of this coded information in the brain lead to possibility of more or less permanent change in organism behavior, then learning has taken place. The extent to which this process can be carried out depends upon the complexities of animal's nervous system.

In learning situation information first reaches the brain through our sense organs and such information can be termed an inputs. This inputs processed in some way by a certain brain mechanism. This processing leads to storage and organization of information leading to output. Learning and retention are the result of information processing. There are two memory storage in the brain- shot tem memory (STM) and long term memory (LTM). The STM has limited capacity where as LTM has unlimited capacity. Information in STM can stay for short period and LTM can stay for indefinite period.

Educational Implications:

The memory capacity of learner is limited so only relevant subject to be taught to children. The children should not be burden with unnecessary details. The school should see that all experience provided should be purposeful and relevant to learner.

Information must be properly processed before it can be permanently stored in LTM. For this students should understand the material first. The role of teacher is to see that information provided should be properly coded, interpreted and gives meaning. It must be repeated and rehearsed over time and again. The new information should be associated with old one for better retention. Structuring of

information is very important for quick coding. Coding will be easier if learning materials are divided into units. So text content should be divided into small units and have correlation. The amount of information can be retained in the brain depends on capacity of the child. So the child's mental development should be taken into account before preparing curriculum and presenting information to students.

METACOGNITION :

Metacognition is cognition about cognition or knowing about knowing. It can take many forms; it includes knowledge about when and where to use particular strategy for learning/problem solving. J H Flavell first time used the term metacognition. It refers to ones knowledge concerning ones own cognitive process/anything related to them i.e. the learning relevant properties of information/data. For example I am engaging in metacognition or I notice that I am having more trouble learning A than B; it strive me that I should double check (before accepting it as fact). Metacognition has three components;

i) **Metacognitive knowledge**/metacognitive awareness is what individuals know about them and others as cognitive processor.

ii) **Metacognitive regulation** is the regulation of construction and learning experiences through a set of activities that help people control their learning.

iii) **Metacognitive experiences** are those experience that something to do with the current, ongoing cognitive endeavor.

Metacognition refers to a level of thinking that involves active control over process of thinking that is used in learning situations. Planning the way to approach a learning task, monitoring comprehension, evaluating progress towards the completion of task, these are skills that are metacognitive in nature. Student who demonstrate wide range of metacognitive skill perform better on examination and complete work more effectively. They are self regulated learner who utilize right tool for the job and modify learning strategy and skills based on their awareness of effectiveness.

Metacognition involves; i) **Executive management**; It is the process that involves planning, monitoring, evaluating and revising ones own thinking process and products ii) **Strategic knowledge**; It involves knowing what (factual/declarative knowledge) knowing

when and why (conditional and contextual knowledge) and knowing how (procedural/methodological knowledge).Both are needed to self regulate ones own thinking and learning.

There is a distinction between **'domain general and domain specific meta cognition'**. The domain general metacognition refers to metacognition which transcends particular subject/ content area like setting goals. The domain specific metacognition refers to metacognition which is applied in particular subject/content are like editing essay.

Educational Implications:

The theory of metacognition has great significance for teaching and learning. It propagated that learner should know about process of learning that is how to learn a specific task. The research study also proved that learner having better metacognitive knowledge understand content easily and retained it longer.

The teacher should not only teach the contents but teach how this content can be successfully learned that is what is the different strategy suitable for learning this concept/generalization. In more specifically, teacher should teach students about different cognitive skills involved in learning successfully.

Metacognition is different for different subjects; some metacognitive skills are general in nature while others are related to particular subjects. Different subject teachers should focus on inculcating subject specific metacognitive skills so that learner can do better in concern subjects.

2.5   LET US SUM UP :

The unit describes the Behaviorist, Cognitivist and the Information Processing Theories of Learning. While highlighting the contributions of the psychologists to the different schools, the unit also spells out the educational implications of the theories.

2.6   UNIT END EXERCISE :

1. What is classical conditioning theory of learning? Explain its relevance for classroom practice.

2. Differentiate between classical conditioning and operant conditioning theory of learning.

3. Explain different types of learning advocated by Gagne.

4. Describe Ausubel theory of meaningful learning with special emphasis on role of subsumption and advance organizer in learning.

5. Elucidate Bruner theory of learning. Explain the educational implications of his theory.

6. Explain the different aspects of information processing theory of learning.

7. Describe the nature of metacognition and its use for a learner.

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2C

SOCIAL LEARNING: ALBERT BANDURA; SOCIAL CONSTRUCTIVISM- L.VYGOTSKY

Unit Structure:

2C.1 Objectives

2C.2 Introduction

2C.3 Social Learning: Albert Bandura

2C.4 Social Constructivism: Lev Vygotsky

2C.5 Let us Sum up

2C.6 Unit End Exercise

2C.1 OBJECTIVES :

After going through you the unit you would be able to:

- Define social learning

- Describe the basic principles underlying social learning proposed by Albert Bandura and social constructivism of L.Vygotsky

- State the implications of social learning and social constructivism theories on teaching learning process.

2C.2 INTRODUCTION:

Learning plays an important role in our day to day experiences. Learning is a social process and we learn through interaction with peers, parents and teachers etc in a social setting. Observation, imitation and modeling plays important role in child's learning. In the present unit we shall learn about the social cognitive and constructivist views of learning developed by Albert Bandura and L.Vygotsky.

2C.3 SOCIAL LEARNING: ALBERT BANDURA :

Albert Bandura's social learning theory consists of a blending of behaviouristic reinforcement theory and purposive cognitive psychology. His theory aimed at a balanced synthesis of cognitive

psychology with the principles of behaviour modification. Bandura believed that the traditional behavioural views were accurate but incomplete because they give only a partial explanation of learning-overlooking important elements particularly the social influences in learning. Social learning theory explains human behavior in terms of continuous reciprocal interaction between cognitive, behavioral, and environmental influences. It is also referred to as observational learning or imitation learning.

Bandura's Social Learning Theory proposed that people learn from one another, via observation, imitation, and modeling. People learn through observing others' behavior, attitudes, and outcomes of those behaviors. Most human behavior is learned observationally through modeling: from observing others, one forms an idea of how new behaviors are performed, and on later occasions this coded information serves as a guide for action.

BASIC SOCIAL LEARNING CONCEPTS :

(1)People can learn through observation (Observational Learning): In his famous "Bobo doll" studies, Bandura demonstrated that children learn and imitate behaviors they have observed in other people. The preschool children in Bandura's studies (1965) observed an adult (model) acting violently toward a Bobo doll. One group saw the model rewarded for aggression; another group saw the model punished and a third group saw no consequences. When they were moved to a room with the Bobo Doll, the children who had seen the punching and kicking reinforced in the film were the most aggressive toward the doll. Those whom had seen the attacks punished were the list aggressive. When the children were later allowed to play in a room with the Bobo doll, they began to imitate the aggressive actions they had previously observed.

Bandura identified three basic models of observational learning:

1. A live model, which involves an actual individual demonstrating or acting out a behavior.
2. A verbal instructional model, which involves descriptions and explanations of a behavior.
3. A symbolic model, which involves real or fictional characters displaying behaviors in books, films, television programs, or online media.

(2) Mental states are important to learning (Intrinsic Reinforcement)

Bandura noted that external, environmental reinforcement was not the only factor to influence learning and behavior of children. He described intrinsic reinforcement as a form of internal reward, such as pride, satisfaction, and a sense of accomplishment. This emphasis on internal thoughts and cognitions helps connect learning theories to cognitive developmental theories.

(3)Learning does not necessarily lead to a change in behaviour.

While behaviorists believed that learning led to a permanent change in behavior, observational learning demonstrates that people can learn new information without demonstrating new behaviors.

The Modeling Process:

Not all observed behaviors are effectively learned. Factors involving both the model and the learner can play a role in whether social learning is successful. Certain requirements and steps must also be followed. The following steps are involved in the observational learning and modeling process:

Attention:

In order to learn, you need to be paying attention. Anything that detracts your attention is going to have a negative effect on observational learning. If the model interesting or there is a novel aspect to the situation, you are far more likely to dedicate your full attention to learning.

Retention:

The ability to store information is also an important part of the learning process. Retention can be affected by a number of factors, but the ability to pull up information later and act on it is vital to observational learning.

Reproduction:

Once you have paid attention to the model and retained the information, it is time to actually perform the behavior you observed. Further practice of the learned behavior leads to improvement and skill advancement.

Motivation:

Finally, in order for observational learning to be successful, you have to be motivated to imitate the behavior that has been modeled. Reinforcement and punishment play an important role in motivation. While experiencing these motivators can be highly effective, so can observing other experience some type of reinforcement or punishment. For example, if you see another student rewarded with extra credit for being to class on time, you might start to show up a few minutes early each day.

2C.4 SOCIAL CONSTRUCTIVISM: L.VYGOTSKY :

Lev Vygotsky (1896-1934) a Russian psychologist and philosopher in the 1930's, is most often associated with the social constructivist theory. He emphasizes the influences of cultural and social contexts in learning and supports a discovery model of learning. This type of model places the teacher in an active role while the students' mental abilities develop naturally through various paths of discovery. Vygotsky's theory is one of the foundations of constructivism. It emphasizes three major themes:

Major themes:

* Social interaction plays a fundamental role in the process of cognitive development. In contrast to Jean Piaget's understanding of child development (in which development necessarily precedes learning), Vygotsky felt social learning precedes development. He states: "Every function in the child's cultural development appears twice: first, on the social level, and later, on the individual level; first, between people (inter-psychological) and then inside the child (intra-psychological)." (Vygotsky, 1978).

* The More Knowledgeable Other (MKO). The MKO refers to anyone who has a better understanding or a higher ability level than the learner, with respect to a particular task, process, or concept.

* The Zone of Proximal Development (ZPD). The ZPD is the distance between a student's ability to perform a task under adult facilitation and/or with peer collaboration and the student's ability solving the problem independently. For learners there is zone of proximal development for each task they are expected to master. Learning occurred in this zone.

Vygotsky focused on the connections between people and the socio-cultural context in which they act and interact in shared experiences .According to Vygotsky, humans use tools that develop from a culture, such as speech and writing, to mediate their social environments. Initially children develop these tools to serve solely as social functions, ways to communicate needs. Vygotsky believed that the internalization of these tools led to higher thinking skills.

Applications of the Vygotsky's Social Development Theory:

Many schools have traditionally held a transmissionist or instructionist model in which a teacher or lecturer 'transmits' information to students. In contrast, Vygotsky's theory promotes learning contexts in which students play an active role in learning. Roles of the teacher and student are therefore shifted, as a teacher should collaborate with his or her students in order to help facilitate meaning construction in students. Learning therefore becomes a reciprocal experience for the students and teacher.

Implications of Vygotskian Principles in the Classroom:

- Learning and development is a social and collaborative activity that cannot be "taught" to anyone. It is up to the student to construct his or her own understanding in his or her own mind. It is during this process that the teacher acts as a facilitator.

- The zone of proximal development can be used to design appropriate situations during which the student can be provided the appropriate support for their optimal learning. Applying Zone of Proximal Development to teaching may involve assessing, selecting learning activities and providing instructional support to help students move through the zone successfully.

- When providing appropriate situations, the teacher must take into consideration that learning should take place in meaningful contexts, preferably the context in which the knowledge is to be applied.

- Out of school experiences should be related to school experiences. Pictures, news clips, and personal stories incorporated into classroom activities provides the students with a since of oneness between their community and learning.

2C.5 LET US SUM UP :

Children learn through interaction with others. While Bandura's theory focuses on observation, imitation and modeling in learning, L.Vygotsky's social constructivism believe that social interaction, cultural tools and activity shape individual development and learning.

2C.6 UNIT END EXERCISE :

1. What is social learning? Discuss the implications of social learning theory proposed by Albert Bandura on Teaching learning process

2. What is a social constructivist view of learning? Critically examine the implications of the implications of this theory in the present day

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2D

THEORIES OF TEACHING: BEHAVIOURISTIC, COGNITIVIST AND HUMANISTIC

Unit Structure:

2D.0   Objectives

2D.1   Introduction

2D.2   What is teaching?

2D.3   Theories of Teaching

2D.4   Let us Sum up

2D.5   Unit End Exercise

2D.0 OBJECTIVES :

After going through this unit, you would be able to:

- List different theories of teaching
- Distinguish between teaching and learning
- Identify basic principles/ideas of each theories
- State the implications of different theories on teaching learning process

2D.1 INTRODUCTION :

We have learnt about theories of learning. Theories of learning describe and explain the conditions under which learning does and does not occur. A theory of learning is a general concept which applies to all organisms, to all learning tasks and to all situations where learning occurs. In this unit we shall examine how the respective theories are related to teaching principles and procedures. Theories of teaching are based upon theories of learning. As we help students acquire information, ideas, skills, values, ways of thinking and means of expressing themselves, we are teaching them how to learn.   In this unit we shall learn in detail some of the theories of teaching: Behaviouristic, Cognitivist and Humanistic.

2D.2 WHAT IS TEACHING?

Although we are all students for many years majority of us have no systematic conceptions of teaching. Generally we relate teaching to teacher characteristics. If someone asks us 'what is teaching?' .We may simply answer –teaching is what a teacher does. Within the context of class room life the teacher does many things i.e. help students acquire knowledge, understanding, skills and attitude. Traditionally teaching has been looked on as the process of imparting to the learner the knowledge and skills to master prescribed subject/s. A dictionary definition is a little further than the traditional concept. It defines teaching "as to show how to do, make understand, give instruction to". But the definition leaves out the what, who and the why of teaching.

Brubacher (1939) defines teaching as "arrangements and manipulations of situation in which an individual will seek to overcome or form which he will learn in course of doing so".

Smith.Bothanel (1969) proposes three uses of the word teaching Teaching refers to-

1. what is taught, as a doctrine or body of knowledge

2. an occupation or profession –the profession of one who instructs or educates and

3. ways of making something known to others usually in the routine of a school

Teaching is now viewed more as a task of arranging a complex environment of learners an activities rather than an assembly line in which knowledge is transferred/disseminated from some one who knows(the teacher)to individuals who don't(students)by means of a monologue(teaching by telling). Thus comprehensively teaching can be thought of as a system of actions intended tom induces learning. Thus from the above discussions you will realize that teaching is assimilated to learning and teaching entails learning.

A growing number of researches/theories now argue that teaching and learning are essentially a social and linguistic process (communication) rather than merely cognitive ones. While some theories view that teaching is training of mental power, others view it as helping child in construction of knowledge. We shall discuss these in details.

2D.3 THEORIES OF TEACHING

A theory of teaching is a general concept which applies to all teachers, to all students and tom all situations both in and out of the school. It should explain, predict and control the ways including the behaviour of teacher affects the learning of students. Gage (1963) proposed that a theory of teaching should answer the following questions.

- How do teachers behave?
- Why do they behave as they behave?
- What are the effects?

Teaching and learning can be better understood by identifying with different teaching learning situations.Bigge (1982) divides teaching-learning situations according to where they fall on a continuum range of thoughtless to thoughtful modes of operation. These levels are related to different theories of teaching learning which will be discussed later in this unit. The four levels are presented below:

1. Autonomous development level
2. Memory Level
3. Explanatory understanding level ,and
4. Exploratory understanding and reflection level.

While the *autonomous development level* emphasizes the importance of student's feelings and minimizes the value of hard thinking based upon empirical data, the *Memory level* is relatively thoughtless; the *Explanatory understanding level* is more thoughtful and the *Exploratory understanding and reflection level* is the most thoughtful of all. Each level can be linked with theory/theories of learning (Table-1, Page, 4).

The teaching theories offer the guidance on how to better help people learn and develop. The kinds of learning may include cognitive emotional, social and physical. There are three schools of psychology in which theories are categorized; behaviorism, cognitivism and humanism. It is believed that one school of theory is not better than the other, and individuals are encouraged to apply the theory that is the most appropriate for the student. It can also be mentioned that these are not categorical theories of teaching rather theories of learning having implications for methods and principles of teaching.

Table -1 Theories of Learning, their focus on levels of Teaching learning, Focus on Teaching and Key Exponents

School of Psychology	Theory of Teaching/learning	Levels of Teaching and Learning (Mainly Focus)	Nature of Learning	Emphasis in Teaching	Key Exponents*
Humanistic	-Natural Unfoldment(Self Actualization)	Autonomous Development Level	Self directed active unfoldments; Focus on students affective needs;	Promotion of intuitive awareness of each self, Development of self concept ,Non directive teaching	Rousseau G.W Allport J.Holt A.H.Maslow
	-Non-Directive	Memory Level	Development of natural needs or instincts /accompanying feelings	Student/child centered education	C.Rogers
Behaviourists	-Apperception (Structuralism)	Memory Level	Right sequence of ideas identifying mental faculties Teacher-imposed understandings, principles, relationships	Preparation, presentation, association, comparison and application	J.F.Herbart I.P.Pavlov B.F.Skinner
	-Conditioning with no reinforcement(Classical conditioning)	Memory and Explanatory understanding Level	Learning overt action Behaviour modifications	Promotion of adhesion of desired responses to appropriate stimuli	
	-Conditioning through reinforcement(Operant conditioning)	Memory and Explanatory understanding Level	Learning overt action Conditioned through reinforcement	Successive and systematic changes in-learning environment, interventions, reward, Programmed learning	B.S.Bloom
	*Neo-Behaviorist(Social learning)	Memory and Explanatory understanding Level	Learning overt action and internal process, Learning through observation, imitation, modeling	Attention, retention, reproduction and motivation	Hull, Guthrie A.Bandura R.L.Gagne

Cognitivists	-Insight learning(Gestalt)	Explanatory understanding Level	Examples ,generalizations, scientific outlook and instrumental thinking	Promotion of insight learning, problem solving	K.Kofka W.Kohler
	-cognitive field theory	Exploratory understanding/reflection level	Learning as internal process	Cooperative learning	J.S.Bruner J.Piaget David Asubel
	-Constructivist		Focus on the child	Focus on child, thinking child as constructer of knowledge, appreciating child's work, perspective, social interaction	L.Vygotsky

*Some exponents may be coming under different schools. Social learning theory can be clubbed under cognitive theory also. For example A.Bandura, social learning can be clubbed under Cognitivist theories.

## A)	HUMANISTIC THEORIES

Theories that focus on a student's affective needs come from the humanism school of Psychology. These theories attend to human experiences i.e. Feelings, emotions, values, and attitudes. Some of the earliest work that reflected humanism came from thy work of J.J.Rouesau's romantic view of human nature. Theorists such as Elliot W. Eisner, Ross Moorey, and PaulKlohr supported the development of learning experiences that focused on self value. Some of the exponents of humanistic theories include Paul Goodman, John Holt, Carl Rogers and Abraham Maslow.The work of these psychologists eventually influenced the development of other theories based on Humanism. Collective common factors of theories rooted in Humanism include the attention toward student-centered learning and individualism. Let us discuss here two important theories developed by Rogers and Maslow.

Non Directive Teaching: Carl Rogers

Carl Roger's approach of non-directive counselling has direct implication to teaching. He believed that positive human relationships enable people to grow. Therefore instruction should be based on concept of human relations in contrast to subject matter. He held that:

1. Reality is phenomenal. Each has his/her own world

2. need to self actualize is the motivation behind behaviour

3. Behaviour is within the context of personal realities. We need to understand another's point of view in order to understand their behaviour

4. Self is constructed by the individual and we behave according to our concept of self.

5. Developed from counseling model, the theory emphasizes a partnership between student and teachers. When operating non - directively, the teacher attempts to see the world as the student sees it, creating an atmosphere of empathetic communication in which student's self direction can be nurtured and developed. Based upon Rogers approach Bruce Joyce and Weil (2000) have divided the non-directive strategy of teaching sequence into five phases. These are as follows:

Non-Directive Strategy

Phase -1	Defining the helping situation	teacher encourages free expression of feelings
Phase -2	Exploring the Problem	Student is encouraged to define problem Teacher accepts and clarifies feelings
Phase -3	Developing insight	Student discusses problem Teacher supports students
Phase -4	Planning and decision making	Student plans initial decision making Teacher clarifies possible decisions
Phase -5	Integration	Student gains further insight and develops more positive actions Teacher is supportive

Thus the non-directive atmosphere has the following features.

- Teacher shows warmth and responsiveness, expressing genuine interest in the student and accepts her/him as a person

- Teacher does not judge or moralize .Facilitates process

- Student is free to express feelings symbolically but is not free to control teacher

- Relationship is free from any type of pressure or coercion

The theory of non directive teaching has implications for student centered teaching, cooperative learning, discovery learning etc.

Self-Actualization Theory: Abraham Maslow

Theory of Abraham Maslow concentrates on development of child's self concept. If the child feels good about her/himself then that is a positive start. Feeling good about oneself would involve an understanding of one's strengths and weaknesses and a belief in one's ability to improve .Learning is not an end in itself, it is the means to proceed towards the pinnacle self development which Maslow term "self actualization".

Maslow believed that strong beliefs about one's self are connected to the thought of self-actualization. According to his thinking, individuals with strong self-actualization interacted well with others, and they found ways to develop and contribute to the world around them fairly easily. Those who did not have strong self-actualization choose to live within their environment and accept what comes their way instead of reaching into their environment and making new opportunities happen for themselves For a person to reach the level of self-actualization, s/he she has to be fulfilled at each level of what Maslow (1954) referred to as the hierarchy of needs.

- The first level is the biological level. At this level, an individual's need for food and shelter must be met before the individual can move to another level.

- At the next level, the individual has to feel secure.

- Next level is love and belongingness needs

- Needs for self respect, achievement, attention, and recognition must be fulfilled if an individual is to move past the esteem level of the hierarchy.

- When an individual has past each of those levels, s/he has reached the final level, the level of self-actualization. At this point, the individual's ability to reach potential can take place.

While each level has to be fulfilled, they do not have to stand alone and one behavior can satisfy more than one level on the hierarchy.

B)   BEHAVIOURISTIC THEORIES

Behavioural theories of instruction have their origins in the classical conditioning experiments of I.P.Pavlov (1927),the work of Thorndike (1911,1913) on reward learning and B.F.Skinner (1953). Many of the theories of behaviourists began in experimental laboratories and as observation of animal behaviour, which were generalized to explain human behaviour. Behaviorism focuses on individual's responses to feedback when they performed a task. For behaviourists, learning is a change in observable behaviour. People respond to variables in their environment with a conditioning effect. These external forces stimulate individuals to engage or avoid certain behaviours. Other behavioral psychologists those have made contributions to the field of teaching include J.B.Watson and

Benjamin S. Bloom. Similarly some of the psychologists like Albert Bandura, R .M.Gagne are regarded as neo-behaviourists.

Principles

Since behaviourists view education as a matter of behavioural engineering or technology, they think of a teacher as a designer and manager of instruction and an evaluator of specific student learning. Hence they view educational goals as specified behaviours that students will manifest when they have been properly processed (Bigge, 1984).Some of the common principles of Behaviourist views which have implications for teaching can be discussed as follows.

1. *Behaviour is an observable, identifiable phenomenon:* Behaviorist theories concentrate on observable behaviour and takes an optimistic view .Given the right conditions and enough time we can succeed in learning.

2. *Maladaptive behaviours are acquired through learning and can be changed through learning principles*

3. *Behaviour goals are specific, discrete and individualized*: Two externally similar responses do not necessarily proceed from the same original stimulus .No two people will respond to the same situation in precisely the same way. This does not mean that they reject group training. Goals for each student may differ and the training process will need to be individualized in term of pacing or content. The instructional materials prepared will thus be self paced.

4. *Focus on the Here and Now:* The role of past in shaping a persons behaviour is deemphasized. The behaviorists concentrate on creating conditions or helping students create conditions that will enable them to progress and gain satisfaction quickly

We shall discuss in brief the Classical conditioning of Pavlov, Instrumental conditioning of B.F.Skinner and Mastery Learning approach developed by B.S.Bloom.

Classical Conditioning: I.P.Pavlov

Conditioning is the formation of some sort of stimulus-response sequential relation that results in an enduring change in either the pattern of behavior or the likelihood of a response of an organism. It takes one or a combination of two forms called *classical* and *instrumental* conditioning.

Classical conditioning is conditioning that occurs with out reinforcement. Association is a key factor in classical conditioning. The learning theory developed by I.P. Pavlov can enable us to explain student behaviour and can provide strategies for changing harmful associations in the classroom as well.

Instrumental Conditioning: B.F.Skinner

Instrumental conditioning is also called reinforcement or operant conditioning. You have learnt about this theory in detail in earlier units. Unlike many theorists Skinner (1968) considered the problem of educating children in his interpretations of operant conditioning. He suggested that teachers could be more effective if the acted as "behaviour engineers". You as a teacher and behavioral engineer have to observe the students' behaviour or follow up stimuli and then use the information to bring about increases or decreases in behavioral strengths.

Knowledge about different types, levels and schedules of reinforcement you have already learnt in the previous unit, will help you in planning strategies for effective use of reinforcement skill in the classroom.

Mastery Learning: B.S.Bloom

Mastery learning approach has emerged as an outcome of programmed learning theory. It offers a powerful new approach to students learning which can provide almost all students within the successful and rewarding learning experiences. B.S.Bloom related the apparent weaknesses of the school system to lack of clear cut objectives for education and their implementation by carefully developed instructional materials and procedures. So he developed mastery learning approach, which provides a compact and interesting way of increasing the likelihood that more students will attain a satisfactory level of performance in school subjects.The central thesis of Bloom and his associate is that "variations in the cognitive entry behaviour and affective entry characteristics and the *quality of instruction* will determine the nature of the learning outcomes. These outcomes are the level and type of achievement, the rate of learning and the effective characteristics of the learner in relation to the learning task and self.

Teaching for Mastery

Teaching for mastery involves (i) formulation of a set of instructional objectives or tasks that all students will be expected to

achieve to a particular mastery performance standard. (ii)Then the course/task will be broken down in to a sequence of smaller learning elements or units. (iii) The teacher follows a cycle of group based instruction, formative testing and certification or prescription /correction for each student on each unit until all learning units have been completed, and (iv) each student's grade is determined solely on the basis of his/her absolute, as opposed to relative, performance over the learning material.

Morrison's concept of Mastery

Like Bloom, Morrison believed that the outcome of all teaching is mastery not mere memorization of facts. Each subject fields is to be divided into units. Each unit should present a specific understanding with such thoroughness that mastery is achieved by most students. Although a unit in our common use is thought as a block, portion of text book, Morison's concept of unit is psychological. To him a unit is a "generalization" and its related facts as a student should come to see them .It represents an insight that is relatively complete in itself. A unit will be never covered until all/almost all students thoroughly understood the genaralisations-its factual origins, and relevance.

C)   COGNITIVIST THEORIES

Cognitive theories are based on learning tasks that are practical, and they are seen being used in authentic learning environments. There are three tradition of cognitive perspective. The oldest of these is the Gestalt psychology which emphasizes insight learning, constructivism characterizing cognitive growth of children and symbolic information processing focusing on language understanding, reasoning and problem solving.   Cognitive theorists such as Jean Piaget, J. Bruner, Erik Erikson and David Ausubel have developed theories that are not only widely accepted, but they have begun the path for the development of other cognitive theories. When instructors utilize theories that are cognitive in nature, they tend to develop learning experiences that help students make connections that are meaningful to themselves

Jean Piaget

Swiss Psychologist Jean Piaget's (1896-1980) theory of cognitive development provides insight on teaching and teacher behaviour. Piaget believes that human beings develop increasingly more complex level of thinking in definite stages. Each stage is characterized by possession of certain concepts or intellectual

structures which he refers to *schemas*. He classified intellectual development into following stages:

- Sensory motor (0-2 years)
- Pre-operational(2-7 years)
- Operational(7-16 years)

  -Concrete operational (7-11 years)

  -formal operational (12-16 years)

Wadsworth (1978) has provided some principles of teaching based on his researches on Cognitive development, especially Piaget's theory.

- Teaching is the creation of environments in which students cognitive structure can emerge and change. Piaget believes that cognitive structure will grow only when students initiate their own learning experiences. Thus learning will be spontaneous.

- Student's role in learning experiences must be active and self discovering. In learning new operations children must be given extensive opportunity to manipulate the environment. Piaget sees important symbolic meaning in the manipulation, play and aesthetic behaviour of children, activities that have much to tell about children's academic development.

- The demands for learning situation differ for the three types of knowledge (Physical, Social and Logical). Physical knowledge refers to learning about the nature of matter (Example –cotton is soft, iron is hard).Social knowledge comes through free interaction with other people in the environment. Logical knowledge is concerned with mathematics and logic. Teacher's role in physical and logical knowledge is to provide a setting in which students construct knowledge for themselves through questioning and experimenting.

- Logical and social knowledge are best learned from peer groupsGiven these principles Wadsworth (1978) sketches out three roles for teachers who operate from Piagetian orientation.

  1. organizer of the learning environment
  2. assessor of children's thinking and
  3. Initiator of group activities especially plays games and d discussions.

J.S.Bruner

J.S.Bruner, a developmental psychologist in his study of human beings thinks of them as information processors, thinkers and creators. Bruner perceives learning as involving three almost simultaneous processes namely:

1. Acquisition of new information
2. Transformation of knowledge and
3. Check of pertinence of adequacy of knowledge.

New information may be either a refinement of previous knowledge or of such nature that it runs counter to a person's previous information. For example a student may learn the details of energy conservation in physical science after thinking of energy as being wasted. Bruner levels his views of learning or cognitive growth as "instrumental conceptualism". This view is based on two tenets concerning the nature of the knowing process.

- a persons knowledge of the world is based on her/his constructed models of reality and
- Such models are first adopted from one's culture, then they are adapted to one's individual use.

The theory of instruction according to Bruner should take into account (1) the nature of persons as knower (2) the nature of knowledge and (3) the nature of knowledge getting process.

The nature of Person as Knower

In the book "The Relevance of Education" published in 1973, Bruner writes that-

> Man is not a naked ape, but a culture clothed human being, hopelessly ineffective without the prosthesis provided by culture .The very nature of his characteristics as a species provides a guide to appropriate pedagogy, and the nature of his nervous system and its constraints provides a basis for devising reasonable if not inevitable principles for designing testable pedagogy.

Nature of Knowledge

Bruner (1973) states that "knowledge we know now as never before, is power. This does not mean that there are not canons of truth or that idea of proof is not a precious one. Rather, let knowledge as it appears in our schooling be put into the context of

action and commitment". That's why we should provide students with opportunities to learn skills in problem solving .They should be given problems those they have an inherent passion and interest.

Knowledge getting Process

In the same book mentioned above Bruner addresses a critical question i.e. how do we teach something to a child? This can be effectively done by arranging a child's environment in such a way that s/he can learn something with some assurance that s/he will use the material that s/he has learned appropriately in variety of situations. The student will develop an approach to learning that enables him/her to learn the material in school setting and using the knowledge in day to day life situations.

A theory of instruction as viewed by him should cover five major aspects.

1. the optimal experience to predispose learners to learn

2. a structuring of knowledge for optimal comprehension

3. Specification of optimal sequence of presentation of materials to be learned.

4. the role of success and failure and the nature of reward and punishment

5. procedures for stimulating thought in a school setting

David Ausubel: Advance Organiser:

David Ausubel is one of the few educational psychologists who address learning, teaching and curriculum simultaneously. He believed that acquisition of information is an essential goal of schooling and certain theories can guide teachers in their job of transmitting bodies of knowledge to their students   He developed Advance Organiser model to help teachers organize and convey large amounts of information as meaningfully and efficiently as possible

What is Meaningful?

Ausubel believed that whether or nor the material is meaningful depends more omn the preparation of the learner and on organization of the material than it does on method of presentation .If the learner begin with the right set and the material solidly organized, then meaningful learning can occur.

His theory of Meaningful verbal learning deals with three major concerns:

1.   How knowledge is organized?(Curriculum Content)
2.   How the mind works to process new information?(learning)
3.   How teachers can apply these ideas when they present new materials to students(Instruction)

Advance Organiser:

The advance organizer model is designed to strengthen student's cognitive structures-their knowledge of a particular subject at any given time and how well organized ,clear and stable the knowledge is(Ausubel,1963).The person's existing cognitive structure is the foremost factor governing whether the new material will be meaningful and how it can be acquired and retained. Therefore before we can present new material effectively, we must increase the stability and clarity of our students' cognitive structures

There is a parallel between the way subject matter is organized and the way people organize knowledge in their minds (cognitive structures).Each of the academic disciplines has a structure of concepts and/or propositions that are organized hierarchically .He describes mind as an information processing and information storing system that can be compared to the conceptual structure of an academic discipline. Like the disciplines mind is hierarchically organized   set of ideas that provides anchors for information and ideas and serves as a storehouse for them. The new ideas should be meaningfully linked to the previous ideas.

All these theories i.e. behaviorist, humanistic and cognitivst are thus crucial to teachers in the classroom.

2D.4 LET US SUM UP :

In the unit we have learnt about three theories of learning and teaching. Humanistic theories focus on a student's affective needs. Self development through individualized instruction is emphasized by these theorists. While   Abraham Maslow focused on natural unfoldment through self actualization, Rogers approach was on nondirective teaching. The behaviourists perspective on teaching view teacher as a designer and manager of instruction and an evaluator of specific student learning and educational goals are specified behaviours that students will manifest .I.P.Pavlov, B.F.Skinner, B.S.Bloom are some of the psychologists whose ideas on learning influenced teaching learning process.

There are three traditions of cognitive perspective. The oldest of these is the Gestalt Psychology which emphasises insight learning, constructivism characterizing cognitive growth of children and symbolic information processing focusing on language understanding, reasoning and problem solving. J.Piaget, J.S.Bruner, D.Ausubel were some cognitive theorists whose theories are relevant in teaching learning process.

2D.5 UNIT END EXERCISE :

1. Define teaching. Discuss in brief various behaviouristic theories if teaching.

2. Critically examine the implications of humanistic theories on teaching learning process.

3. Critically examine the implications of cognitive theories on teaching learning process.

4. Explain how Hunanistic, Behaviouristic and Cognitive theories view differently about nature of learning and teacher behaviour.

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MODULE- II
UNDERSTANDING LEARNER DIVERSITY

3

LEARNER DIVERSITY

Unit Structure:

3.0   Objectives
3.1   Introduction
3.2   Learner Diversity
         a. Personality- Theories of Personality-Western(Cognitive-Ellis, Humanistic-Berne) and Indian Perspective (Vedic, Buddhist and Aurobindo)
         b..Intelligence- Cognitive (J.P. Guilford, Emotional D. Goleman) and Multiple (H. Gardner)
         c. Aptitude, Interest, Creativity
3.3   Let us Sum up
3.4   Unit End Exercise

3.0   OBJECTIVES :

After reading this unit you will be able to explain:

- Ellis's Theory of personality
- Berne's Theory of personality
- Vedic concept of personality
- Buddhist concept of personality
- Aurobindo's concept of personality
- Guilford's Structure of Intellect
- Goleman's theory of Emotional Intelligence
- Gardner's Theory of Multiple Intelligence

3.1   INTRODUCTION :

We are already aware of the nature and implications of individual differences among learners. Learner diversity is seen in

various aspects such as personality, intelligence, creativity, aptitude and attitude. It is necessary for a teacher to understand learner diversity in order to design learning experiences that would lead to a holistic development of their students.

3.2   LEARNER DIVERSITY :

Personality- Theories of Personality-Western (Cognitive-Ellis, Humanistic-Berne) AND Indian Perspective (Vedic, Buddhist and Aurobindo)

Introduction to Personality
        The word personality is derived from the Latin word 'persona' which means mask. The study of personality can be understood as the study of masks that people wear. Personality usually refers to that which is unique about a person, the characteristics that distinguish him or her from other people. Thought, emotion, and behavior as such do not constitute a personality, which is, rather, the dispositions that underlie these elements. Personality implies predictability about how a person will act or react under different circumstances.

Definition
'The dynamic organization within the individual of those psychophysical systems that determine his unique adjustment to his environment' — (Allport, 1937)

'that which permits a prediction of what a person will do in a given situation.' – (Cattell, 1965)

'One's habits and usual style, but also ability to play roles.' –- (Cronbach, 1984)

'personality traits are the key antecedent of an individual's cognitions and affective states that may influence his or her task and interpersonal or socio-emotional role behavior (in teams). – (Moynihan and Peterson, 2001)

        A brief definition would be that personality is made up of the characteristic patterns of thoughts, feelings and behaviors that make a person unique. In addition to this, personality arises from within the individual and remains fairly consistent throughout life.

Characteristics of personality

Consistency - There is generally a recognizable order and regularity to behaviors. Essentially, people act in the same ways or similar ways in a variety of situations.

Psychological and physiological - Personality is a psychological construct, but research suggests that it is also influenced by biological processes and needs.

Impact behaviors and actions - Personality does not just influence how we move and respond in our environment; it also *causes* us to act in certain ways.

Multiple expressions - Personality is displayed in more than just behavior. It can also be seen in our thoughts, feelings, close relationships and other social interactions.

Determinants of Personality

1. Heredity:- There are some genetic factors that play a part in determining certain aspects of what we tend to become. Whether we are tall or short, experience good health or ill health, are quickly irritable or patient, are all characteristics which can, in many cases, be traced to heredity. How we learn to handle others' reactions to us (eg.our appearance) and the inherited traits can also influence how our personality is shaped.

2. Culture:- The culture and the values we are surrounded by significantly tend to shape our personal values and inclination. Thus, people born in different cultures tend to develop different types of personalities which in turn significantly influence their behaviours. India being a vast country with a rich diversity of cultural background provides a good study on this. For example, we have seen that people in Gujarat are more enterprising than people from other states, Punjabees are more diligent and hardworking, people from Bengal are more creative and with an intellectual bend e.t.c.

3. Family Background:-The socio-economic status of the family, the number of children in the family and birth order, and the background and education of the parents and extended members of the family such as uncles and aunts, influence the shaping of personality to a considerable extent. First-borns usually have different experiences, during childhood than those born later;

Members in the family mould the character of all children, almost from birth, in several ways -by expressing and expecting their children to conform to their own values, through role modeling, and through various reinforcement strategies such as rewards and punishments which are judiciously dispensed. Think of how your own personality has been shaped by your family background and parental or sibling influences!

4. Experiences in Life:- Whether one trusts or mistrusts others, is miserly or generous, have a high or low self esteem and the like, is at least partially related to the past experiences the individual has had. Imagine if someone came to you and pleaded with you to lend him Rs. 100 which he promised to return in a week's time, and you gave it to him even though it was the last note you had in your pocket to cover the expenses for the rest of that month. Suppose that the individual never again showed his face to you and you have not been able to get hold of him for the past three months. Suppose also that three such incidents happened to you with three different individuals in the past few months. What is the probability that you would trust another person who comes and asks you for a loan tomorrow? Rather low, one would think. Thus, certain personality characteristics are moulded by frequently occurring positive or negative experiences in life.

5. People We Interact With:- "A Person is known by the company he or she keeps" is a common adage. The implication is that people persuade each other and tends to associate with members who are more like them in their attitudes and values. Beginning childhood, the people we interact with influence us. Primarily our, parents and siblings, then our teachers and class mates, later our friends and colleagues, and so on. The influence of these various individuals and groups shapes our personality. For. Instance, if we are to be accepted as members of our work group, we have to conform to the values of that group which mayor may not always be palatable to us; if we don't, we will not be treated as valued members of the group. Our desire to be a part of the group and belong to it as its member, will compel many of us to change certain aspects of our personality (for instance, we may have to become less aggressive, more cooperative, etc.). Thus, our personality becomes shaped throughout our lives by at least some of the people and groups we interact with. Thus, our personality is a function of both heredity and other external factors that shape it.

There are a number of different theories about how personality develops. Different schools of thought influence many of these theories.

Western Theories of Personality:

Majority of the Western theories regard the psychophysical self as the basic unit of personality.

An individual's personality is that pattern that distinguishes him as an individual and accounts for his unique and relatively consistent ways of interacting with his environment.

Rational-Emotive-Behavior Therapy by Ellis':

Cognition means to perceive, comprehend, and conceive or to know. The basic premise behind cognitive theory of personality is the idea that the way we think about or perceive ourselves and others, determines how we respond to the world with our emotions and behaviors. Hence any treatment would have to include changing the way a person thinks about himself and / or the world.

Rational-Emotive-Behavior Therapy (REBT), developed by Albert Ellis, is a therapy that consciously uses cognitive, emotive, and behavioral techniques to help clients. REBT theorists stress that human beings have choices. The control of ideas, attitudes, feelings, and actions is specific to the person who arranges a life according to personal dictates. Having little control over what happens or what actually exists, people do have choices and control over how they view the world and how they react to difficulties.

Behavioral techniques to help people:

REBT is based on the premise that whenever we become upset, it is not the events taking place in our lives that upset us; it is the beliefs that we hold that cause us to become depressed, anxious, enraged, etc.

To illustrate this, Dr. Ellis developed a simple **ABC** format to teach people how their beliefs cause their emotional and behavioral responses:

A. Something happens.
B. You have a belief about the situation.
C. You have an emotional reaction to the belief.

A ---→ B ---→ C
Activating   Belief   Emotional
Event   Consequence
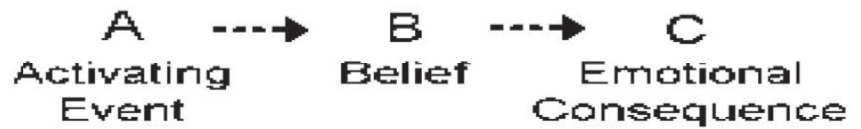
D, E and F are aimed at the promotion and maintaining of change.

D. Counselor disputing the client's irrational thoughts

E. Presumed consequences of the counselor's intervention

F. New feelings the client has regarding situation

For example:
A. Your employer falsely accuses you of taking money from her purse and threatens to fire you.
B. You believe, "She has no right to accuse me. She is a @#$%$."
C. You feel angry.

If you had held a different belief, your emotional response would have been different:

A. Your employer falsely accuses you of taking money from her purse and threatens to fire you.
B. You believe, "I must not lose my job. That would be unbearable."
C. You feel anxious.

The ABC model shows that A does not cause C. It is B that causes C. In the first example, it is not your employer's false accusation and threat that make you angry; it is your belief that she has no right to accuse you, and that she is a @#$%$. In the second example, it is not her accusation and threat that make you anxious; it is the belief that you must not lose your job, and that losing your job would be unbearable.

Although we all express ourselves differently, according to Albert Ellis the beliefs that upset us are all variations of three common irrational beliefs.

The Three Beliefs / Musts That Contribute to Making People Miserable:

1. I must do well and/or be approved of by significant others.
2. I must be treated fairly by others and in exactly the way I want
3. I must get what I want, when I want it; and I must not get what I don't want

The first belief often leads to anxiety, depression, shame, and guilt. The second belief often leads to rage, passive-aggression and acts of violence. The third belief often leads to self-pity and procrastination. It is the demanding nature of the beliefs that causes the problem. Less demanding, more flexible beliefs lead to healthy emotions and helpful behaviors

Disputing

The goal of REBT is to help people change their irrational beliefs into rational beliefs. Changing beliefs is the real work of therapy and is achieved by the therapist disputing the client's irrational beliefs.

Techniques Used by Therapist to Reduce or Eliminate Irrational Thinking

Active disputation –asking questions in Socratic Style

Why is _____ so terrible or awful?

Where is it written that you can't stand the situation?

Is there another way you can think about this?

What is preventing you from doing so?

Why must you have it this way?

What is the worst that can happen if you give up this belief?

What is the best that can happen?

When the client tries to answer the therapist's questions, s/he sees that there is no reason why s/he absolutely must have approval, fair treatment, or anything else that s/he wants.

Insight

Albert Ellis contends that although we all think irrationally from time to time, we can work at eliminating the tendency by developing three insights:

1. We don't merely get upset but mainly upset ourselves by holding inflexible beliefs.

2. No matter when and how we start upsetting ourselves, we continue to feel upset   because we cling to our irrational beliefs.

3. The only way to get better is to work hard at changing our beliefs.

Acceptance

REBT therapists strive to help their clients develop three types of acceptance: (1) unconditional self-acceptance; (2) unconditional other-acceptance; and (3) unconditional life-acceptance. Each of these types of acceptance is based on three core beliefs:

Unconditional self-acceptance:

1. I am a fallible human being; I have my good points and my bad points.

2. There is no reason why I must not have flaws.

3. Despite my good points and my bad points, I am no more worthy and no less worthy than any other human being.

Unconditional other-acceptance:

1. Other people will treat me unfairly from time to time.
2. There is no reason why they must treat me fairly.
3. The people who treat me unfairly are no more worthy and no less worthy than any other human being.

Unconditional life-acceptance:

1. Life doesn't always work out the way that I'd like it to.
2. There is no reason why life must go the way I want it to
3. Life is not necessarily pleasant but it is never awful and it is nearly always bearable

Ellis believes that when people have achieved all three types of insight, "elegant" change takes place as they have not only made changes but also know why the changes have been made.

Transactional Analysis by **Eric Berne:**

Humanistic theorists believe that each individual is motivated to develop and tries to develop his full potential and capabilities.

Eric developed Transactional Analysis (TA) which is basically a statement describing the human personality. He believed that life is a series of decisions to be made and problems to be solved, and that people have the rationality and the freedom to do both. TA is a theory of personality and a systematic psychotherapy for personal growth and personal change. As a theory of personality, TA describes how people are structured psychologically. Berne

believed that when we interact with other people, our state of mind affects what happens. There are three states of mind in all humans, no matter how old they are, called ego states.

The Ego-State (or Parent-Adult-Child, PAC) model

At any given time, a person experiences and manifests their personality through a mixture of behaviors, thoughts and feelings. There are three ego-states that people consistently use:

1. Parent: The authoritative and directive core in each of us, learned from our parents and other authority figures when we were young. The parent is concerned with rules and guidelines. For example, a person may shout at someone out of frustration because they learned from an influential figure in childhood the lesson that this seemed to be a way of relating that worked.

2. Adult: The reasoning core in each of us. The adult seeks to understand and rationalize external stimuli and react appropriately to such stimuli.

3. Child: The emotional core in each of us. The child in us reacts to external stimuli in an emotional manner such as happiness, sorrow, anger etc. For example, a person being told off by the boss at work may look down and feel shame or anger, as they used to when being told off as a child.

Within each of these are sub-divisions. Thus parental figures are often either nurturing (permission giving, security giving) or critical (finds faults, displays prejudices, disapproves and prevents others from feeling good about themselves), childhood behaviors are either natural (free, spontaneous, impulsive, feeling oriented, self-centered & pleasure loving) or adapted (compliant, conforms to the wishes & demands of parental figures) . Each of these tends to draw an individual to certain patterns of behavior, feelings and ways of thinking, which may be beneficial (positive) or dysfunctional/counterproductive (negative).

Transactions

When people are in their different ego states and they interact with other people, three main types of transaction (or interaction) can happen.

Types of Transaction

Complementary – both people are operating from the same ego state

Crossed – the other person reacts from an unexpected ego state

Ulterior – two ego states within the same person but one disguises the other

At the core of Berne's theory is the rule that effective transactions (i.e. successful communications) must be complementary. They must go back from the receiving ego state to the sending ego state. For example, if the stimulus is Parent to Child, the response must be Child to Parent, or the transaction is 'crossed', and there will be a problem between sender and receiver.

Life positions

Many people get stuck in one ego state more than the other two and this may be due to early childhood experiences.

Types of Life positions

Four basic life scripts:

1. I'm OK, you're OK – ideal

2. I'm OK, you're not OK – get away from me
3. I'm not OK, you're OK – I'll never get anywhere
4. I'm not OK, you're not OK – get rid of each other

Everyone is born in the same Life Position **I'm not OK, You're OK**

The reason you are not OK when you are born is because you are dependent on others for all your needs. They are OK, because they have the ability to satisfy their own needs and your needs.

The ideal life position to reach is I'm OK, You're OK, where you are in a position to satisfy your own needs and are happy that others are able to satisfy their needs. However, not all people progress to this happy state, they get stuck in either" I'm not OK, You're not OK" or "I'm OK, You're not OK" on account of childhood experiences which result in either very low self esteem or too high self esteem.

Transactional Analysis helps to create, develop and maintain better relationships in every situation, by enabling one to understand more clearly what is going on, and use this knowledge in the choice of what ego states to adopt, which signals to send, and where to send them.

Indian Perspective of Personality

The Indian theories of personality opine that man is essentially a spiritual being, and each individual's true identity lies outside the personality complex in the Jivatman or spirit. Indian philosophical-psychologists perceive some 'life force' in an individual which persists amidst biological, psychological and environmental changes. It has been referred to as 'self consciousness' or 'self illuminacy'. The western concept of 'self 'refers to 'ME' reaction of an individual as a mental process whereas the Indian concept the Indian concept of 'self consciousness' refers to something deep, inherent, intuitive, the transcendental self in the individual as apart of the universal self

Vedic Perspective of personality

"Veda" means knowledge in the Sanskrit language. According to the Vedic psychological philosophy consciousness is 'the essence of personality' and only through proper integration of One's body, mind, ego and spirit can one strengthen one's personality. The integration of the different cells in the body is essential to prevent disharmony or ill health. Hence the body must be nourished with pure food, fresh air and exercise so that one becomes stronger and healthier and cheerful. Similarly our mind is a 'synthetic whole' consisting of the faculties of cognition, feeling and will. These faculties of the mind are often at war with one another and create confusion within the individual which may lead to the individual battling a whirlpool of emotions. Hence integration of the mind is essential to ensure purity, strength and harmony of the mind. Likewise 'ego' which is constantly changing if perverted may make an individual egocentric, selfish and mean; which is detrimental for himself, his family and to the society. Integration of the internal components of the ego can thus prevent the individual from being maladjusted.

Thus 'Integration' has its physical aspects, mental aspects as well as its spiritual aspects. In a properly integrated personality the 'ego' or the individual's consciousness is in tune with the universal consciousness which guides the mind and the body in a harmonious, intelligent and spontaneous manner. The individual feels harmonized and integrated when s/he is the master of her/his mind and spontaneously follows the spiritual life without conflicts. The process of mental purification is called 'sublimation' in psychological terms. It is a process of giving a higher turn to the desires of primary instincts. Such a blessed personality sees the

supreme spirit in himself and in all beings. His mind is not shaken by misery nor upset by happiness. He does not get affected by joys and sorrows, censure and praise, love and hatred. For him there is no difference between a piece of log and a piece of gold. He looks upon honor and dishonor, friendship and enmity as the same, and shuns initiative in all matters, for he has nothing to ask for. This state of perfect liberation or 'supreme consciousness' is hard to attain. It can be achieved only through long-sustained endeavor and a strong sense of detachment

Objectives of Vedic education:

1. Ultimate aim is to be one with the almighty or to be 'free'
2. Education for character formation
3. Development of:
>Self restraint
>Self confidence
>Self respect
>Discrimination and Judgement
>Stress on social duties
>Preservation and promotion of culture

Buddhist Perspective of Personality

Buddhism began in India in 6th century BC. based upon the Teachings of Siddhartha Gautama, the Buddha. Buddhism maintains that every person possesses the 'Buddha-nature.' Everyone is capable of developing into a Buddha (**Buddha** = One who is awake, one who has achieved full humaneness) In Buddhism, a human being is perceived to be made up of five components i.e. the skanda, namely that of the material form (rupa), cognition (samjna), sensation (vedana), disposition (samkharas), and consciousness (vijnana). According to Buddhism a person is the dynamic aggregation of these five different elements (*skandhas*), together called *Nama-Rupa*. The *skandhas*, constitute an individual personality

Personality in Buddhism means the characteristics that are specific to an individual. These characteristics are manifested by his/her good and bad behaviors through body, speech, and mind. In other words good and bad behaviors were the manifestations of the mental motivation.

Personality is divided into two categories:

1. Implicit Personality and
2. Explicit Personality

Implicit Personality is described as the characteristics of an individual who has wholesome and unwholesome mental conducts. Explicit Personality is described as the characteristics of an individual who has wholesome and unwholesome behaviors through body and speech that are manifested in outward appearances.

Buddhism essentially talks about the four noble truths: The world is full of suffering, that suffering is cause by desire, that suffering can cease, and that there is a path to freedom, or Nirvana. This path is the eightfold path of right views, right intentions, right speech, right conduct, right livelihood, right effort, right mindfulness and right concentration.

The essence of Buddhism's teachings is therefore to understand the basic element behind what makes life and living. The Buddha understood this to be the dukha factor. Dukha is being in a state of wanting with a sense of restlessness, unfulfilled and incomplete, a state of dissatisfaction, a feeling of unfinished and unsettled matter, and this is a form of misery. This feeling exists and develops because people have tanha which appears in the form of needs and wants, desire and aspirations, and unless these are fulfilled, there is always the feeling and sense of striving and therefore of dukha. Thus, this situation ought to be addressed and repressed and this can be done through the Eight-fold Paths.

The Eight-fold Path trains an individual to attain a very high sense of self-discipline, including at the levels of the mind, feeling and action, which are also in correspondence to the five components of man, i.e., the skanda. Numerous techniques are developed to assist Buddhists to attain this perfection of personality. The objective of this discipline and training is to assist the individual to get rid of tanha and so ultimately to abrogate dukha altogether. Nonetheless, tanha and dukha can only be completely annihilated from a person upon his or her achieving Nirvana a situation where is no more tanha and dukha, a state of being fully fulfilled, satisfied and contented.

Personality development in Buddhism is the improvement of internal and external characteristics. The improvement of internal characteristics is emphasized in Buddhism as it leads to the enlightenment of the ultimate goal of Buddhism, Nirvana. A state of mind in which all cravings and desires have been extinguished. Nirvana can only be achieved through self-discipline, meditation, and realization of impermanence of selflessness.

The person who continuously underwent personality development according to the Buddhist teaching benefited in 3 ways.

Physically he changed his unwholesome bodily action and bad speech to wholesome bodily action and good speech. Mentally his mental unwholesome tendencies changed to wholesome tendencies. Spiritually he destroyed his worldly knowledge and obtained sublime wisdom that eradicated greed, hatred, and delusion. He finally attained the highest goal in Buddhism, of e.g. the total eradication suffering which is Nirvana.

Shri Aurobindo's Perspective of Personality -Integral psychology

Integral psychology is an approach to personality growth which is experienced in the Integral Yoga of Shri Aurobindo. Sri Aurobindo drew his inspiration from the Vedas, Upanishads and the Bhagwad Gita. Combining elements and practices of many yogic traditions, Aurobindo devised a Yoga of Self-Perfection and Integral Yoga. . According to him , every one has in him something 'divine' which can be realized through Integral yoga.Yoga means consciousness-growth. Integral Yoga means all comprehending consciousness-growth for a harmonious and complete unfolding of man and his possibilities.

The starting point for this unfolding is the capacity to learn-every human being is able to learn, to gather knowledge and experience. Learning and exploring lead to the next step of our unfoldment- creative assimilation and introspection, playfulness, unveiling of possibilities, the experience of dreams and imaginations. The interaction between learning and growing creative imagination gives form to an inner or psychological world. Learning and the creative assimilation of its contents give gradual birth in this inner world to our individuality or person we feel to be the "I". This ego formation enables us to be a functioning person in the external world. The ego formation is the psychological center for our external person, for our activities and attitudes which we apply in the surrounding world., Through our ego we mould our sense of personality, experience it and also realize its limits;.

For many individuals their progress ends in this state of being and limits itself to opportunism, compromises, struggle or resignation. Finally the circle of life nears completion, possibly satisfied with the feeling of having fulfilled one's duty, possibly restless with many open questions.

But Sri Aurobindo says that growth of consciousness does not end with the formation of the ego. We can explore our inner worlds deeper and wider, can go beyond the limits of ego and find the divine. Sri Aurobindo tells us, that the very fact of being conscious

as a person enables us to open ourselves to that in us which is vaster and truer than the limited sense of I-ness. This self-opening can be achieved through faith, sincerity and surrender. Faith in the greater spiritual reality living within us, sincerity which enables us to move forward on the way of the inner discovery without self-deceit, surrender to the influence coming from the secrecy of our inmost spiritual reality which we can feel and – in moments of clarity – comprehend. This is the method of the Integral Yoga. Surrender and self-opening to our inmost reality combined with faith and sincerity is the first step of the Integral Yoga, giving us access to the experience of this reality. In the further unfoldment we become conscious of the soul.

With the initial sense of the soul's atmosphere, and finally with the knowledge and experience of our soul, we have become conscious of our inmost reality and no longer live within ego-limits. We are united with our true being, which not only gave birth to our individuality but also is the origin of all human beings and the creation in its entirety. As a result we are now living a psychic life, a life born from the soul, and we are able not only to experience love, beauty, creative joy, strength and unity within, but are fit to express and manifest them in the physical world.

Sri Aurobindo defines this state of consciousness-growth as the psychic transformation, enabling us to live to a great extent free from the limitations of the ego. The meaning of the Integral Yoga of Sri Aurobindo thus is fusing the spiritual and material realities in the consciousness of man to establish an original divine unity making possible the fulfillment of life by revealing its goal and meaning leading to the ultimate, divine "sacchidananda" state.

Sri Aurobindo says that two systems are simultaneously active in the organization of the being and its parts a concentric system and a vertical system.The concentric system is like a series of rings or sheaths. The outer most circle is comprised of awareness of physical body, awareness of vital (pranic) body or sheath and awareness of mental sheath. These three types of consciousness are interconnected.

The inner circle is composed of inner mind which is in touch with the universal mind or Supreme Energy.The innermost core is called as Psychic being which is a spark of the Divine (Supreme Energy) present in all of us and in every thing. It is also called as Atman. The vertical systems is like a staircase consisting of varius levels, planes of consciousness ranging from the lowest – the

inconscient to the highest – Sat chit anand. Sri Aurobindo states that though the first realization of the Self is passive it can be followed by a dynamic heightening and widening of consciousness that leads eventually to transformation of both the inner and outer beings.

For the harmonious development of all aspects of human personality, physical, vital, mental, psychical and spiritual Sri Aurobindo advocated integral education. Like Integral Yoga, integral education is synthetic in its approach and aims. Aurobindo believed that an atmosphere of freedom was the prerequisite of a child's growth. The child should be given a certain freedom to err and stumble in its path so as to help it walk straight in the future. . Education, according to him should not be content with the provision of saleable competence but must also instill a self-confidence that will train students to improvise the necessary skills to meet the challenges of an unknown future.

Education should focus on

1. Sense training through observation of natural phenomena under the guidance of the teacher

2. Developing power of Investigation through development of the sense of observation

3. Training of memory and mind by encouraging students to note similarities and dissimilarities

4. Training in making judgments through all of the above

5. Training of logical faculty through;

    a. ascertaining correctness of facts

    b. collection of accurate data

    c. sifting facts by eliminating false elements

6. Training of imagination depens on

    a. formation of correct ideas

    b. developing power of creative thinking

    c. training in appreciating the existence of truth, goodness and beauty of soul in all existing things

7. Training in language through appropriate methods of teaching and also through concrete thinking

Intelligence- Cognitive (J.P. Guilford, Emotional D. Goleman) and Multiple (H. Gardner)

Intelligence-

Intelligence derives from the Latin verb *intelligere* which derives from inter-legere meaning to "pick out" or discern. Intelligence is a term that is easier to recognize than to define, and it can mean many different things to different people. In fact, it has divided the scientific community for decades and controversies still rage over its exact definition and form of measurement.

In the popular sense, intelligence is often defined as the general mental ability to learn and apply knowledge to manipulate your environment, as well as the ability to reason and have abstract thought. Other definitions of intelligence include adaptability to a new environment or to changes in the current environment, the ability to evaluate and judge, the ability to comprehend complex ideas, the capacity for original and productive thought, the ability to learn quickly and learn from experience and even the ability to comprehend relationships.

A superior ability to interact with the environment and overcome its challenges is often seen as a sign of intelligence. In this case, the environment does not just refer to the physical landscape (eg. mountains, forests) or the surroundings (eg. school, home, workplace) but also to a person's social contacts, such as colleagues, friends and family – or even complete strangers.

Researchers when asked about the aspects of intelligence felt that factors like problem-solving ability, mental speed, general knowledge, creativity, abstract thinking and memory all played important roles in the measure and standard of intelligence. Most agree that intelligence is an umbrella term which covers a variety of related mental abilities.

Definitions :
'Intelligence is the ability to judge well, reason well and act well.' Binet

 'Intelligence is the cognitive ability of an individual to learn from experience, to reason well, to remember important information, and to cope with the demands of daily living'. Sternberg 'the global capacity of a person to act purposefully, to think rationally, and to deal effectively with his/her environment.' Wechsler.

Based on the definitions, Intelligence is:

Cognitive – Examples of cognitive ability: memory, perception, concept formation, problem solving, mental imagery, action, association, language and attention.

The ability to learn from experience

The ability to live and cope with the demands of daily life.

Rational thought and reasoning

The ability to act purposefully in an environment.

The ability to deal with situations, in an effective manner, within an environment.

Intelligence thus, may be thought of as an organization of activities to learn, to grasp broad and subtle facts especially abstract facts with alertness and accuracy to exercise mental control and to display flexibility while seeking solutions to problems.

Cognitive J.P. Guilford

J.P.Guilford views intelligence as a systematic collection of abilities or functions for the processing of information of different kinds in various ways.

In (1986) J.P. Guilford proposed the structure of- intellect model which classifies intellectual traits among three **dimensions** namely:

1. **Operation**: concerned with how the mind goes about the task/ the style or approach it adopts
2. **Content** : concerned with the type of mental operation or mental representation which is involved
3. **Product**: type of outcome which can result from the mental task

The Operation Dimension

This consists of five (later six when memory was separated into recording and retention) kinds of operations or general intellectual processes:

1. Cognition - The ability to understand, comprehend, discover, and become aware of information.

2. Memory - The ability to encode information and recall information. Later divided into

Memory Recording - The ability to encode information.

Memory Retention - The ability to recall information.

3. Divergent Production - The process of generating multiple solutions to a problem

4. Convergent Production - The process of deducing a single solution to a problem.

5. Evaluation - The process of judging whether an answer is accurate, consistent, or valid.

The Content Dimension

This dimension includes the broad areas of information in which operations are applied. It was divided into four categories, later five when auditory and visual were separated:

1. Figural - Information that is non-verbal or pictorial. Later divided into

    Auditory - Information perceived through hearing.

    Visual - Information perceived through seeing.

2. Symbolic - Information perceived as symbols or signs that have no meaning by   themselves; for example, Arabic numerals or the letters of an alphabet.

3. Semantic - Information perceived in words or sentences, whether oral, written, or silently in one's mind.

4. Behavioral - Information perceived as acts of an individual or individuals.

The Product Dimension

As the name suggests, this dimension contains results of applying particular operations to specific contents. There are six kinds of products, they are:

1. Unit - Represents a single item of information.

2. Class - A set of items that share some attributes.

3. Relation - Represents a connection between items or variables; may be linked as opposites or in associations, sequences, or analogies.

4. System - An organization of items or networks with interacting parts.

5. Transformation - Changes perspectives, conversions, or mutations to knowledge; such as reversing the order of letters in a word.

Guilford's original model comprised of 120 components because he had not separated Figural Content into separate Auditory and Visual contents, nor had he separated Memory into Memory Recording and Memory Retention. When he separated Figural into Auditory and Visual contents, his model increased to 5 x 5 x 6 = 150 categories. When Guilford separated the Memory functions, his model finally increased to the final 180 factors .Hence these 180 factors constitute intellect and intellectual activity generally called as intelligence.

Emotional D. Goleman

Emotional Intelligence

Emotional intelligence (sometimes known as emotional literacy) is a relatively new concept in the education world. By helping children to deal with their emotions and to become better listeners, it can assist teachers in the classroom and raise standards.

There is no doubt that children's emotions have a huge impact on school life. Anger affects the atmosphere in a classroom like nothing else. Similarly, in lessons where significant progress has been made, it is likely that more positive emotions were present in both teacher and pupils.

Emotions impact productivity, relationships, creativity and achievements. Philosophers such as David Hume and Adam Smith believed them to be vital to social and individual existence. More recent thinkers have examined the premise further. In *Emotion: The science of sentiment*, Dylan Evans writes that 'Intelligent action results from a harmonious blend of emotion and reason'. He adds, 'Knowing when to follow our feelings and when to ignore them is a valuable talent that some have called "emotional intelligence".'

Emotional Intelligence, emotional literacy is a relatively new concept in the education world. By helping children to deal with their emotions and to become better listeners, it can assist teachers in the classroom and raise standards.

Emotional Intelligence (EI), often measured as an **Emotional Intelligence Quotient (EQ)**, describes a concept that involves the

ability, capacity, skill or (in the case of the trait EI model) a self-perceived ability, to identify, assess, and manage the Emotions of one's self, of others, and of groups.

Aspects of Emotional intelligence
1.Understanding yourself, your goals, intentions, responses, behaviour and all.
2.Understanding others, and their feelings.

Concept
Emotional Intelligence - EQ - is a relatively recent behavioral model, rising to prominence with **Daniel Goleman's 1995** Book called 'Emotional Intelligence'. In 1994 Daniel Goleman stated in a report on the current state of **emotional literacy** in the U.S;

"...in navigating our lives, it is our fears and envies, our rages and depressions, our worries and anxieties that steer us day to day. Even the most academically brilliant among us are vulnerable to being undone by unruly emotions. The price we pay for **emotional literacy** is in failed marriages and troubled families, in stunted social and work lives, in deteriorating physical health and mental anguish and, as a society, in tragedies such as killings. EQ is the personal, social, and survival dimensions of Intelligence. EQ is concerned with understanding oneself and others, relating to people, and adapting to and coping with the immediate surroundings • A dictionary definition might include "an array of noncognitive capabilities, competencies, and skills that influence one's ability to succeed in coping with environment

Goleman identified the five 'domains' of EQ as:
1.Knowing your emotions.
2.Managing your own emotions.
3.Motivating yourself.
4.Recognizing and understanding other people's emotions.
5.Managing relationships, ie., managing the emotions of others.

Goleman includes a set of emotional competencies within each construct of EI.

Emotional competencies are not innate talents, but rather learned capabilities that must be worked on and developed to achieve outstanding performance.

Goleman says that individuals are born with a general emotional intelligence that determines their potential for learning emotional competencies

Five yardsticks to measure EI

1. Your **ability to identify and name one's emotional states** and to understand the link between emotions, thought and action

2. Your **ability to manage your emotional states** — to control your emotions or to shift undesirable emotional states to more reasonable ones

3. Your **ability to enter into emotional states** associated with **achievement and success**

4. Your **ability to read, be sensitive to and influence other people's emotions**

5. Your **ability to enter into and to sustain positive interpersonal relationships**

The Southampton Emotional Literacy Interest Group (SELIG) defines emotional literacy as: 'The ability to recognise, understand, handle and appropriately express emotions'. According to SELIG, such an important skill should not be marginalized or contained in one small dimension of the curriculum. Emotional literacy can be used to encompass:
1. Learning and achievement
2. Social and health education
3. Spiritual, moral and cultural development
4. Equal opportunities
5. Citizenship
6. Behaviour and discipline
7. Social inclusion
8. Crime and disorder
9. Music, art, dance and drama

Role of Schools:

Schools that seek specifically to promote emotional literacy amongst pupils have provided evidence that it helps to raise achievement. Teachers will often use certain approaches. For example, they might adopt key emotions such as anger and happiness or fear and excitement each half term. This encourages awareness of the impact that emotions can have on our lives. Children can be asked to think about contrasting emotions: when

they might experience them and how they might express them differently. Fiction, themed displays or music and colour imagery can all help children of any age feel more connected to their emotions.

Role of the Teacher

The teacher's level of EQ is by far the single most important variable in creating a classroom where EI can be developed healthily.and the single most important variable in the teacher's EQ is how they handle their own emotions, especially their negative emotions. An effective, successful teacher is largely one who can handle his or her negative feelings in an authentic, real and healthy way.

As a new teacher in a school your role can be central. The impact of both your own, and your pupils', emotions might play a strong role in the development of your personal teaching style. The following methods will begin developing emotional intelligence in your pupils:

1. Offer pupils a part of each lesson to explain what they have learned or researched to others in their group.

2. Let personal reflection play a strong role in your lessons. Encourage pupils to think about what they are achieving and how they are making progress. They might consider how they are helping or hindering themselves and how they might do things differently.

3. Develop tasks and activities that nurture listening skills.

4. Offer pupils choices within your lessons, as far as is practical. This helps them to develop a sense of responsibility for, and commitment to, their actions.

5. Give praise and positive encouragement as frequently as possible and encourage pupils to do this for themselves and for each other.

Why does emotional literacy matter?

In *Nurturing Emotional Literacy*, educational psychologist Peter Sharp explains what we can expect to see if schools are successful at nurturing emotional literacy:

Children who recognise and understand their feelings and so become more adept at handling and expressing them appropriately

Children and teachers who are less unduly stressed, and are able to manage competing demands more effectively Children who have become better listeners, and who are more likely to see the other person's point of view Children with an increased attention span Children who have greater prowess at forming and maintaining relationships Children will have learned problem-solving methods that lead to enhanced interpersonal skills as adults Children who have learned to manage conflicts and are therefore less likely to be involved in crime, particularly those crimes involving violence Children who have learned skills that enhance their future parenting skills

Introducing emotional intelligence in schools.
What would be the consequences of introducing emotional intelligence in schools? Are schools the right place for it? Is it even possible? Scientific research, in particular on how the brain works, indicates that the formation of emotional skills is much easier in the "formative" years from birth to the late teens. Looking at existing structures, school is **the** major activity in that age group. However, emotions rarely have a place in schools. Beyond infants school and early primary school, almost all efforts are concentrated on cognitive skills (reading, writing, mathematics,...). What's more, there is little or nothing in the standard training of teachers that prepares them from such a task. Yet there is no subject where the quality and ability of teachers would be more crucial.

Introducing emotions in schools would be a radical change! Yet schools do not change so readily. Those well-meaning people who have tried to introduce innovations in schools have come up against considerable resistance from teachers, students and parents alike. Yet without their active participation, no such far-reaching change is possible.

One possible solution, if such essential skills prove too difficult to develop in schools, would be to start by introducing them in the spaces around school. During the breaks for example. Daniel Goleman describes how appointed pupil mediators, once all involved know the rules of the game, resolve conflicts in the playground. Such a "school for emotions" could be a local, community-based activity in conjunction with other activities like scouts, parent-teachers associations, artistic expression groups, clubs etc.

What skills?
But what exactly might such skills be? In his book, Daniel Goleman gives a considerable list. Here are some indications

inspired by a list quoted by Goleman from a book called *Self Science: The Subject is Me* (2nd edition) by Karen Stone McCown et al. [San Mateo, Six Seconds, 1998]

Self awareness

One of the basic emotional skills involves being able to recognise feelings and put a name on them. It is also important to be aware of the relationship between thoughts, feelings and actions. What thought sparked off that feeling? What feeling was behind that action?

Managing emotions

It is important to realise what is behind feelings. Beliefs have a fundamental effect on the ability to act and on how things are done. Many people continually give themselves negative messages. Hope can be a useful asset. In addition, finding ways to deal with anger, fear, anxiety and sadness is essential: learning how to soothe oneself when upset, for example. Understanding what happens when emotions get the upper hand and how to gain time to judge if what is about to be said or done in the heat of the moment is really the best thing to do. Being able to channel emotions to a positive end is a key aptitude.

Empathy

Getting the measure of a situation and being able to act appropriately requires understanding the feelings of the others involved and being able to take their perspective. It is important to be able to listen to them without being carried away by personal emotions. There's a need to be able to distinguish between what others do or say and personal reactions and judgements.

Communicating

Developing quality relationships has a very positive effect on all involved. What feelings are being communicated to others? Enthusiasm and optimism are contagious as are pessimism and negativity. Being able to express personal concerns without anger or passivity is a key asset.

Co-operation

Knowing how and when to take the lead and when to follow is essential for effective co-operation. Effective leadership is not built on domination but the art of helping people work together on common goals. Recognising the value of the contribution of others and encouraging their participation can often do more good than giving orders or complaining. At the same time, there is a need to

take responsibilities and recognise the consequences of decisions and acts and follow through on commitments.

Basic Steps to Emotional Intelligence in the Classroom

Managing your Own Emotions

Identify Your Feelings - Ask yourself: How am I feeling? - Answer using three word sentences beginning with "I feel..."   - Label your feelings, not your children (or situation)

Take Responsibility for Them (Own them)   - Don't blame the children for your feelings   - Owning your feelings means not thinking in terms of:You are making me angry You kids are driving me crazy   - Remember that there is a little space between stimulus and response, and in this space lies your power to choose your reaction. Don't give away this power.** If your kids are in charge of your emotions, you are in trouble! Same is true for the children especially teenagers

Use Your Emotional Awareness to Learn About Yourself

Your negative feelings reveal your unmet emotional needs. Remember that the children are not there to meet your needs, you are there to meet theirs. Thus, you must either get your needs met somewhere else, or you must "let go" of some of your needs, such as your need to have so much control, or to feel obeyed.

Do not demand respect work towards earning it. The easiest way to do this is by respecting each individual child's feelings, and reminding oneself that his negative feelings   are indicative of unmet emotional needs.

Work on Keeping Your Area of Acceptance Wide Open

When you feel good about yourself you are more accepting, tolerant, patient, understanding. This helps your students feel Accepted, Approved of ,Secure and Relaxed.
Feeling good about themselves ===> contribute to healthy self-esteem, openness to learn and willingness to cooperate.

Helping your Students Feel Better Through Increased Eq

A. Help them label their feelings   - Teach them a wide range of feeling words   - Start expressing your feelings   - Start talking about feelings

B. Give them real choices   - Honor their decisions   - Don't issue orders in disguise as requests   - Ask them to help you meet your needs; don't demand it

C. Respect their feelings   - Ask them how they feel   - Ask them how they would feel before taking action   - Think about how you want them to feel - what feelings create a <u>positive learning environment</u>

D. Encourage a positive outlook - Validation   -   Accept their feelings   - Show understanding, empathy, caring and concern   - Whenever there is a problem remember to always first validate the feelings
E. Empower them   - Ask them how they feel and "What would help you feel better"   - Teach them to solve their own problems using empathy, compassion and   mutual respect for each other's feelings

F. Avoid Labels and Judgment   - Avoid "shoulds"   - Avoid subjective labels (good/bad; nice/rude, etc.)

Creating a Positive Learning Environment
Traits of a positive learning environment:

Safe-- Free from fear of physical, psychological or emotional pain and abuse. Free from threats, force, punishment, coercion, manipulation, pressure, stress, intimidation, humiliation, embarrassment, invalidation.

Free -- Students have real choices. Participation in activities and lessons is voluntary.

Respectful -- Students and teachers respect each other's feelings, emotional needs, beliefs, values and uniqueness

Individual/Supportive/Nurturing --   Students   are   treated individually. Their individual needs, talents, potential and interests are supported.

Emotionally Intelligent -- Feelings are valued, discussed, validated. EI is part of the formal and informal curriculum.

Relevant/Meaningful/Practical -- Material helps students with real problems in their lives. Life skills, relationship skills and parenting skills are taught.

Empathetic & Caring -- Students and teachers care about each others feelings.

Interesting/Stimulating -- The material and the environment stimulate the student's natural curiosity and need to learn.

Flexible -- Changes are made frequently, easily and smoothly.

Conflict resolution skills
Setting up the atmosphere

Reassure the students that it is okay to be honest about their feelings. Tell them that if they feel hateful, hurtful, vengeful, violent or destructive, it is okay to say it.

To lighten up the tension, set a goal finding 3-30 things that everyone can agree on. Use humor. For example, ask, "Ask them how they are feeling at that specific moment.

Ask what would help them feel better. Give them some control over something. Ask them where they want to sit for example. Suggest your chair, the floor, the desk, wherever they would feel comfortable.

Conclusion

Assisting teachers in creating a positive environment for learning, and better managing their own emotions, will help to enhance students' experiences and those of teachers. To work towards an emotionally literate learning community a whole-school approach (ethos, curriculum and partnerships) needs to be employed. This multidimensional strategy has the potential to transform pedagogy and relationships in a responsive classroom approach, increasing the capacity for improved learning outcomes.

Multiple H. Gardner

Theory of Multiple Intelligences by Gardner

The theory of multiple intelligences was developed in 1983 by Dr. Howard Gardner, professor of education at Harvard University. Using the definition of intelligence as "the capacity to solve problems or to fashion products that are valued in one or more cultural setting" (Gardner & Hatch, 1989), Gardner developed a list of seven later nine intelligences.

These intelligences are:

1.**Linguistic intelligence** ("word smart")

2.**Logical-mathematical intelligence** ("number/reasoning smart")

3.**Spatial intelligence** ("picture smart")

4.Bodily-Kinesthetic intelligence ("body smart")
5.Musical intelligence ("music smart")
6.Interpersonal intelligence ("people smart")
7.Intrapersonal intelligence ("self smart")
8.Naturalist intelligence ("nature smart")
9.Existential intelligence

According to Howard Gardner, intelligence is:
1. The ability to create an effective product or offer a service that is valued in a culture;

2. A set of skills that make it possible for a person to solve problems in life; The potential for finding or creating solutions for problems, which involves gathering new knowledge

Gardner says-
All human beings possess all nine intelligences in varying amounts.
Each person has a different intellectual composition.

We can improve education by addressing the multiple intelligences of our students.

These intelligences are located in different areas of the brain and can either work independently or together.

These intelligences may define the human species.

1.Visual and Spatial Judgement
Strengths: Visual and Spatial Judgement
People who are strong in visual-spatial intelligence are good a visualizing things. These individuals are often good with directions as well as maps, charts, videos and pictures.

Characteristics of Visual-Spatial Intelligence
• Enjoys reading and writing
• Good at putting puzzles together
• Good at interpreting pictures, graphs and charts
• Enjoys drawing, painting and the visual arts
• Recognizes patterns easily

Potential Career Choices
• Architect
• Artist
• Engineer

2.Linguistic-Verbal Intelligence

Strengths: Words, Language and Writing

People who are strong in linguistic-verbal intelligence are able to use words well, both when writing and speaking. These individuals are typically very good at writing stories, memorizing information and reading.

Characteristics of Linguistic-Verbal Intelligence
- Good at remembering written and spoken information
- Enjoys reading and writing
- Good at debating or giving persuasive speeches
- Able to explain things well
- Often uses humor when telling stories

Potential Career Choices
- Writer / Journalist
- Lawyer
- Teacher

3.Logical - Mathematical Intelligence
Strengths Analyzing Problems and Mathematical Operations

People who are strong in logical-mathematical intelligence are good at reasoning, recognizing patterns and logically analyze problems. These individuals tend to think conceptually about numbers, relationships and patterns.

Characteristics of Logical-Mathematical Intelligence
- Excellent problem-solving skills
- Enjoys thinking about abstract ideas
- Likes conducting scientific experiments
- Good and solving complex computations

Potential Career Choices
- Scientist
- Mathematician
- Computer programmer
- Engineer
- Accountant

4.Bodily-Kinesthetic Intelligence
Strengths: Physical Movement, Motor Control

Those who have high bodily-kinesthetic intelligence are said to be good at body movement, performing actions and physical

control. People who are strong in this area tend to have excellent hand-eye coordination and dexterity.

Characteristics of Bodily-Kinesthetic Intelligence
- Good at dancing and sports
- Enjoy creating things with their hands
- Excellent physical coordination
- Tends to remember by doing, rather than hearing or seeing

Potential Career Choices
- Dancer
- Builder
- Sculptor
- Actor

5.Musical Intelligence

Strengths Rhythm and Music

People who have strong musical intelligence are good and thinking in patterns, rhythms and sounds. They have a strong appreciation for music and are often good at musical composition and performance.

Characteristics of Musical Intelligence
- Enjoy singing and playing musical instruments
- Recognizes musical patterns and tones easily
- Good at remembering songs and melodies
- Rich understanding of musical structure, rhythm and notes

Potential Career Choices
- Musician
- Composer
- Singer
- Music Teacher
- Conductor

6.Interpersonal Intelligence

Strengths: Understanding and Relating to Other People

Those who have strong interpersonal intelligence are good understanding and interacting with other people. These individuals are skilled at assessing the emotions, motivations, desires and intentions of those around them.

Characteristics of Interpersonal Intelligence
- Good at communicating verbally
- Skilled nonverbal communicators
- See situations from different perspectives
- Create positive relationships with others
- Good at resolving conflict in groups

Potential Career Choices
- Psychologist
- Philosopher
- Counselor
- Sales person
- Politician

7. Intrapersonal Intelligence
Strengths: Introspection and Self-Reflection

Individuals who are strong in intrapersonal intelligence are good at being aware of their own emotional states, feelings and motivations. They tend to enjoy self-reflection and analysis, including day-dreaming, exploring relationships with others and assessing their personal strengths.

Characteristics of Intrapersonal Intelligence
- Good at analyzing their strengths and weaknesses
- Enjoys analyzing theories and ideas
- Excellent self-awareness
- Clearly understands the basis for their own motivations and feelings

Potential Career Choices
- Philosopher
- Writer
- Theorist
- Scientist

8. Naturalistic Intelligence
Strengths: Finding Patters and Relationships to Nature

Naturalistic is the most recent addition to Gardner's theory [5] and has been met with more resistance than his original seven intelligences. According to Gardner, individuals who are high in this type of intelligence are more in tune with nature and are often interesting in nurturing, exploring the environment and learning about other species. These individuals are said to be highly aware of even subtle changes to their environments.

Characteristics of Naturalistic Intelligence
- Interested in subjects such as botany, biology and zoology
- Good at categorizing and cataloguing information easily
- May enjoy camping, gardening, hiking and exploring the outdoors
- Doesn't enjoy learning unfamiliar topics that have no connection to nature

Potential Career Choices
- Biologist
- Conservationist
- Gardener
- Farmer

9.EXISTENTIAL – concerned with 'ultimate issues' learning by seeing the "big picture": "Why are we here?" "What is my role in the world?" "What is my place in my family, school and community?"
Characteristics of Existentialist Intelligence
This intelligence seeks connections to real world understandings and applications of new learning.

Although the intelligences are anatomically separated from each other, Gardner claims that they very rarely operate independently. Rather, the intelligences are used concurrently and typically complement each other as individuals develop skills or solve problems. For example, a dancer can excel in his art only if he has

1. strong musical intelligence to understand the rhythm and variations of the music,
2. interpersonal intelligence to understand how he can inspire or emotionally move his audience through his movements, as well as
3. bodily-kinesthetic intelligence to provide him with the agility and coordination to complete the movements successfully.

Strengths of Gardner's Multiple Intelligence Theory
- helps to explain the variety of individual differences in different types of mental performance
- based in developmental, clinical, case study and educational evidence

Criticisms of Gardner's Multiple Intelligence Theory
- **It's not new**. Critics of multiple intelligence theory maintain that Gardner's work isn't groundbreaking -- that what he calls

"intelligences" are primary abilities that educators and cognitive psychologists have always acknowledged.

- **It isn't well defined**. Some critics wonder if the number of "intelligences" will continue to increase. These opposing theorists believe that notions such as bodily-kinesthetic or musical ability represent individual aptitude or talent rather than intelligence. Critics also believe that M.I. theory lacks the rigor and precision of a real science. Gardner claims that it would be impossible to guarantee a definitive list of intelligences.

- **It's culturally embedded**. M.I. theory states that one's culture plays an important role in determining the strengths and weaknesses of one's intelligences. Critics counter that intelligence is revealed when an individual must confront an unfamiliar task in an unfamiliar environment.

- **It defeats National Standards**. Widespread adoption of multiple intelligence pedagogy would make it difficult to compare and classify students' skills and abilities across classrooms.

- **It is impractical**. Educators faced with overcrowded classrooms and lack of resources see multiple intelligence theory as utopian.

Multiple Intelligences in the classroom

Everyone is born possessing the intelligences. Nevertheless, all students will come into the classroom with his own unique set of intellectual strengths and weaknesses. These sets determine how easy or difficult it is for a student to learn information when it is presented in a particular manner. This is commonly referred to as a learning style.

Many learning styles can be found within one classroom. Therefore, it is impossible, as well as impractical, for a teacher to accommodate every lesson to all of the learning styles found within the classroom. Nevertheless the teacher can show students how to use their more developed intelligences to assist in the understanding of a subject which normally employs their weaker intelligences . For example, the teacher can suggest that an especially musically intelligent child learn about the revolutionary war by making up a song about what happened.

Assessment

As the education system has stressed the importance of developing mathematical and linguistic intelligences, it often bases student success only on the measured skills in those two intelligences. Supporters of Gardner's Theory of Multiple Intelligences believe that this emphasis is biased, unbalanced, and unfair. Children, whose musical intelligences are highly developed, for example, may be overlooked for gifted programs or may be placed in a special education class because they do not accomplish the required math or language scores. As educators, we must seek to assess our students' learning needs in ways which will give provide a clear picture of their strengths and weaknesses.

Since all children do not learn in the same way, they cannot be assessed in the same way. Therefore, it is important that an educator create an "intelligence profiles" for each student. Knowing how each student learns will allow the teacher to properly assess the child's progress. This individualized evaluation practice will allow a teacher to make more informed decisions on what to teach and how to present information.

Traditional tests (e.g., multiple choice, short answer, essay, etc.) require students to demonstrate their knowledge in a predetermined manner. Supporters of Gardner's theory claim that a better approach to assessment is to allow students to explain the material in their own ways using the different intelligences.

Conclusion

Gardner's Theory of Multiple Intelligences provides a theoretical foundation for recognizing the different abilities and talents of students. This theory acknowledges that while all students may not be verbally or mathematically gifted, children may have an expertise in other areas, such as music, spatial relations, or interpersonal knowledge. Approaching and assessing learning in this manner allows a wider range of students to successfully participate in classroom learning

Aptitude, Interest, Creativity

Aptitude

Aptitude refers to an individual's ability to learn or perform certain skills.

An aptitude is a combination of characteristics indicative of an individual's capacity to acquire (with training) some specific

knowledge, skill, or set of organized responses, such as the ability to speak a language, to become a musician, to do mechanical work.

An **aptitude** is an innate, acquired or learned or developed component of a competency (the others being knowledge, understanding and attitude) to do a certain kind of work at a certain level.They have to do with heredity. E.g. Musical talent, artistic talent etc.

Characteristics:

1. Aptitudes are relatively stable for along period of time.

2. Relative differences in traits can be identified and measured with accuracy.

3. Individuals can excel and develop their aptitudes if provided training and an environment to develop themselves.

Types of Aptitude

General Learning Ability
Verbal Aptitude
Numerical Aptitude

Form Perception
Clerical checking, also called graphoria
Inductive reasoning aptitude, also called differentiation or inductive learning ability
Finger dexterity aptitude
Number series aptitude
Ideaphoria also called, creative imagination
Creativity, also called remote association
Language learning aptitude
Mechanical comprehension
Spatial reasoning, also called spatial visualization, space visualization or structural visualization
Symbolic reasoning aptitude, also called analytical reasoning
Visual memory
Visual pursuit, also called line tracing

Aptitude tests

Aptitudes are generally known as latent and undeveloped abilities which can be developed through their proper identification and training. Aptitudes are generally tested in the form of an

Aptitude Battery which tests a large number of aptitudes at one time with a series of small tests for each aptitude. Aptitude batteries may lean more toward innate aptitudes or more toward learned skills. Batteries that lean toward learned skills are frequently called Aptitude Tests

An aptitude test is one designed to measure a person's potential ability in an activity of a specialized kind and within a restricted range.

Objective of Aptitude tests:

1. To identify individuals potential of which he is not aware

2. To identify the special potential

3. To help in educational and vocational choices on the basis of specific potential identified

4. To enable grouping of individuals according to aptitude

The individual, who knows his own aptitudes, and their relative strengths, chooses more intelligently among the world's host of opportunities.

Some commonly used Aptitude tests

The General Aptitude Test Battery (GATB)
Differential Ability Test (DAT)
The Flannigan Aptitude Classification Test
The Graduate Management Admission Test (GMAT)

Test of English as a Foreign Language (TOEFL)

Individual Difference in Aptitude

Adaptive instructional system is used to handle individual differences in aptitude. In this approach two alternative instructional treatments are used. Students are categorized on the basis of their level of aptitude - High and low. Learner centered approaches are employed for students with high aptitude. They are encouraged to learn with minimum guidance from the teacher. Whereas highly structured instructional approach is provided for low aptitude learners. The material is broken into small units and the learners are taught through sequential steps and immediate feedback. Learning is facilitated through frequent summary, and is reviewed with simplified illustration, analogy and precise explanation of concepts and principles .Both the groups are periodically assessed and the scores obtained are compared with the initial scores to ascertain the changes in the groups.

Compensatory aptitude training which involves equipping the students with skills in the area of reading, study, self-learning, note taking and related activities are provided to those who are unable to benefit from either of the alternative treatments to equip them for entry into structured treatments.

Interest

Interest is a commonly used expression. Interest is an important aspect of the affective domain and greatly influences human behavior. In Latin the word 'interest' means 'it concerns' or 'it matters'

Bingham: "An interest is a tendency to become absorbed in an experience and to continue it"

Crow and Crow: Interest may refer to the motivating force that impels us to attend to a person, a thing, or an activity or it may be the effective experience that has been stimulated by the activity itself. In other words, interest can be the cause of an activity and the result of participation in that activity

Characteristics:

1. Interest relate to personality shaping

2. Interests are shaped by both hereditary and environmental factors

3. New interest can be created through exposure

4. Preferences may be exposed towards certain occupational activities through a wide   range of stimuli

5. Interest may not necessarily be associated with academic or occupational achievement

6. Peer groups, friends and family influence interest

7. Interest needs social confirmation also. Interest may not develop if the culture   disapproves of it

8. Interest patterns though visible at an earlier age may become crystallized much later

9. Interest inventories may reveal the needs of a person but may not be indicative of success in a specific area of study or occupation

Factors affecting interests:

1. Age and Gender- younger children are interested in playing with books, sand etc. as they grow older their interests change. Interests of the girls differ from boys

2. Physical Development- a strong child may develop interest in sports involving physical exertion whereas a weak child may develop interest in indoor sports

3. Intelligence- bright children develop more interest in intellectual activities than the not so bright ones

4. Economic status- of the family influences exposure of the child which impacts his interest

6. Culture , social set up, instincts, habits, sentiments, education and training influences the interest of an individual

Types of Interest:

1. Inborn or natural interests- interests based on instincts
2..Acquired interest- interests aquired by habits, sentiments, complexes, character and ideals

How to measure Interest:

1. By putting questions to the individual
2. By observing the behavior of individuals
3. By using interest tests or inventories

Uses of interest tests:

1. The test may reveal hidden interest of which the individual may not be aware
2. Inventories may confirm the expressed interest of the person and the results can be utilized to help the student in choosing an educational or professional stream
3. The results of the test may be used in conjunction with other psychological tests to guide the student in the right direction

Creativity

In 1980 Guilford said that of all the qualities that man possesses, those that contribute to his creative thinking have been most important for his well being and his advancement.

Torrance says that society is down right savage towards creative thinkers especially when they are young.

In every underdeveloped country the potential of the Einstein and Newton are herding cattle for breaking stones.

Definitions of Creativity

Creativity is the capacity of the person to produce compositions, products, or ideas which are essentially new or novel and previously unknown to the producer.

Drevdahl J.E

Creative thinking means that the predications or inferences for the individual are new original ingenious, unusual. He explores new areas and makes new observations new inferences.

Skinner

Creativity is a process of becoming sensitive to problems, deficiencies, gaps of Knowledge, missing elements, identifying difficulties, searching for solutions, making guesses, formulating hypotheses, modifying, retesting and finally communicating results. Torrance

Creativity and Intelligence

Since the word gifted is used both for highly intelligent and creative individuals there is a common notion that high creativity is accompanied by high intelligence

Research evidence shows though that creative individuals may be average or above average in intelligence but need not necessarily be high.

Donald Mc Kinnon an American Psychologist found zero correlation in his study of the creative mathematicians and building construction experts. He concluded that it is not true to think in the reverse that highly intelligent people are necessarily more creative. Although there are cases of this combination highly intelligent and highly creative Leanardo –da vinci

Eugene Nuss found that teachers liked students with high IQ than the average students. Creativity measured by creativity tests are independent of intelligence while creativity measured by teachers is related to intelligence.

Nature of creativity

Creativity is the Process as well as product
It is a complex, dynamic and serious process
It is the capacity to accept challenge.
It is the freedom to exercise choice
It is universal. Everyone has some capacity of creativity
Creativity can be fostered and encouraged by suitable environment.
Creativity again is an outcome of hereditary and environment.

Characteristics of a creative Individual

Intellect
Readiness to change self and environment.
Motivational Interest
Openness, independent thinking.
Fluency- quantity of output
Flexibilty – sees alternative and unusual possibilities.
Origninality- original response for a particular situation. Unusual or uncommon responses emitted by a person.
Adventurous
Curious by nature full of questions
Flexible in his thinking and doing
Intuitive
Keen to explore and investigate
Non-conformist
Self-disciplined
Visionary
Willingness to take risk

The Process of creativity

Four stages:
1.Preparation:
Purposeful study makes all efforts to accumulate that information to solve a problem or a felt need

2.Incubation:
During this period ideas churn around below the threshold of consciousness. It is during this time that unusual connections are likely to be made. Because of its mysterious quality, incubation has often been thought the most creative part of the entire process. What happens in this "dark" space defies ordinary analysis and evokes the original mystery shrouding the work of genius. How long a period of

incubation is needed varies depending on the nature of the problem. It may range from a few hours to several weeks and even longer.

3.Illumination:

A clearer conception or idea of the problem emerges. The mind is rewarded with a solution that seems appropriate. When the pieces of the puzzle fall together.

4.Verification:

Deciding whether the insight is valuable and worth pursuing. This is often the most emotionally trying part of the process, when one feels most uncertain and insecure. Is this idea really novel, or is it obvious? The solution to the problem is extended to other situations. The solution is reformed and adapted in the light of its application.

Creative thought can be divided into divergent and convergent reasoning.
Divergent thinking is the intellectual ability to think of many original, diverse, and elaborate ideas.
Convergent thinking is the intellectual ability to logically evaluate, critique and choose the best idea from a selection of ideas

Difference between Convergent and Divergent thinking

Convergent thinking	Divergent thinking
1.One single answer	Variety of responses
2.Solution is a commonly acceptable answer	New or an original answer not common is discovered
3. Rigid and stereotyped	Exploratory and Venturesome.
4 Convergent is stimulus bound	Divergent thinking is Stimulus free
5.Measured by means of intelligence test Emphasis on remembering, recognition and manipulation	Measured by creativity tests emphasis on flexibility and originality
6. It is known as reasoning and rational thinking	Known as creative or Imaginative

7. Non- creative people high on convergent thinking	Creative people on divergent thinking
8. Left brain dominated activity	Right brain dominated activity.
9. More focused on success	Not so focused on success
10.Conformists and conservative	Non-conformists original/risk taking

Need and ways to measure Creativity.

Enhances your understanding of the person's capabilities.
Helps in teaching and individual teaching
Evaluation
Emphasizes the identification and nurturing responsibility of education
Figural
Picture construction
Picture completion
Parallel lines
Verbal
Torrance tests of creativity 1966
Ask and guess
Product improvement
Unusual uses
Unusual questions
Just suppose
Passi's test of creativity
Guilfords creativity test 1959
Flangans ingenuity test 1966
Baquar Mehndis test.
Figural/verbal
Unusual uses
Consequence test
Similarity
Product improvement
Creativity in the classroom
When students are being creative in the classroom they are likely to:

- question and challenge. Creative pupils are curious, question and challenge, and don't necessarily follow the rules.

- make connections and see relationships. Creative pupils think laterally and make associations between things that are not usually connected.

- envision want might be. They imagine, see possibilities, ask 'what if?', picture alternatives, and look at things from different view points.

- explore ideas and options. Creative pupils play with ideas, try alternatives and fresh approaches, keep open minds and modify their ideas to achieve creative results.

- reflect critically on ideas, actions and outcomes. They review progress, invite and use feedback, criticize constructively and make perceptive observations.

Teachers encouraging creativity

Carolyn Edwards and Kay Springate suggests the following ways to encourage student creativity:

Give students extended, unhurried **time** to explore and do their best work. Don't interfere when students are productively engaged and motivated to complete tasks in which they are fully engaged.

Create an inviting and exciting **classroom environment**. Provide students with space to leave unfinished work for later completion and quiet space for contemplation.

Provide an abundant supply of interesting and useful **materials** and **resources**.

Create a classroom **climate** where students feel mistakes are acceptable and risk taking is encouraged. Appropriate noise, mess and autonomy are accepted.

Torrance identified five principles to encourage children:

Be respectful of unusual questions.
Be respectful of imaginative ideas
Show pupils that their ideas have value
Do not evaluate all the time.
Encourage self-initiated learning and evaluate it

Others:
Encourage the production of ideas in many media such as dance, painting, poetry etc
Reward creative efforts
Develop student ideas through constructive criticism

Use humor and wit
Encourage reading
Use innovative techniques such as Brain-storming, gaming, drama.

3.3   LET US SUM UP :

The unit describes the areas in which learners exhibit diversity. The knowledge of this diversity can be gained through proper diagnosis of the learners. The diagnosis will help the school provide meaningful and purposeful learning experiences so that they aid in the holistic development of the personality.

3.4   UNIT END EXERCISE :

1) Explain Ellis's Theory of personality
2) Explain Berne's Theory of personality
3) Explain Vedic concept of personality
4) Explain Buddhist concept of personality
5) Explain Aurobindo's concept of personality
6) Explain Guilford's Structure of Intellect
7) Explain Goleman's theory of Emotional Intelligence
8) Explain Gardner's Theory of Multiple Intelligence

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4

IMPLICATIONS FOR LEARNING AND THINKING STYLES IN CLASSROOM TEACHING

Unit Structure

4.0 Objectives
4.1 Introduction
4.2a Learning Styles
4.2b Thinking Styles
4.2c Creative Thinking
4.2d Teaching Thinking
4.3 Let us sum up

4.0 OBJECTIVES:

After going through this Unit, you will be able to:

- Describe the Kolb's Model
- Explain the application of the Kolb's Model
- Enumerate the different thinking styles
- Explain the application of thinking styles in Education
- Define creativity
- Highlight the contribution of Edward De' Bono
- Explain the feuerstein's approach

4.1 INTRODUCTION:

Classroom teaching can be considered effective only of it learning about student engagement and involvement in the learning process. To ensure this a teacher ought to understand the different learning and thinking styles of the students. Teachers can ensure creative and critical thinking among students.

4.2a   LEARNING STYLES: CONCEPT AND APPLICATION OF KOLB'S MODEL :

Concept of learning styles:

The simplest definition of a learning style is the learning strengths and preferences of a student. However, many other definitions exist, such as the one given by the National Association of Secondary School Principals. They define a learning style as "the composite of characteristic cognitive, affective, and physiological factors that serve as relatively stable indicators of how a learner perceives, interacts with, and responds to the learning environment" (Keefe & Monk, 1986, p 1). According to Sharma "cognitive style refers to the characteristic way in which an individual organises his environment and accordingly acts on it. These are intrinsic information-processing patterns that represent a person's typical mode of perceiving, thinking, remembering and problem-solving." She also defines learning style "as the composite of characteristic cognitive, affective and physiological factors that serve as a relatively stable indicators of how a learner perceives, interacts with and responds to the learning environment." Despite the plethora of definitions for learning styles, the basic idea can be seen through a few examples provided by Felder (1996). He discusses that some students might focus on facts while others prefer theories or that some students learn better visually and others verbally. In other words, a learning style may be defined as a habitual pattern or a preferred way of acquiring knowledge or doing something.

Distinction between Learning Style, Strategy and Approach:

At the outset, it is necessary to distinguish between the terms 'styles', 'approaches' and 'strategies'. In the Psychological literature, the term 'styles' has been used to convey the marked differences in preference shown by people as they carry out task. According to Webster's Dictionary (1967), "A style is a distinctive or c Webster's Dictionary (1967), "A style is a distinctive or characteristic manner …or method of acting or performing". (p.873). Allport, the Psychologist defined a style as a means of identifying distinctive personality types or types of behaviour. On the other hand, the term 'strategy' has been used to convey preference which are more task-related whereas the term 'approaches' has been used to convey "processes" and "pre-dispositions" to adopt particular processes. Learning styles operate without individual awareness and imply a higher degree of stability.

On the other hand, learning strategy implies operations followed to minimize error during decision-making process and

involves a conscious choice of alternatives and is dependent on the task or context.

Learning approach refers to (a) the processes adopted during learning, which directly determine the outcomes of learning and (b) the predispositions or orientations to adopt particular processes.

In short, the relationship between these concepts can be ordered as follows:

| Learning Ability | → | Learning St yle | → | Learning Strategy | → | Learning Approach |
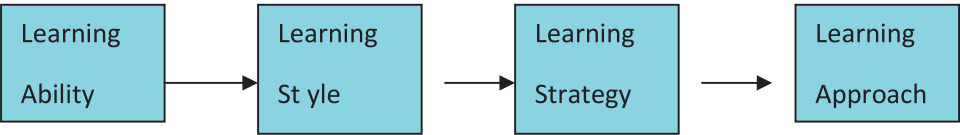
Personality has been assumed to be a source of variation in learning styles among individuals.

Meaning of Learning Styles:

Several definitions of learning style currently exist. Keefe defined learning style as being characteristic of the cognitive, affective, and physiological behaviours that serve as relatively stable indicators of how learners perceive, interact with, and respond to the learning environment. Learning style also represents both inherited characteristics and environmental influences.

Dunn described learning style as "... the way each learner begins to concentrate, process, and retain new and difficult information" (p. 224) She noted that this interaction occurs differently for everyone. Dunn also highlighted that "To identify and assess a person's learning style, it is important to examine each individual's multidimensional characteristics in order to determine what will most likely trigger each student's concentration, maintain it, respond to his or her natural processing style, *and* cause long-term memory" (p. 224).

Check your Progress:

1. Explain the meaning of Learning Styles.

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David Kolb's learning styles model and experiential learning theory (ELT):

Having developed the model over many years prior, David Kolb published his learning styles model in 1984. The model gave rise to related terms such as Kolb's experiential learning theory (ELT), and Kolb's learning styles inventory (LSI). In his publications - notably his 1984 book 'Experiential Learning: Experience. As The Source of Learning and Development' Kolb acknowledges the early work on experiential learning by others in the 1900's, including Rogers, Jung, and Piaget. In turn, Kolb's learning styles model and experiential learning theory are today acknowledged by academics, teachers, managers and trainers as truly seminal works; fundamental concepts towards our understanding and explaining human learning behaviour, and towards helping others to learn.

Kolb's experiential learning theory (learning styles) model :

Kolb's learning theory sets out **four distinct learning styles** (or preferences), which are based on **a four-stage learning cycle**. (which might also be interpreted as a 'training cycle'.)

In this respect Kolb's model is particularly elegant, since it offers both a way to understand **individual people's different learning styles**, and also an explanation of **a cycle of experiential learning that applies to us all**.

Kolb's includes this 'cycle of learning' as a central principle his experiential learning theory, typically expressed as **four-stage cycle of learning**, in which **'immediate or concrete experiences'** provide a basis for **'observations and reflections'**. These 'observations and reflections' are assimilated and distilled into **'abstract concepts'** producing new implications for action which can be **'actively tested'** in turn creating new experiences.

Kolb's model therefore works on two levels - **a four-stage cycle**:

1. **Concrete Experience - (CE)**

2. **Reflective Observation - (RO)**

3. **Abstract Conceptualization - (AC)**

4. **Active Experimentation - (AE)** and a **four-type definition of learning styles**, (each representing the combination of two preferred styles, rather like a two-by-two matrix of the four-stage cycle styles, as illustrated below), for which Kolb used the terms:

1. **Diverging (CE/RO)**

2. **Assimilating (AC/RO)**

3. **Converging (AC/AE)**

4. **Accommodating (CE/AE)**.

Kolb's learning styles
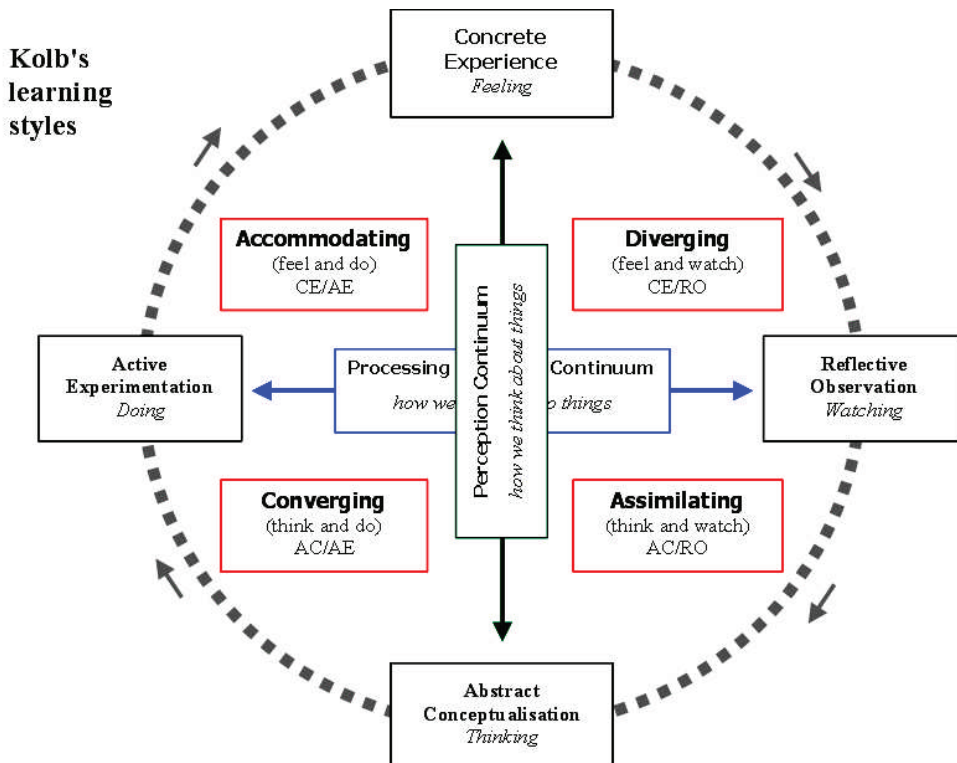
© concept david kolb, adaptation and design alan chapman 2005-06, based on Kolb's learning styles, 1984
Not to be sold or published. More free online training resources are at www.businessballs.com. Sole risk with user.

Kolb's explains that different people naturally prefer a certain single different learning style. Various factors influence a person's preferred style: notably in his experiential learning theory model (ELT) Kolb defined three stages of a person's development, and suggests that our propensity to reconcile and successfully integrate the four different learning styles improves as we mature through our development stages. The development stages that Kolb identified are:

1. Acquisition - birth to adolescence - development of basic abilities and 'cognitive structures'
2. Specialization - schooling, early work and personal experiences of adulthood - the development of a particular 'specialized learning style' shaped by 'social, educational, and organizational socialization'
3. Integration - mid-career through to later life - expression of non-dominant learning style in work and personal life.

Check your Progress :

1. Name the four different learning styles given by Kolb.

_____

_____

_____

2. Explain the development stages identified by Kolb.

_____

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_____

Kolb learning styles definitions and descriptions:

Knowing a person's (and your own) learning style enables learning to be orientated according to the preferred method. That said, everyone responds to and needs the stimulus of all types of learning styles to one extent or another - it's a matter of using emphasis that fits best with the given situation and a person's learning style preferences.

Here are brief descriptions of the four Kolb learning styles:

- **Diverging (feeling and watching - CE/RO)** - These people are able to look at things from different perspectives. They are sensitive. They prefer to watch rather than do, tending to gather information and use imagination to solve problems. They are best at viewing concrete situations several different viewpoints. Kolb called this style 'Diverging' because these people perform better in situations that require ideas-generation, for example, brainstorming. People with a Diverging learning style have broad cultural interests and like to gather information. They are interested in people, tend to be imaginative and emotional, and tend to be strong in the arts. People with the Diverging style prefer to work in groups, to listen with an open mind and to receive personal feedback.

- **Assimilating (watching and thinking - AC/RO)** - The Assimilating learning preference is for a concise, logical approach. Ideas and concepts are more important than people. These people require good clear explanation rather than practical opportunity. They excel at understanding wide-

ranging information and organising it a clear logical format. People with an Assimilating learning style are less focused on people and more interested in ideas and abstract concepts. People with this style are more attracted to logically sound theories than approaches based on practical value

- **Converging (doing and thinking - AC/AE) -** People with a Converging learning style can solve problems and will use their learning to find solutions to practical issues. They prefer technical tasks, and are less concerned with people and interpersonal aspects. People with a Converging learning style are best at finding practical uses for ideas and theories. They can solve problems and make decisions by finding solutions to questions and problems. People with a Converging learning style are more attracted to technical tasks and problems than social or interpersonal issues. A Converging learning style enables specialist and technology abilities. People with a Converging style like to experiment with new ideas, to simulate, and to work with practical applications.

- **Accommodating (doing and feeling - CE/AE) -** The Accommodating learning style is 'hands-on', and relies on intuition rather than logic. These people use other people's analysis, and prefer to take a practical, experiential approach. They are attracted to new challenges and experiences, and to carrying out plans. They commonly act on 'gut' instinct rather than logical analysis. People with an Accommodating learning style will tend to rely on others for information than carry out their own analysis. This learning style is prevalent and useful in roles requiring action and initiative. People with an Accommodating learning style prefer to work in teams to complete tasks. They set targets and actively work in the field trying different ways to achieve an objective.

APPLICATION:

Kolb's learning style theory integrates individual students' approaches to perceiving and processing information (Kolb, 1985). The following are the ways through which it can be used in the classrooms:

1. Abstract conceptualization:

At the opposite end of the perceiving continuum is the abstract conceptualization mode. These learners use logical analysis

and they solve problems systematically (Kolb, 1985). They are "theorists" (DeCiantis & Kirton, 1996) who learn by "thinking" (Smith & Kolb, 1986). In college mathematics classrooms, they appreciate highly structured lectures, and they are comfortable in dealing with theories and abstract ideas. In laboratory group work, abstract conceptualizers like to focus on how practical exercises and experiments connect to the theoretical framework. In individual problem solving, these learners often categorize problems into groups and derive systematic solutions, usually linked to the theoretical steps. In examinations, they prefer true-false and matching questions related to theoretical terms and definitions, as well as longer answer questions that require theoretical knowledge.

2. Active experimentation:

Learners in the active experimentation mode process information "%y doing" (Smith & Kol, 1986,), appreciate opportunities to work actively on well-defined tasks (Felder, 1996), and "value getting things done" (Kolb, 1985). In college mathematics classrooms, these learners favour hands-on activities and discussions over traditional lectures. In laboratory group work, they prefer to be assigned active tasks and to accomplish visible results. In individual problem solving, active experimenters enjoy the risk-taking component if it is connected to problems that have a practical focus. In examinations, they favour take-home and pre-prepared questions that require the creative application of course information and principles to real-life situations.

3. Reflective observation:

At the opposite end of the processing continuum is the reflective observation mode, with learners who use "watching and listening" (Veres, 1991) to "create ideas that integrate their observations into logically sound theories" (Atkinson & Murrell, 1988,). These learners see the validity of different perspectives (Kolb, 1985). In college mathematics classrooms, they prefer lectures where they can listen to theoretical information without direct involvement. In laboratory group work, they tend to consider the opinions of other group members and to integrate these concepts with their own perceptions. In individual problem solving, these learners are prone to devise structured plans of action based on theoretical formulae and previous experience, grouping the problems by type. In examinations, reflective observers prefer longer answers and "what if" question whereby they can demonstrate their theoretical knowledge.

4. Laboratory Group Work :

A variety of laboratory assignments, in individual and group format, will expose students to multiple learning experiences that can foster functioning in all learning modes. Group assignments bring students together to discuss possibilities, compare answers, reflect, interpret, and experiment actively. Instructors should encourage students to form study groups, so they can meet under the direction of a group leader to discuss laboratory questions and connect them to the course material. Concrete experiences may wish to choose their own group members, but creating heterogeneous groups on the basis of learning style assessment will ensure opportunities to share individual strengths. An excellent group exercise for every learning style is the development of questions of various kind (multiple choice, true and false) and difficulty as review for upcoming tests.

5. Individual Problem Solving:

Individual problem solving in mathematics and other scientific disciplines can promote assimilation and reflection while providing opportunities for active trial-and-error experimentation and the development of critical thinking skills. In addition, students can be asked to summarize their knowledge (for example, by using flow charts, diagrams, and compare-and-contrast tables) as part of the assignment. Opportunities for reflection and analysis will appeal to divergers, while convergers will be stimulated by real-life application problems. The instructor can organize sessions to teach students how to approach problem solving in order to relieve the feelings of anxiety and inadequacy that some students experience regardless of learning style.

6. Examinations :

Tests and exams should include both short and long-answer questions. Multiple-choice questions that focus on rote knowledge and recall appeal to concrete experiences. Those that require deductive reasoning stimulate divergers, while inductive reasoning favours accommodators. True-false and matching questions that require rational theory building are preferred by assimilators and abstract conceptualizers. These types of questions are also useful when testing recall of facts and definitions. and application of theories. Long-answer questions based on problem solving appeal to divergers and active experimenters,

Therefore: This theory takes into account that people could use any of the four styles some of the time by claiming that the classification is a preferred method, not an exclusive one. Gregorc's (1982) model is similar to Kolb's, except that the two dimensions rate perception from abstract to concrete and ordering from sequential to random. The final classification of the learner is into one of four states, again similar to Kolb, using the Gregorc Style Delineator.

Check your Progress :

1. Discuss Kolb's model of learning styles.

   _____

   _____

   _____

2. How would a teacher use Kolb's learning model in a classroom.

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   _____

   _____

4.2B THINKING STYLES: CONCEPT, APPLICATION AND CONTRIBUTION OF R. STERNBERG :

<u>Meaning:</u>

*   Cognitive abilities like thinking, reasoning and problem-solving may be considered to be some of the chief characteristics which distinguish human beings from other species.

*   A highly developed computer or a robot, a magnificent building are all products of the thinking, reasoning and problem-solving capabilities of their creators and inventors.

*   Even to understand, appreciate or put these into use, we have to employ our powers of thinking.

*   The challenges and problems faced by the individual, or by society, in general, are solved through serious efforts involving thinking and reasoning.

*   The powers of thinking and reasoning may thus be considered to be the essential tools for the welfare and meaningful existence of the individual as well as society.

- **Actually 'thinking' is very complex process.**

- Thinking consists of the cognitive rearrangement or manipulation of both – the information from the environment and the symbols stored in the long term memory.

- Thinking is the form of information processing that goes on during the period between a stimulus event and the response to it.

Definitions:

- <u>Mohsin (1967) –</u> "Thinking is an implicit problem solving behaviour".

- **Garret :- (1968)** "Thinking is behaviour which is often implicit and hidden and in which symbols (images, ideas, concepts) are ordinarily employed."

- **Valentine (1965) "**In strict psychological discussion it is well to keep the thinking for an activity which consists of a connected flow of ideas which are directed towards some end or purpose".

  o Therefore, thinking may be defined as a pattern of behaviour in which we make use of internal representations (symbols, images, signs etc.) of things and events for the solution of some specific, purposeful problem.

  o Thinking is a mental process which stars with a problem and concludes with its solution.

Five Thinking Styles:

According to Bramson, the five thinking styles are:

- Synthesists
- Idealists
- Pragmatist Thinkers
- Analyst Thinkers
- Realist Thinkers

Synthesists:
According to Bramson, "Synthesists are creative thinkers who perceive the world in terms of opposites. When you say black, they think white, when you say long, they think short."

To connect with Synthesists, Bramson suggests "listen appreciatively to their speculation and don't confuse their arguing nature with resistance."

Idealists:

According to Bramson, "Idealists believe in lofty goals and standards."

To connect with Idealists, Bramson suggests "associate what you want to do with these goals of quality, service, and community good."

Pragmatic Thinkers:

According to Bramson, "Pragmatic thinkers are flexible, resourceful folk who look for immediate payoff rather than for a grand plan that will change the world."To connect with Pragmatists, Bramson suggests "emphasize short-term objectives on which you can get started with resources at hand."

Analyst Thinkers:

According to Bramsom, "Analyst thinkers equate accuracy, thoroughness, and attention to detail with completeness. They are likely to gather data, measure it, categorize it, and rationally and methodically calculate the right answer to any problem you come up with.

To connect to Analysts, Bramson suggests "provide a logical plan replete with back-up data and specifications."

Realist Thinkers:

According to Bramson, "Realist thinkers are fast moving doers who know that reality is what their senses – sight, sound, taste, smell, and touch – tell them it is, and not that dry stuff that one finds in accounting ledgers, or the insipid pages of manual of operations."

To connect with Realists, Bramson suggests, "If you communicate with Realist bosses as if they were Analysts, you will never get their attention. Rather than gobs of computer-printouts and other detailed information, Realists want a three-paragraph "Executive Summary" which tells briefly what is wrong and how you propose to fix it. For rather complicated reasons, they will often take you at your word if they see you as a qualified expert. You become an expert in their eyes when they know that you've

assembled a store of facts in which they are interested, and you have proposed a set of actions that they already believe are the best things to do."

Check your progress :

1. Define Thinking.

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2. Explain different Thinking Styles propounded by Bramson.

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Robert Jeffrey Sternberg:

(born December 8, 1949), is an American psychologist and psychometrician and the Dean of Arts and Sciences at Tufts University. He was formerly IBM Professor of Psychology and Education at Yale University and the President of the American Psychological Association He is a member of the editorial boards of numerous journals, including American Psychologist. Sternberg has a BA from Yale University and a PhD from Stanford University . Gordon Bower was his PhD advisor. He holds ten honorary doctorates from one North American, one South American, and eight European universities, and additionally holds an honorary professorate at the University of Heidelberg in Germany. He is currently also a Distinguished Associate of The Psychometrics Centre at the University of Cambridge.

Sternberg has proposed a triarchic theory of intelligence.

Triarchic theory of intelligence

Many descriptions of intelligence focus on mental abilities such as vocabulary, comprehension, memory and problem-solving that can be measured through intelligence tests. This reflects the tendency of psychologists to develop their understanding of intelligence by observing behaviour believed to be associated with intelligence.

Sternberg believes that this focus on specific types of measurable mental abilities is too narrow. He believes that studying intelligence in this way leads to an understanding of only one part of intelligence and that this part is only seen in people who are "school smart" or "book smart".

The Triarchic Model:

Sternberg (2003) categorizes intelligence into three parts, which are central in his theory, the <u>triarchic theory of intelligence</u>:

- <u>**Analytical intelligence**</u>, the ability to complete academic, problem-solving tasks, such as those used in traditional intelligence tests. These types of tasks usually present well-defined problems that have only a single correct answer.

- <u>**Creative or synthetic intelligence**</u>, the ability to successfully deal with new and unusual situations by drawing on existing <u>knowledge</u> and <u>skills</u>. Individuals high in creative intelligence may give 'wrong' answers because they see things from a different perspective.

- <u>**Practical intelligence**</u>, the ability to adapt to everyday life by drawing on existing knowledge and skills. Practical intelligence enables an individual to understand what needs to be done in a specific setting and then do it.

Sternberg (2003) discusses experience and its role in intelligence. Creative or synthetic intelligence helps individuals to transfer <u>information</u> from one problem to another. Sternberg calls the application of ideas from one problem to a new type of problem *relative novelty*. In contrast to the skills of relative novelty there is *relative familiarity* which enables an individual to become so familiar with a process that it becomes automatized. This can free up brain resources for coping with new ideas.

Context, or how one adapts, selects and shapes their environment is another area that is not represented by traditional measures of giftedness. Practically intelligent people are good at picking up tacit information and utilizing that information. They tend to shape their environment around them. (Sternberg, 2003)

Sternberg proposed the following <u>cognitive styles</u> in 1997:

The four forms of mental self-government are <u>hierarchical</u>, <u>monarchic</u>, <u>oligarchic</u>, and <u>anarchic</u>. The hierarchic style holds multiple goals simultaneously and prioritizes them. The oligarchic

style is similar but differs in involving difficulty prioritizing. The monarchic style, in comparison, focuses on a single activity until completion. The anarchic style resists conformity to "systems, rules, or particular approaches to problems.

Practical application and Contribution:

Sternberg's educational theories aim to bring out the best in all students by catering for different forms of intelligence and thinking styles. They have evolved through reflection on his own problems.

Sternberg does not advocate teaching everything three times, but varying teaching styles in order to practise different skills and cater for different learning styles:

- **Analytical skills**: for example, getting students to analyse a character from a novel, compare and contrast two paintings or rate the performance of someone who has won a tennis match. Assessment is based on the extent to which the work is informed, logical, organised and balanced.

- **Creative skills**: asking students questions to which there is no 'right' answer: imagining alternative endings to a novel; creating an advertisement for a product based on something studied in a science class; writing a dialogue in French in which a tourist asks for directions in Paris. Assessment is based on the extent to which the work is informed, novel, compelling and task oriented.

- **Practical skills**: enabling students to apply something they have learned in a real world context: using a lesson learned from a literary character in their own lives; applying a mathematical lesson in the supermarket; predicting how they would have to change their lifestyle in a different region of the globe. Assessment is based on the extent to which the product is informed and feasible.

- For Sternberg, the gifted student is one who can capitalise on strengths and compensate for their weaknesses, adapt to novelty and automatise new skills rapidly. For him, just as there is no single kind of intelligence; there is no single kind of giftedness. It can manifest in different ways in different situations. His view is that what is good for gifted students is good for all students, but that if badly done, gifted education can become an elitist enterprise.

- In *Teaching for Wisdom, Intelligence, Creativity, and Success*, Sternberg, Jarvin, and Grigorenko (2009) identify "four types of different thinking skills: memory, analytical skills, creative skills, and practical skills" (p. 19). Comparison between these thinking types and the core processes of the Architecture of Learning provide valuable insights.

- "Practical skills" comprises knowledge students need "in living their own life" (p. 47). Practical skills can be applied to "real world situations" (p. 47). Verb phrases associated with practical skills include *apply*, *connect to real life*, *identify examples*, *translate*, *show its benefit in different contexts*, *predict*, *design*, *problem-solve*, *implement*, and *advise*.

- Application, as defined in Architecture of Learning, is practice within the instructional setting that enables the use of understandings or skills within a widened or new (i.e., outside the instructional) setting. It provides the practice that constructs proficiency. Many of the verbs associated with Sternberg, Jarvin, and Grigorenko's "practical skills" relate to activities that engage students in Architecture of Learning's application.

- This connection between practical skills and application is similar to those of memory and experience, analytical skills and comprehension, and creative skills and elaboration. These remarkable parallels reinforce beneficial insights.

Check your progress

1. Discuss Sternberg's Triarchic Model of Intelligence.

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2. Illustrate the application of Sternberg's Triarchic Model in a classroom.

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4.2C   CREATIVE THINKING: CONCEPT AND CONTRIBUTION OF E. DE' BONO :

Introduction:

Much of the thinking done in formal education emphasizes the skills of analysis--teaching students how to understand claims, follow or create a logical argument, figure out the answer, eliminate the incorrect paths and focus on the correct one. However, there is another kind of thinking, one that focuses on exploring ideas, generating possibilities, looking for many right answers rather than just one. Both of these kinds of thinking are vital to a successful working life, yet the latter one tends to be ignored until after college. We might differentiate these two kinds of thinking like this:

Critical Thinking	Creative Thinking
Analytic	Generative
convergent	Divergent
Vertical	Lateral
probability	Possibility
judgment	suspended judgment
Focused	Diffuse
objective	Subjective
Answer	an answer
left brain	right brain
Verbal	Visual
Linear	Associative
reasoning	richness, novelty
yes but	yes and

What is Creativity?

<u>An Ability</u>: A simple definition is that creativity is the ability to imagine or invent something new. As we will see below, creativity is not the ability to create out of nothing (only God can do that), but the ability to generate new ideas by combining, changing, or reapplying existing ideas. Some creative ideas are astonishing and brilliant, while others are just simple, good, practical ideas that no one seems to have thought of yet.

Believe it or not, everyone has substantial creative ability. Just look at how creative children are. In adults, creativity has too often been suppressed through education, but it is still there and can be reawakened. Often all that's needed to be creative is to make a commitment to creativity and to take the time for it.

An Attitude. Creativity is also an attitude: the ability to accept change and newness, a willingness to play with ideas and possibilities, a flexibility of outlook, the habit of enjoying the good, while looking for ways to improve it. We are socialized into accepting only a small number of permitted or normal things, like chocolate-covered strawberries, for example. The creative person realizes that there are other possibilities, like peanut butter and banana sandwiches, or chocolate-covered prunes.

A Process. Creative people work hard and continually to improve ideas and solutions, by making gradual alterations and refinements to their works. Contrary to the mythology surrounding creativity, very, very few works of creative excellence are produced with a single stroke of brilliance or in a frenzy of rapid activity. Much closer to the real truth are the stories of companies who had to take the invention away from the inventor in order to market it because the inventor would have kept on tweaking it and fiddling with it, always trying to make it a little better.

The creative person knows that there is always room for improvement.

Creative Methods:

Several methods have been identified for producing creative results. Here are the five classic ones:

Evolution: This is the method of incremental improvement. New ideas stem from other ideas, new solutions from previous ones, the new ones slightly improved over the old ones. Many of the very sophisticated things we enjoy today developed through a long period of constant incrementation. Making something a little better here, a little better there gradually makes it something a lot better--even entirely different from the original.

The evolutionary method of creativity also reminds us of that critical principle: **Every problem that has been solved can be solved again in a better way.** Creative thinkers do not subscribe to the idea that once a problem has been solved, it can be forgotten, or to the notion that "if it ain't broke, don't fix it." A creative thinker's

philosophy is that "there is no such thing as an insignificant improvement."

Synthesis: With this method, two or more existing ideas are combined into a third, new idea. Combining the ideas of a magazine and an audio tape gives the idea of a magazine you can listen to, one useful for blind people or freeway commuters.

For example, someone noticed that a lot of people on dates went first to dinner and then to the theatre. Why not combine these two events into one? Thus, the dinner theatre, where people go first to eat and then to see a play or other entertainment.

Revolution: Sometimes the best new idea is a completely different one, an marked change from the previous ones. While an evolutionary improvement philosophy might cause a professor to ask, "How can I make my lectures better and better?" a revolutionary idea might be, "Why not stop lecturing and have the students teach each other, working as teams or presenting reports?"

For example, the evolutionary technology in fighting termites eating away at houses has been to develop safer and faster pesticides and gasses to kill them. A somewhat revolutionary change has been to abandon gasses altogether in favour of liquid nitrogen, which freezes them to death or microwaves, which bake them. A truly revolutionary creative idea would be to ask, "How can we prevent them from eating houses in the first place?" New termite bait that is placed in the ground in a perimeter around a house provides one answer to this question.

Reapplication: Look at something old in a new way. Go beyond labels. Unfixate, remove prejudices, expectations and assumptions and discover how something can be reapplied. One creative person might go to the junkyard and see art in an old model T transmission. He paints it up and puts it in his living room. Another creative person might see in the same transmission the necessary gears for a multi-speed hot walker for his horse. He hooks it to some poles and a motor and puts it in his corral. The key is to see beyond the previous or stated applications for some idea, solution, or thing and to see what other application is possible.

For example, a paperclip can be used as a tiny screwdriver if filed down; paint can be used as a kind of glue to prevent screws from loosening in machinery; dishwashing detergents can be used to remove the DNA from bacteria in a lab; general purpose spray cleaners can be used to kill ants.

Changing Direction: Many creative breakthroughs occur when attention is shifted from one angle of a problem to another. This is sometimes called creative insight.

A classic example is that of the highway department trying to keep kids from skateboarding in a concrete-lined drainage ditch. The highway department put up a fence to keep the kids out; the kids went around it. The department then put up a longer fence; the kids cut a hole in it. The department then put up a stronger fence; it, too, was cut. The department then put a threatening sign on the fence; it was ignored. Finally, someone decided to change direction, and asked, "What really is the problem here? It's not that the kids keep getting through the barrier, but that they want to skateboard in the ditch. So how can we keep them from skateboarding in the ditch?" The solution was to remove their desire by pouring some concrete in the bottom of the ditch to remove the smooth curve. The sharp angle created by the concrete made skateboarding impossible and the activity stopped. No more skateboarding problems, no more fence problems.

This example reveals a critical truth in problem solving: **the goal is to solve the problem, not to implement a particular solution**. When one solution path is not working, shift to another. There is no commitment to a particular path, only to a particular goal. Path fixation can sometimes be a problem for those who do not understand this; they become overcommitted to a path that does not work and only frustration results.

Check your progress :

1. Differentiate between Critical and Creative thinking.

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2. Define thinking.

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3. Exppail the Creative methods with a suitable example.

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Edward de Bono:

Six Thinking Hats, a thinking skills training course from <u>Edward de Bono</u>, teaches parallel thinking as an alternative to argument. <u>Parallel thinking</u> guides thought processes in one direction at a time so we can effectively analyze issues, generate new ideas, and make better decisions. In traditional thinking, if two people disagree, there is an argument in which each tries to prove the other wrong. In parallel thinking, both views, no matter how contradictory, are put down in parallel. At all times the emphasis is on designing a way forward.

Six Thinking Hats helps put our opinions and egos aside so we can focus on a way forward, without argument.

Each of the six thinking hats has a colour: white, red, black, yellow, green and blue. The colour provides the name for the hat. De' Bono wanted thinkers to visualize and to imagine the hats as actual hats. For this to happen, colour is important. Colour makes the imaging easier.

<u>The colour of each hat is also related to its function.</u>

- *White Hat*: White is neutral and objective. This white hat is concerned with objective facts and figures.
- *Red Hat*: Red suggests anger, rage and emotions. The red hat gives the emotional view.
- *Black Hat*: Black is sombre and serious. The black hat is cautious and careful. It points out the weaknesses in an idea.
- *Yellow hat*: Yellow is sunny and positive. The yellow hat is optimistic and covers hope and positive thinking.
- *Green Hat*: Green is grass, vegetation and abundant, fertile growth. The green hat indicates creativity and new ideas.
- *Blue Hat:* Blue is cool, and it is also the colour of the sky, which is above everything else. The blue hat is concerned with control, the organization of the thinking process and the use of the other hats.

Check your progress :

1. Discuss the Six Thinking Hats propounded by E.De'Bono.

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Application:

Six Thinking Hats training is fast-paced, practical, and interactive. Participants learn how to separate emotion from facts, the positive from the negative and critical thinking from creative thinking.

Encourage children to **reflect upon their 'Thinking'** and learn to apply **different ways of thinking** for different situations.

Of course these concepts can be introduced in a simple form for the young ones, allowing them just to become **more aware of ways of thinking and to begin building thinking strategies...**

Use these hats as a guide to reflect upon thinking types when.....

- Brainstorming new ideas for **classroom management, classroom rules and discipline strategies.**
- **Panning class projects** such as assembly items, performances
- **Class meetings**
- **Problem solving** techniques like role playing
- **Group** projects
- **Book** reports / **character** profiles (how do others think)
- Discussing **cause and effect**

Some techniques that can be used in the classroom:

Brainstorming:

Brainstorming is a creative problem solving technique very widely used in the industries. It is now frequently used in the classrooms. Osborn (1953) developed this technique following the principle of deferred judgement because he believed that judgement and imagination cannot go together in creative thinking. They help each other only if kept apart. Evaluation is not ruled out, it is only

postponed. This provides psychological safety to the children while thinking for solutions. It can be used individually as well as in a group.

- It is a technique conducted in the classroom.
- The basis of brainstorming is generating ideas in a group situation based on the principle of suspending judgment .
- A principle which is scientifically researched, has proved to be highly productive in group efforts.
- The generation phase is separate from the judgment phase of thinking
- Brainstorming is useful for attacking specific (rather than general) problems and where a collection of good, fresh, new ideas are needed.

Guidelines for brainstorming:

- Suspend judgment
- Evaluation is to be reserved for later.
- Practical ideas very often come from silly, impossible ideas
- Think freely
- Tag on
- Quantity of ideas are important

Procedure to use brainstorming:

- Introduce a question, problem or topic both orally and in writing.
- Define the problem.
- Intimate participants to respond with as many ideas or suggestions as possible.
- Frame up the time limit.
- Let the ideas flow and no one may repeat or comment on any response.
- Record every response.
- There should be absolutely no criticising of any idea.
- Select the best ideas after the time limit is over.
- Select the best ideas based on the some relevant criteria's.
- Have a discussion.

Note: Make sure that every student participates in the brainstorming session.

E.gs. 1. Invent a new game for the Olympics.

2. How to reduce road congestion?

3. How to control pollution?

4. What will happen if examinations are abolished in schools?

5. What will happen if all houses got wings?

6. How would you feel if you were a television?

Role Playing:

Moreno used this natural phenomenon to develop his socio-drama and psycho-drama techniques. As an instructional technique it was later developed into role playing which starts with imitation but then there is imaginative transformation of reality. It is a group activity. It enables learners to adopt self learning process by exploring, correlating, contrasting and comparing. In role playing, learning takes place not only at verbal level, but also at sense level and emotional level. The learner experiments with his behaviour without fear of punishment from harsh realities of life. It stimulates thinking, emphasising imagination and spontaneous response to problematic situation.

Procedure:

- **Defining the problem situation**
- **Selecting the role-players**
- **Warm-up**
- **Briefing**
- **Enactment**
- **Discussion**
- **Evaluation**
- **Replaying**

E.gs. Environment Degradation and ways to protect it.

Provocation:

Provocation is an important lateral thinking technique. Just like Random Input, it works by moving your thinking out of the established patterns that you use to solve problems. We think by recognizing patterns and reacting to them. These reactions come from our past experiences and logical extensions to those experiences. Often we do not think outside these patterns. While we may know the answer as part of a different type of problem, the structure of our brains makes it difficult for us to link this in.

Provocation, originally developed by Edward de Bono, is one of the tools we use to make links between these patterns.

How to Use the Tool:

We begin by making deliberately stupid statements (Provocations), in which something we take for granted about the situation is not true. Statements need to be stupid to shock our minds out of existing ways of thinking. Once we have made a provocative statement, we then suspend judgment and use that statement to generate ideas. Provocations give us original starting points for creative thinking.

Example-1: we could make a statement that 'Houses should not have roofs'. Normally this would not be a good idea! However this leads one to think of houses with opening roofs, or houses with glass roofs. These would allow you to lie in bed and look up at the stars.

Once you have made the Provocation, you can use it in a number of different ways, by examining:

* The consequences of the statement
* What the benefits would be
* What special circumstances would make it a sensible solution
* The principles needed to support it and make it work
* How it would work moment-to-moment
* What would happen if a sequence of events was changed Etc.

Example- 2

"The owner of a video-hire shop is looking at new ideas for business to compete with the Internet. She starts with the provocation 'Customers should not pay to borrow videos'."

She then examines the provocation:

* *Consequences:* The shop would get no rental revenue and therefore would need alternative sources of cash. It would be cheaper to borrow the video from the shop than to download the film or order it from a catalogue.

* *Benefits:* Many more people would come to borrow videos. More people would pass through the shop. The shop would spoil the market for other video shops in the area.

* *Circumstances:* The shop would need other revenue. Perhaps the owner could sell advertising in the shop, or sell popcorn,

sweets, bottles of wine or pizzas to people borrowing films. This would make her shop a one-stop 'Night at home' shop. Perhaps it would only lend videos to people who had absorbed a 30-second commercial, or completed a market research questionnaire.

After using the Provocation, the owner of the video shop decides to run an experiment for several months. She will allow customers to borrow the top ten videos free (but naturally will fine them for late returns). She puts the videos at the back of the shop.

To use provocation, make a deliberately stupid comment relating to the problem you are thinking about. Then suspend judgment, and use the statement as the starting point for generating ideas.

Questioning:

Thinking is not driven by answers but by questions. Had no questions been asked by those who laid the foundation for a field — for example, Physics or Biology — the field would never have been developed in the first place? Furthermore, every field stays alive only to the extent that fresh questions are generated and taken seriously as the driving force in a process of thinking. To think through or rethink anything, one must ask questions that stimulate our thought.

Questions define tasks, express problems and delineate issues. Answers on the other hand, often signal a full stop in thought. Only when an answer generates a further question does thought continue its life as such.

This is why it is true that only students who have questions are really thinking and learning. It is possible to give students an examination on any subject by just asking them to list all of the questions that they have about a subject, including all questions generated by their first list of questions.

That we do not test students by asking them to list questions and explain their significance is again evidence of the privileged status we give to answers isolated from questions. That is, we ask questions only to get thought-stopping answers, not to generate further questions.

Contribution:

A thinking system based on argument is excellent just as the front left wheel of a car is excellent. There is nothing wrong with it at all. But it is not sufficient. Today, there is a huge amount of experience using hats method. The method now can be used in the field of academics with confidence as the results have been magnificent for the last one decade. It is no longer a matter of trying out something new or exotic. It is now a matter of catching up with a power thinking method that has been in use for fourteen years across all ages, cultures and abilities in academics. It has revolutionised the idea of developing thinking abilities among students of all ages.

It has come as an alternative to the argument system, which was never intended to be constructive or creative. With the Six Hats method the emphasis is on 'what can be' rather than on 'what is' and on how we design a way forward – not on who is right and who is wrong.

Check your progress :

1. How would a teacher use Edward De Bono's Six Thinking Hats method in a classroom to enhance the thinking ability of students? Illustrate.

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2. Discuss the contribution of Edward De Bono's Six Thinking Hats method to education.

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4.2D TEACHING THINKING: REUVEN FEUERSTEIN'S APPROACH :

Introduction:

Every teacher shows preference to and adopts a specific philosophy, style and behaviour for carrying out the teaching-

learning process in the classroom. The specific philosophy provides a basis for selecting teaching-learning process through which a teacher's orientation towards his / her teaching gets reflected. According to Duck, the following indicators are necessary for analysing a teacher's classroom behaviour:

1. The nature of the learner which a teacher may presume to be passive (Lockean) or active (Platonic).

2. The nature of the subject matter which a teacher may presume to be amorphous (rote-learning) or structured (understanding the relationship among the components of the subject matter).

3. The manner in which the subject matter is used to guide students towards meaningful learning activities which could be cognitive or affective.

4. The nature of behaviour trends one should exhibit in order to carry out one's philosophical position which could include encouraging students for convergent thinking or divergent thinking.

Philosophical Basis of Teaching :

There are six different philosophies which could influence a teacher's behaviour which are as follows:

1. **Perrenialism**: It emphasises humanities as presented in great books with the assumption that there are no absolute truths and standards more real than the physical world. The teaching would be based on S-R association theories of learning with behavioural objectives and assumption of one correct answer. The behaviour trend of the perennialist is convergent thinking- the authoritarian world-view. The nature of the learner is platonic (active). The nature of the subject matter is structured. They are geared strongly towards cognitive learning and to some extent, towards affective learning.

2. **Essentialism:** Essentialism emphasises physical sciences as used by authorities. It assumes that there are no absolute truths and that success is based on absorption of knowledge about the physical world. As far as the essentialist is concerned, the learner is passive, and the subject matter is strongly structured and to some extent amorphous. Students are geared strongly towards cognitive learning and convergent thinking.

3. **Experimentalism:** Experimentalists believe in active learning and learners. As it is believed that all knowledge has some internal correlation with each other, it necessarily has to be structured. The aim of the teacher while using subject matter to

guide students towards meaningful learning activities so as to gain knowledge. They strongly believe in divergent thinking and a non-authoritarian world-view. Experimentalists emphasise on social sciences as a framework for problem-solving, assuming that the physical world is constantly changing.

4. **Existentialism:** In this school of thought, the assumption is that the learner is active, the subject matter learnt is structured, the focus is more on affective learning and divergent thinking. It emphasises problem-solving in the area of highly controversial and emotional issues in any subject matter, the assumption being that the learners "confine" themselves and their relationship to the environment by their choices.

5. **Reconstructionism:** It implies that one has decided what the "perfect" form of society is and seeks to reach that society through teaching techniques associated with experimentalism or existentialism. The learner here is active and the subject matter is structured. On the other hand, they organise subject matter towards affective learning and not cognitive. In this there is a characteristic shift from acceptance of students' contributions to an emphasis on the best solution – a shift from divergence to convergence, which gives it a special appeal.

6. **Behaviourism:** It implies that one has decided what the "perfect" form of society is and seeks to reach that society through teaching techniques associated with essentialism. The learner here is passive and the subject matter is amorphous. The behaviourist encourages cognitive and affective learning as well as convergent thinking.

Reuven Feuerstein Approach :

(born August 21, 1921 in Botoşani, Romania) is an Israeli clinical, developmental, cognitive psychologist who is renowned for his theory of intelligence which states "*it is not 'fixed', but rather modifiable*". This idea in general is that intelligence can be modified through mediated interventions. Feuerstein is recognized for his lifelong work in developing the theories and applied systems of: **Structural Cognitive Modifiability**, **Mediated Learning Experience**, **Cognitive Map**, **Deficient Cognitive Functions**, Dynamic Assessment: **Learning Propensity Assessment Device**, **Instrumental Enrichment** Programs, and **Shaping Modifying Environments**. These interlocked practices provide educators with the skills and tools to systematically develop students' cognitive functions and operations to build meta-cognition.

His interest came from observing the difficulties experienced by the new immigrant students coping with unfamiliar learning environment that he saw as culturally "*deprived*." He describes culturally "*different*" children as children who receive an adequate amount and type of **Mediated Learning Experience** (MLE) in their native culture and who face the challenges of adapting to a new culture. These children are expected to have good learning potential. On the contrary, culturally "*deprived*" are those children who, for one reason or another, were deprived on MLE in their native culture or children who show a reduction in learning potential.

The theory of **Mediated Learning Experience (MLE)**, to which Feuerstein attributes human modifiability. It is MLE which is a typical human modality of interaction that is responsible to the unique character of the human being which is structurally modifiable. Feuerstein offers a variety of conceptual tools including the cognitive map, the **deficient cognitive functions** and the process orientation which marks and shapes the applied aspects of the SCM theory.

Feuerstein defines **Mediated Learning Experience** as a quality of human-environment interactions. *"It is much more than a simple pedagogical model and entails the shaping of cognitive process as a by product of cultural transmissions*". As such it represents to stimuli, is considered as the "most pervasive" way in which the organism-environment interaction affects the organism. MLE, through which the interaction, human-environment is mediated by a human being, whose intentionality "transforms the three components of **S-O-R** of what Piaget formed, into a meaningful way into a compatible combination. Feuerstein places great emphases on the H is the human, O is Organism, R is Response and S represents the Stimuli. Where **H** interposes himself between the S and the O as well as between the O and the R, there is mediation.*" This is what is known as **S-H-O-H-R** theory.*

The theory of **Mediated Learning Experience** addresses the question, ***What are the origins of differential cognitive development?*** This question involves examining the organism (the learner) and the environment (the context in which the learning experience occurs) and the two factors involved are either organic or environmental. Organic factors consist of heredity, maturation level, and others. Environmental factors are sensory stimulation, socio-economic status, and educational opportunities. This theory suggests that these two types of factors constitute only "*distal*" determinants of cognitive development (factors which cause the differential

responses to the environment), while the **Mediated Learning Experience** (or lack of) constitutes "*proximal*" determinant's.

Check your progress:

1. Discuss the Philosophical bases of teaching.

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2. Explain Feurstein's Mediated Learning Experience.

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The Cognitive Map:

Another important conceptual tool of the dynamic assessment process is the need to understand the relationship between the characteristics of the task and the performance of the subject. The "cognitive map" describes the mental act in terms of several parameters that permit an analysis and interpretation of a subject's performance by locating specific problem areas and producing changes in corresponding dimensions. The manipulation of these parameters becomes highly important in the subject-examiner interaction, by helping the examiner to form and validate hypotheses regarding the subject's performance difficulties. There are seven parameters to the cognitive map:

- Content of the mental act
- Modality or language in which the mental act is expressed
- Cognitive operations required for the mental act
- Level of complexity
- Level of abstraction
- Level of efficiency with which the mental act is performed

The cognitive map is an important element in the process of dynamic assessment and the use of the LPAD. It is reflected in the construction of the LPAD instruments and in the examiner's choice

regarding the order of the instruments to use with the subject, the amount of time and the extent of focus within the instrument, and the nature and type of mediation to offer within the functioning of the instrument.

Dynamic Assessment: Learning Propensity Assessment Device:

The Learning Propensity Assessment Device (LPAD) - originally named Learning Potential Assessment Device - is a dynamic approach, based on the theory of Structural Cognitive Modifiability, used to assess cognitive functioning. Propensity conveys the uniquely dynamic process of change, which is consonant with Feuerstein's concept of the nature of intelligence. In his conceptual view and in his methodology of assessment, intelligence is the "propensity of the individual to undergo changes in the direction of higher levels of adaptability." This name change underscores the significance of Feuerstein's attempt to do away with any concepts that represent intelligence as related to a reified objective entity, which by its nature much be considered measurable, predictable, and fixed. The LPAD encompasses goals, functions, and methods, which are substantially different from traditional, static, psychometric assessment methods.

Difference between IQ test and Dynamic Assessment:

Central to the dynamic evaluation is the acceptance of the modifiability of functioning instead of a belief in (or acceptance of) "fixed and immutable" characteristics of intelligence or cognitive functioning. The LPAD is a systematic attempt to overcome the limitation in standard tests and to provide a basis for making inference, based on prescribed observations of particular tasks, regarding the nature and adequacy of the development of cognitive functions.

Related to these inferences are additional specific appropriate questions:

1. What other obstacles to effective performance are observed?
2. How amenable to change are the observed deficiencies?
3. How much change can be expected?
4. What is the nature of the investment required to produce the desired changes (content areas, modalities of response, phase of the mental act)?
5. How much investment is required to produce the desired change?

6. How much stability can one achieve with the desired change?

7. How much generalization can one achieve following mediation?

Three levels of inference are employed in the LPAD. They are: (1) evaluation of the level of manifest functioning; (2) exploration of conditions under which manifest functioning may be improved; and (3) assessment of modifiability by actually bringing about changes in cognitive structure through meditation of functions and strategies, with subsequent assessment of the effects of this meditation on generalization processes of thought and manifest functioning.

Check your progress :

1. Discuss the parameters of cognitive Map.

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2. Differentiate between IQ test and Dynamic Assessment.

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Application:

The theory of SCM and the understanding of learning propensity require a different approach to assessment. There is abundant evidence that the assumptions associated with normative assessment are untenable and that they contributed to restricting large numbers of children, youth, and adults from receiving the education and therapeutic benefits to which they are entitled and from which they can benefit. In other words, we need methods by which it is possible to ask how individuals can be taught in such a way as to uncover and make accessible their available learning potential, not whether individuals can learn.

The examiner working from the perspective of dynamic assessment is thus able to reframe the critical assessment questions as following: Not:

1. What is the person's typical performance?

2. How much does this person know?

3. How well is the person likely to learn independently?

4. What areas of content have not been mastered?

But instead:

1. What is the person's maximal performance?

2. How can the person learn?

3. What teaching is needed to enable the person to learn at an acceptable level?

4. What process deficiencies underlie pervious learning failure and how can these be corrected?

The assessment strategy of the LPAD consists of two distinguishing features: (1) the assessment as a fluid process of the person's thoughts, perceptions, learning; (2) the carefully structured teaching of cognitive principles and processes followed by an assessment of the way in which this activity modifies the subject in the direction of higher capacity and greater efficiency on similar, although different, problems. The goals of the assessment process are to:

1. Identify well-developed cognitive functions

2. Identify deficient cognitive functions

3. Assess the response to the teaching of cognitive principles and strategies

4. Estimate the kinds and amounts of investment needed to overcome cognitive deficiencies

5. Sensitize both the examiner and subject to the processes involved in confronting and coping with a variety of tasks.

The tools of the LPAD are designed and selected through the general strategy, which requires a theoretical perspective, a methodological orientation, and the use of appropriate tools on the subject because:

1. Each of them requires the use of one (or more) fundamentally important cognitive process

2. Considered as a battery of instruments, they represent a broad range of specific cognitive functions

3. They employ tasks and materials, which have been found to be intrinsically attractive, interesting, and challenging, and which lend themselves to mediational intervention

4. They have been used for dynamic assessment for many years and with a large number of subjects and have thus been field tested and adapted for use in the assessment of learning propensity

5. They represent tasks requiring differing levels of higher mental processes

6. They are controlled for content so that the subject's functioning is not dependent upon familiarity or prior knowledge

7. They present a range of modalities of required responses

The instruments have been constructed to reflect the purpose and goals of evaluation in the LPAD, as opposed to those of a static and normative assessment. There are four basic changes reflected in the instruments:

1. Structure of the instruments: for each instrument, subjects are offered opportunities to use (and the examiner to observe) cognitive prerequisites and strategies to master the task

2. Subject-examiner interaction: the examiner uses the instruments in an active, interventionist posture, offering mediation, creative and engaging interaction, reinforcement, and feedback

3. Product to process orientation: the LPAD instruments shift the emphasis from product to process - that is, to a search for the reasons for a subject's success and failure

4. Interpretation of results: global or generalized scores are replaced by an active search for the peak of a subject's functioning and the creation of a detailed profile of performance that describes the subject's cognitive functions and deficiencies.

Feuerstein's Instrumental Enrichment Programs - Standard & Basic:

The **Feuerstein's Instrumental Enrichment Standard** program is a cognitive intervention/enrichment that can be used both individually and in a classroom framework. Feuerstein uncovered the needs for specific teaching methods (Mediated Learning

Experience) that would ground his work in an educational format. To this end, he developed 14 tools or what are known as "instruments". "Instruments" are series of pencil and paper tasks, which increase in the level of difficulty and are independent of any subject area (content) that identifies, defines and classifies a set of cognitive functions.

Feuerstein organized these tools into "content free" instruments that specifically trained educators 'mediate' to students to enrich cognitive functions and build habits for effective and efficient thinking. When a child is weak in use of any functions, for whatever reason, it is necessary that a teacher or other helping professional mediate the development.

The FIE Standard program goals seek to correct deficiencies in fundamental thinking skills, provides students with the concepts, skills, strategies, operations and techniques necessary to function as independent learners, increases their motivation, develops students' meta-cognition, and in a word helps students learn how to learn. Deliberately free of specific subject matter, the tasks in the instruments are intended to be transferable (bridged) to all educational and everyday life situations.

To date FIE program has been successfully used across the world in the following frameworks:

- Remedial programs for special needs children.

- Cognitive rehabilitation of brain injured individuals and psychiatric patients.

- Learning enhancement programs for immigrant and cultural minority students.

- Enrichment programs for underachieving, regular and gifted children.

- Professional training and retraining programs in the industrial, military, and business sectors.

Feuerstein has added **FIE-BASIC** in the year 2000 to further expand the application of his theory of **Structural Cognitive Modifiability** to preventing learning problems in young children (Pre-Kindergarten or 3 to 7 years old) and helping those older children with "special needs". Feuerstein's claims, that learning problems may be prevented through early, developmentally appropriate, intervention as well as the emerging brain research. In order to achieve these goals an emphasis is placed on a systematic

exposure of selected and necessary content areas. Specific skills are mediated and transformed into working concepts that build subsequent learning and development and the process of how to think.

The FIE- BASIC program includes a total of 10 instruments, with addition instrument in perpetration to be included in the program, which are taught over 2-4 years depending on the learner's needs and/or the development of implementation. Each focuses on specific cognitive functions that are the pre-requisites to successful school learning, especially in literacy and mathematics. It is designed to be used in a classroom group setting, for smaller groups of targeted learners, and as a one-to-one therapeutic intervention.

It is designed to provide an "early intervention" to enable students who are a special risk for their development, or those individuals who have not acquired basic foundational knowledge and skills, to respond to the direct world of stimuli and develop the pre-requisite cognitive functions. The use of the FIE-B can be a preparation for the use of the FIE-Standard (mentioned above), taking students to higher levels of mental processing and cognitive functioning.

Check your progress :

1. Illustrate the application of Feuerstein's approach to classroom.

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4.3 LET US SUM UP:

The knowledge of learning and thinking styles of students helps the teacher to make the teaching learning solution very engaging and meaningful. This unit has highlighted the contribution of different Psychologists in the analysis of learning and thinking strategies.

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EDUCATIONAL NEEDS OF DIFFERENTLY ABLED CHILDREN

Unit Structure

5.0   OBJECTIVES

After reading this unit you will be able to;

- Explain the meaning of learner diversity

- Enumerate the characteristics of exceptional children

- Describe the educational requirements of exceptional children

- Explain the role of the teacher in dealing with exceptional children

- Explain the concept of Inclusive Education in the Indian context

5.1   INTRODUCTION

The interplay between heredity and environment has created this beautiful world which abounds in human diversity. Individuals differ from each other in their physical, intellectual, emotional and behavioural traits. This creates a confounding situation before a class room teacher where in he/she has to deal with students of different ability levels, emotional and attitudinal make up and of varying physical characteristics within the given time frame to fulfil academic responsibilities. Catering to individual differences in the classroom thus proves to be the greatest challenge before the teacher.

A typical child in a classroom can either be a normal child with average capabilities or an exceptional or differently-abled one requiring more attention from the teacher.

5.2a   CATERING TO INDIVIDUAL DIFFERENCES

    i)   Cognitively Exceptional Children
    ii) Physically Cognitively Exceptional Children
    iii) Socio-Culturally Exceptional Children

Who is an exceptional child?
    An exceptional child is the one whose performance deviates from the norm, either below or above, to such an extent that special educational programmes and intervention strategies had to be planned to fulfil their academic needs.

Types of Exceptional Children:
Students can be broadly classified to the following three categories:
    a) Cognitively Exceptional Children
    b) Physically Exceptional Children
    c) Socio-Culturally Exceptional Children

COGNITIVELY EXCEPTIONAL CHILDREN

The children belonging to this category can be further subdivided in to the following types:
    i.   The Gifted
    ii.   The Mentally Retarded
    iii. Children With Learning Disabilities

Gifted Children:
    Children possessing high intellectual level and special abilities and talents are regarded as gifted.

    According to Guilford, ' the gifted are those students whose potential intellectual powers are at such a high ideational level in both productive and evaluative thinking that it can be reasonably assumed, that they could be the future problem solvers, innovators of the culture if adequate educational experiences are provided.

Characteristics of Gifted Children:

- **Physical Characteristics:**

  By and large, these children have superior physical abilities like-

  1. Greater birth weight,
  2. Early walk and talk,
  3. Early puberty,
  4. Superior motor ability, etc.

- **Intellectual Characteristics:**

  1. High IQ,
  2. Precocious,
  3. Varied interests,
  4. Higher scholastic performance,
  5. Rich cognitive processes of abstract thinking, reasoning, generalizing, critical & reflective thinking and creativity.

- **Personality Characteristics:**

  1. Ambitious,
  2. Higher levels of motivation and enthusiasm,
  3. Impulsive,
  4. Confident.

Identification of the Gifted:

- Parents, teachers and social workers can help in identifying in identifying gifted children at a very early date. Careful observation of the child in different setting and for considerable amount of time has to be worked out for early detection of giftedness.

- General intelligence tests, creativity test, word association test, Achievement tests serve as useful tools.

- School records, report cards also provide valuable information on giftedness.

Education of the Gifted:

The two major approaches to teaching gifted are acceleration and enrichment.

- **Acceleration:** These programmes allow gifted students to move ahead at their own pace, even if this means jumping to higher grade levels.

- **Enrichment:** These programmes allow the students to remain in the same grade but provide special programmes and special activities to cover the topics in greater detail and depth.

It is generally agreed that the education of the gifted pupils should emphasize the following objectives to cater to their giftedness.

1. Analytical perception
2. Methods of problem solving
3. Employing Analysis & Synthesis
4. Conceptual Thinking
5. Scientific Objectivity
6. Originality and creativity
7. Independent study habits
8. Encouragement of special interests

The Mentally Retarded Child:

The American Association of Mental Deficiency states that mental retardation exists when there is significant sub average general intellectual functioning existing concurrently with deficit in adaptive behaviour and is manifested during the developmental period.

This means that people classified as mentally retarded can range from those who can be trained to work and function with little special attention to those who are virtually untrainable and do not develop speech and the rest of the motor functions.

There are four levels of mental retardation. They are:

1. Mild Mental Retardation (IQ 50-70)

This is the largest group of people comprising of 80% retarded population. They are 'educable' and do not show the signs of brain pathology or other physical defects. Their retardation, therefore, is not identified, at times, even after reaching school, although their early development is often slower than the normal. It can become apparent only when the child starts lagging behind the peers in school work. With early detection, parental assistance and appropriate training, these students can reach a third to sixth grade educational level. Although they cannot carry out complex intellectual tasks, they are able to take up manual jobs and jobs involving inferior skills and function quite successfully and independently and become self supporting citizens.

2. Moderate Mental Retardation (IQ 35-49)

This group consists of about 12% of retarded population. These are 'trainable' and their retardation is evident early in their lives. They are slow to develop language skills and their motor development is also affected. Some of these students could be taught to read and write and speak some broken language. Physically, they are clumsy and suffer from poor motor coordination.

3. Severe Mental Retardation(IQ 20 -34)

This is the group of 'dependent retarded' consisting of 7% of retarded population. These are the children with severe problems of speech retardation and sensory defects and motor handicaps are common.

4. Profound Mental Retardation (IQ under 20)

They belong to the category of 'life support mental retardation' consisting of 1% of the retarded population. Most of these are severely deficient in adaptive behaviours and unable to master even the simplest of tasks. Severe physical deformities along with convulsive seizures, mutism, deafness and other problems are common. Such a person has a very short life expectancy.

Causes of Mental Retardation:

Biological Causes

- In about 25 % to 35 % of the cases, of mental retardation, there is a known biological cause. The most frequent being the presence of an extra chromosome causing Down's syndrome. The frequency of this disorder increases with the increasing age of the mother.

- A birth complication like inadequate supply of oxygen to the brain is another major cause of biological mental retardation.

- Many cases of mental retardation are classified as 'familial retardation' where there is no known biological cause, but there is a family history of retardation.

- Cretinism is retardation due to endocrine imbalance like failed thyroid or degeneration of thyroid.

Infection & Toxic Agents:

Presence of carbon monoxide, syphilis or germ measles with mother can cause retardation in the foetus. Incompatibility between the blood types of the mother and the foetus, drugs taken by mother during pregnancy could result in mental retardation.

Prematurity and Trauma:

Babies weighing less than 1500 grams at birth, difficult labour, bleeding within the brain of the babies are some other causes.

Ionizing & Radiation:

Radiation may act directly on the fertilized ovum or may produce mutation of the sex cells of either or both parents, which may, in turn lead to defective offspring.

Malnutrition:

Protein deficiency in mother's diet during the last five months or in the diet of the child during the first 10 months after birth can cause great harm to child's brain.

Teaching the Mentally Retarded

There are a number of areas, in which mentally retarded have specific difficulty, including attention span, memory, learning rate, ability to generalize, and conceptualization.

Providing great deal of practice, making the child rehearse actively the learning material to be memorised, may improve child's retention considerably. Over learning is another useful strategy to deal with the problem. Finally, the teachers should realize that the curriculum goals and objectives should be adjusted to suit the needs of the special child. The emphasis should be on teaching the kind of skills that will best enable the child manage himself or herself independently in the society.

PHYSICALLY EXCEPTIONAL CHILDREN

The term physically exceptional has been used in literature in various ways: Physically disabled, crippled, orthopaedically impaired, or otherwise health impaired. Physical handicaps are divided into two types: Orthopaedically handicapped (OH) and Health impairments for the purpose of special education (Bigge and Sirvis, 1986). The legal definition of the term orthopaedically handicapped is a severe, orthopedic impairment that adversely affects a child's educational performance. The term includes impairments caused by a congenital anomaly e.g., club foot, absence of some body organs, impairments caused by disease, e.g poliomyelitis, bone tuberculosis, and impairment from other causes e.g. cerebral palsy, amputations, and fractures or burns that cause contractures.

The legal definition for other health impairments is having an acute condition that is manifested by severe communication and other developmental and educational problems, or having limited strength, vitality or alertness because of acute health problems e.g., heart condition, tuberculosis, rheumatic fever, nephritis, asthma, anaemia, haemophilia, epilepsy, lead poisoning, leukaemia or diabetes that adversely affects a child's educational performance.

However, there are certain neurological disorders which are not categorized as either crippling or a special health problem e.g. aphasia – a language disorder due to brain injury. Hence, from an educational point of view crippling and neurological impairments would include all children with non-sensory physical impairments whether they are accompanied by a neurological damage or not, and whether they resulted in chronic health condition or not.

Basically non-sensory physical impairments may be classified as crippling and chronic health ailments. The cripples have muscular and skeletal deformities which are obvious. They may wear braces, prosthetics devices such as artificial limbs or may be moving with crutches or wheel chairs.

A teacher or educator is less interested in the physical aspects of disability but he is more concerned with the manner in which it will affect the child's functioning in learning situation.

a. Children with muscular or neuromuscular handicaps which significantly limit their ability to get about, sit in the classroom, manipulate the materials.

b. Children with skeletal deformities which also affect movement, posture and use of hand in school work.

c. Children with temporary or chronic lack of strength, vitality or weakness.

The categorization of orthopaedic disability according to extent and severity:

- Mild -- < 40%,

- Moderate – 40% and above

- Severe – 70% and above, and,

- Profound – 100%

Prevalence

It is estimated that physical handicaps occur to the tune of 2%. The most common physical impairments found in school are Cerebral palsy, Spina Bifida, and Muscular dystrophy. The National Sample Survey 1991 puts it at 8.939 million in India (orthopaedic) out 16.15 million of the physically handicapped in 80:20 rural-urban, and 60:40 male-female ratio. In 1981 physically disabled were 1.94% and 1.42% for rural and urban population respectively. The corresponding figure in 1991 NSSO was 1.99% and 1.58% respectively.

Causes

The causes for physical handicap are many and varied. Brain damage, brain fever and brain <u>anoxia</u> lead to physical disability. Rh-incompatibility, intoxication, viral infection for the expectant mother may also causes physical disability. Similarly, prolonged labour, lead poisoning, accidents may cause damage to the brain leading to neurological disorders. Polio, Burns and injuries are significant causes as per NSSO, 1991 for Indian society.

Identification

One or more of these disorders are manifested in the children who are physically exceptional:

1. Deformity in fingers, legs, hands, spine, neck.
2. Frequent pain in joints
3. Jerking movement in walking
4. Amputed limbs
5. Difficulty in sitting, standing, walking
6. Poor motor control
7. Shaky movements
8. Difficulty in picking, holding and putting things.

Characteristics

Physically handicapped students generally have average or above average intelligence. Dykes (1984-85) suggest 85% of health impaired and 35% of orthopaedically handicapped children are served in special schools or classes. Often their needs vary. The greater needs of the physically handicapped children are in the areas of adaptive equipments. Often they require wheel chairs, crutches, head pointers, arm and leg braces. Technological gap has narrowed down the gap in providing adequate educational instruction to students who can not speak move or use hands.

Physically handicapped children are passive, less persistent having shorter attention span, engage them in less exploration and display less motivation. They are more dependent on adults, and interact less with peers. Facilitating independence and building self esteem are the two requirements for the physically handicapped children.

The physically disabled has poor body image, high anxiety, and frustration. They are found to be quiet, conforming, tender minded and somewhat tense. Social relationships constitute a problem area for many crippled youngsters. Their capacity for frustration tolerance is lower than normal children.

Difficulties of orthopaedically handicapped arise out of several factors. Essentially children with motor disabilities are not very different from normal boys and girls. Their handicap arises out of three factors:

a. Society's attitude towards them.
b. Child's interpretation of this reaction to his limitation.
c. Discrepancy between aspiration and achievement.

Because of neurological impairment and experimental impoverishment they do show perceptual difficulties.

Intelligence of the orthopaedically handicapped children does not basically differ from those of normal except for cerebral palsy. The neuro- muscularly impaired children function 10 to 15 points between estimated intelligence. Children with cerebral palsy, muscular dystrophy, and hydrocephalic are included in the dull normal classification while other children with the orthopedic disability are within the normal range.

Educational Provisions

Orthopaedically handicapped children do not need any special situation for schooling. They can be educated well in the regular school along with others. The regular classroom teacher can well handle such cases.

Integrated Education

Education of OH children has changed considerably over the past 50 years. Programs of children with orthopaedic handicaps have broadened extensively to include the process of rehabilitation. This is studying the total child. Each staff member has to participate and show sensitivity and natural respect.

Special educators need specific preparation for their team work role. The teacher's function include (a) diagnosis of deprived experience and provision of what is essential (b) developmental guidance (c) coordination of habilitation programme, (d) promotion of integrated activities (e) maintenance of reality standards and discipline. Attention should be given both to individual and group in planning differential diagnosis. It means understanding and the study of all factors of the child's growth and his development. For example, if a child has IQ 60 and serious emotional problems due to family stress and pressure, it is not a simple case of past polio. In the total programme the vocational rehabilitation counsellor also assumes major responsibility.

Partial integration is possible in special class especially if the unit is desirably located in a public school building.

The child's likelihood of success in regular classroom setting appears efficient when

a. the child is intellectually, socially and emotionally capable of participation with his peers,
b. the child can participate,
c. the child is not being denied therapy necessary for physical rehabilitation,
d. the curriculum is adapted to most of his needs,
e. the physical facilities of the school permit the child to hence access to important educational centres,
f. the teacher is willing to accept the child and prepared to move with one who deviates physically,
g. adequate physical assistance and special supervision is provided
h. periodic evaluation is included in the child's progress report,

What criteria should be used to place physically impaired children in the integrated school? The following criteria seem pertinent:
1. Average or above academic ability
2. Social and emotional ability
3. A desire to be integrated
4. Support of parents
5. Ability to communicate effectively
6. Effective management of contingency.

The Regular Teacher

For physical disability the regular teacher need to make instructional adaptations so that the children communicate with teachers well. For Health Impairment he has to know the basic characteristics of disorders, medicine and their effects, precautionary measures, keeping a watch on day to day requirements and develop appropriate expectations so that children do not suffer from identification.

Three factors are responsible for deciding the teaching procedures of physically and/or neurologically impaired children namely; Task analysis, teaching towards developing independence, and use of computer instruction.

The type of content is dependent upon the degree of physical impairment. Yet certain areas are most essential.

a. Communication skills and language

b. Activities of daily living, or self care skills (eating, bathing etc.)

c. Community referenced instruction (crossing streets, using money, riding public transportation)

d. Advanced self care skills or home living skills (operating kitchen appliances etc.)

e. Vocational preparation, career awareness, works adjustment skills.

f. Continuity and generalization.

SOCIO-CULTURALLY EXCEPTIONAL CHILDREN

Educators categorize socio-culturally exceptional children somewhat arbitrarily into one or more of the following areas of deprivation : economic, racial, geographic, social, cultural, cognitive, and/or emotional. Historically one can identify the roots of this population in terms of their educational needs, but it was not until the mid 1960s that writers such as Riessman and Havighurst had their turns at defining the characteristics that constitute this deprived population. As indicated by Reissman (1962), the terms culturally deprived, educationally deprived, under privileged, and disadvantaged, lower class, and lower socio-economic group, could all be used interchangeably.

The disadvantaged children differ from advantaged class in mainly six areas.

They are: self-concept, motivation, social behaviour, language, intellectual functioning and physical fitness.

Specific learning characteristics of the deprived or disadvantaged student might include many of the following;

(1) orientation towards physical and visual rather than to the oral;

(2) content-centered rather than introspective;

(3) problem-centered rather than abstract centered;

(4) inductive rather than deductive;

(5) spatial rather than temporal;

(6) slow, careful, patient, and persevering rather than quick, clever, facile and flexible;

(7) inclined to communicate through actions rather than words;

(8) deficient in auditory attention and interpretation skills;

(9) oriented toward concrete application of what is learned;

(10) short attention span;

(11) characteristic gaps in knowledge and learning;

(12) lacking experiences of receiving approval for success in tasks.

Meeting the needs of the disadvantaged child is a relatively new educational approach.

Causes

Cultural deprivation or disadvantaged arise due to a complex set of conditions which create intellectual deficiency in a child. Some of these conditions are attributed to unstimulating environment, lack of verbal interaction with adults, poor sensory experience, and other deleterious environmental factors generally associated with poverty, low social status, malnutrition, broken homes etc.

Behavioural Signs for Observation

The term 'disadvantaged' is used to indicate observable behaviours. They are-

a.   Progressive decline in intellectual functioning in school.

b.   Cumulative academic achievement deficits.

c. Premature school termination and high drop out rate.

d. Reading and learning disabilities.

e. Poor language learning.

f. Inadequate social learning and observation in the absence of model,

g. Low attention span and distraction in learning.

h. Lack of proficiency in higher form of cognitive learning and transfer.

i. Inability to classify and form logical concepts, incapacity to verbalise events and solutions.

j. Lack of analytic ability which is essential for learning.

k. Belief in external factors, i.e., luck, chance, fate etc. rather than their own self and activity.

l. Cannot delay gratification. Immediate tangible and non-contingent rewards are their needs.

m. A high sense of avoidance for failure than striving success.

n. Poor self concept, low achievement aspiration, and low need achievement including lack of desire for self actualization.

o. General behaviour lacks intrinsic motivation. Insecurity and anxiety are very obvious.

Assessment of Social Disadvantage

In order to identify social disadvantage the following scales and tests may be used:

1. Deprivation index – Whiteman and Deutsch (1968). This scale even though developed in USA yet is of relevance after appropriate adaptation.

2. Cultural Deprivation Index – Rath and Samant, (1975).

3. Prolonged Deprivation Scale – Misra and Tripathi (1977). This is most relevant and appropriate but needs shortening in terms of the length of the test. It relates to 15 areas of socio-cultural experiences.

   - Housing condition
   - Home environment
   - Economic Sufficiency
   - Food and Nutrition
   - Clothing

- Educational Experience
- Childhood Experiences
- Rearing Experiences
- Parental Characteristics
- Interaction with parents
- Motivational Characteristics
- Emotional Experiences
- Travel and Recreation
- Socio-cultural Experiences
- Miscellaneous

Characteristics of Disadvantaged Children

What are the characteristics of the disadvantaged children? These children show poor academic performance and high drop-out rates, reading and other learning disabilities and have adjustment problems. They have lower grades, their health is poor, and they have deficiencies in the two most skills namely, reading and language, necessary for success in school. They have minimal training in disciplined group behaviour and educationally they are less ambitious. Children from impoverished environments are apt to have various linguistic disabilities. They also show incapacity in cognitive processes such as : the ability to observe and stating sequences of events, perceiving cause and effect relationships, classifying concrete objects, attributing responsibility to self and in general have poor self concept. The combination of non-verbal orientation and an absence of conceptualization well account for their intellectual deficits and deficit in cognitive skills or in Piagetian terminology, formal logical thinking is absent in all such children or appear very late in the development. The consequences of the cognitive deficiencies are again complicated by their pattern of motivation and attitudes. Psychologists explain that these children have a feeling of alienation induced by family climate and experience combined with a debilitating low self concept. They tend to question their own worth, to fear being challenged, and to exhibit a desire to cling to the familiar. They have many feelings of guilt and shame. These children are wary of socialization and their trust in adults is limited. They make trigger like responses and are hyperactive.

The lower achievement of disadvantaged children could be attributed to at least five causes: malnutrition, genetic, lack of stimulating early experience, social motivations and cultural values.

In India, social and cultural disadvantage is not very clear cut. All low income group children are not necessarily at disadvantage. The high caste is supposed to have a culture superior to that of the low caste Harijan given the same low economic status. The cumulative effect of these widens the gap between Brahmins and Harijans. There are empirical findings which support the cultural effect of a high caste home.

Remedial measures

In order to reverse the ill effects of deprivation, certain remedial measures are recommended. They are:

a. Early modelling and imitation of desirable behaviour

b. Language enrichment programme and stimulation at home

c. Affective attention and acceptance

d. Providing initial success experience to build better motivation and striving for success.

e. Removal of discrimination attitudes on the part of teachers and other significant members of society

f. Humanistic approach to teaching the underprivileged in school

g. Instructional programmes may be geared to their needs and ability level

h. Giving responsibility, recognition, tangible rewards, positive remarks etc.

i. Exposure to sensitivity training, exposure to literature, discussion and group contacts, role playing, case conferences relating to their problems.

j. Presenting learning materials using images, aids, and providing adequate organizers and drill.

Compensatory education programmes have proved the validity of these recommendations.

Role of Regular Teacher

The following instructional strategies for educating the disadvantaged are suggested considering the objectives of instructions and their entering behaviour to an instructional situation. Basically, there is no difference in the learning potential between the normal and the disadvantaged group of students. But the teacher

should monitor the rate, the sequence, the type of materials and presentation modes. Hence, the need of a few guidelines is obvious.

a. A continuous appraisal of progress and comprehensive measure of assessment-diagnosis via feedback should become a part of every teaching act and basis of planning the next learning experience.

b. If instruction is to be effective these students are to be simultaneously trained to achieve the three objectives: knowledge, skills and attitudes.

c. Since the students come to the school with cognitive deficit a special hour may be kept aside for remedial teaching language, training in how to increase some of their non-intellective characteristics, i.e. self-concept, level of aspiration, n-ach, sense of responsibility etc.

d. Learning of concepts and ideas may be sequenced before they are presented to the under privileged group, using more of concrete and life like situations. Training for analytic thinking may also constitute a part of the instructional programme design.

e. The imposition of standardized expectation regarding performance should be replaced by more of individualization in the rate of learning and exposure of varied materials. Instructions must be given how to pace performance according to their ability. The teacher has to ascertain the pre-requisites before instructing them to move to the next step.

f. For educating the underprivileged, giving recognition, responsibility, tangible rewards, positive affective remarks encouragement have been found to be effective and are to be encouraged in schools. Affective interactions and developments to be supported in a school programme.

g. They also need to be acculturated through sensitivity training, exposure to literature, discussions and group contacts, role playing and case conferences.

h. Self-instructional materials may be used best to their advantage.

i. The culture specific curriculum relevant to their life, especially for tribal population should be developed and used.

5.2b CONCEPT AND TYPES OF LEARNING DISABILITIES

Learning disability (LD) is a term used to denote a neurological handicap that interferes with a person's ability to receive, process, store, and retrieve information. LD creates a gap between a person's ability and performance caused by an alternation in the way information is processed. Repetition and drilling does not alter this processing, but presenting materials in a different way helps. Individuals with LD are generally of average or above average intelligence.

- LD can affect one's ability to read, write, speak or compute math, and can impede socialization skills.

- Early diagnosis and appropriate intervention and support are critical for the individual with LD.

- Because it is often a 'hidden handicap," LD is not easily recognized, accepted or considered serious.

- It is believed that LD never goes away, but can be compensated for.

- Attention deficits and hyperactivity are sometimes coupled with LD, but not always.

- LD is not the same as the following handicaps: mental retardation, autism, deafness, blindness, and behavioral disorders.

It is thought that up to 15 percent of any population anywhere contains learning disabled. Specific learning disabled (LD) persons find it difficult to succeed in conventional classroom. Therefore, it is essential that all teachers, preschool through university, will have LD students in their classes, unrecognized, undetected and therefore considered to be the "dullard," the backbenchers.

LD is a neurological condition that is beyond the control of the individual. Such a student is more normal than different. There are degrees of LD – mild, moderate, and severe. It might go undiagnosed as late as secondary school, university, or even never at all. They younger the child when diagnosed, greater is the possibility of remediation. When a student is older, it is coping strategies that need to be strengthened.

How it Affects the Students

Learning disabilities affect the child from a variety of angles-but mostly, self-esteem and self-confidence. In the very early years the feedback comes from parents, but since learning at this stage is fairly non stressful, the occasions for failure are few. The situation dramatically changes when the child enters schools and encounters other children (who is not a brother, sister or a cousin), competition (in an alien atmosphere), and other adults (who are not parents). It is the latter which have a very significant and lifelong impact on all students. This involves not only the teaching of particular academic skills, but as importantly, the fostering of students self-esteem, that is, to make them feel that they belong and are welcome in the school setting. This can be done in the classroom by providing them with responsibilities through which they perceive themselves as contributing and making a difference (e.g., distributing books to the students, helping younger children during recess, helping make charts for the class). Offering them opportunities to make choices and decisions and solve problems, communicating encouragement and positive feedback will also help the process. While these kinds of positive interventions are important for all students, they are particularly relevant for student who finds learning problematic.

Negative experiences in the school, especially in terms of learning incapacity can leave long lasting scars of being demeaned, belittled, or accused of being disruptive as they struggled to understand what was being taught.

Behavior Problems

LD can present with hyperactivity and impulsive behavior with lack of reflective thought prior to action. These children have poor peer relationships and poor social judgments. They may behave inappropriately in different situations and fail to see consequences of their actions. They may be overly gullible, and easily led by peers. They show poor adjustment to environmental changes and excessive variation in mood and responsiveness.

Emotional Problems

- LDs often go unrecognized. Children may present with symptoms such as school refusal or agoraphobia, or develop somatic symptoms such as headaches and stomach-aches, especially on the school day they are expected to speak or read in front of the class.

- Undiagnosed and untreated, these problems increase till the child begins to dislike school, refuses to do homework, and perhaps develops oppositional defiant symptoms. Some children may become verbally abusive and physically provocative. Successful intervention with these children requires the diagnosis and treatment of the learning and language problems. Behavioral and emotional problems are more likely to emerge as children mature and academic tasks become more difficult and peer interactions become more complex.

Environmental Causes

These could be poverty, inadequate housing, family dysfunction, and parental psychopathology or substance abuse, dysfunctional peers, too much of television viewing, inadequate or improper schooling.

General Guidelines for Educators

- Students with LD may take much longer to learn and can also tire quickly. They have to try harder, which can be exhausting. Be aware that the pace of the normal class is likely to be too fast because they often need more to process language. Make a conscious effort not to speak too rapidly.

- Be prepared to learn from the parents. Interest, involve, and work closely with them. Use whatever works-home/schools agendas, face-to-face meetings, phone calls or e-mails.

Ensure that information concerning the student is passed on when the students is in transition from one teacher to another and from one year to another. Do not assume that this will be done automatically.

Suggested Strategies

- Encourage students to be aware of and to evaluate the strategies they use to study and to learn Study skills, like note taking and time organization, need to be actively taught.
- Provide structure. Lists of the day's routines and expected behaviors can be great help. Give plenty or warning when changes are made to the timetable, teacher or task.
- Teach how to ask questions. All students, especially the ones with LD, need to feel comfortable with seeking assistance.
- Break activities into small, sequential tasks. Give specific examples.

- Repeat, repeat, repeat – both old and new materials, in different ways.
- Provide the amount of structure and support that the students needs.
- Do not expect the student s to listen and write simultaneously.
- Mark positively- tick the good bits. Mark for content – not presentation or mark for presentation and not content.
- Do not use playtime to finish work.
- Reward any and all good behavior.
- Very important, seek opportunities to praise and build self-esteem

The three major types of LD are:

1. **Dyslexia:** A person has trouble understanding written words, sentences or paragraphs.
2. **Dysgraphia:** A person finds it hard to form letters or writes within a defined space.
3. **Dyscalculia:** A person has difficulty solving arithmetic problems and grasping math concepts.

1. DYSLEXIA

Dyslexia is a disorder manifested by difficulty in learning to read, despite conventional instruction, adequate intelligence and socio-cultural opportunity. It is dependent upon fundamental cognitive disabilities, which are frequently of constitutional origin.

Characteristics of Dyslexia

- Speech difficulties are common in children with dyslexia. Stuttering and lisping are quite common. Delayed spoken language is often an indicator of dyslexia.
- Spatial difficulties-leading to reversal of letters (B-d), words (saw, was) and sometimes even sentences and difficulty in scanning from left to right.
- Visual memory difficulties in recalling sequence of letters in words (spelling).
- Difficulties in visual and motor figure ground- resulting in illegible handwriting, difficulties in scanning lines and discrimination of letters.
- These characteristics appear more often in combination.

Apart from difficulties with phonological processing, dyslexia is also associated with differences in cognition and learning.

Language Problems

Dyslexic children have problems with reading, a lack of awareness of phonemes that make up words, difficulties with spelling, sequencing of letters in words, and difficulty with pronouncing words (may reverse sounds).

- Early warning signs are delay in speech, delay in learning the alphabet, numbers, days of the week, month, colors, shapes, and other basic information. They also have difficulties understanding subtleties of language such as jokes or slang, concept words (forward/backward, near/far) etc. there may be mispronunciations, omission of sounds and immature vocabulary.

- Auditory and visual processing difficulties may also be present. Here children have difficulty distinguishing between words that sound alike (pig/big). There is trouble rhyming words, and in blending sounds into words. Visual processing difficulties may include inability to recognize letters, words, or other printed symbols quickly and accurately. For example, there may be confusion with b and d, or read for saw and on for no.

Motor Coordination

Motor coordination problems are common. These children may be clumsy or awkward. It may be difficult for them to write, draw, or copy with neatness and accuracy. There may be problems with fine motor skills such as tying shoes, buttoning, using scissors or learning to sew.

Diagnosis

Detailed history is most important in making a diagnosis of dyslexia. When dyslexia is suspected, a battery of standardized tests comprising of tests of reading, spelling, language, and cognitive ability must be carried out. Additional tests of academic achievement, e.g., math, language, or memory may be administered as part of a more comprehensive evaluation of academic, linguistic, and cognitive function. The diagnosis is made after careful consideration of the history, clinical observations, and testing data.

Strategies for helping the child with Dyslexia

- Teaching reading and writing simultaneously to enhance language comprehension through visual perception, auditory perception and tactile perception.

- Focusing on most basic perceptual associations that the child I familiar.

- Teaching whole word instead of isolated letters to provide complete language experience

- Planning learning experiences that the child can perform successfully

- Constructing reading experiences that use the skills that the child has learned previously.

    Emphasizing on over learning till it becomes automatic

Specific Teaching Strategies:

- Dyslexics should be taught in a structured, logical step-by-step way, beginning with single-letter sound linked to letter names and letter shapes, working in stages through simple one-syllable words to complex multi syllable words.

- The teaching drills should be based on a multi-sensory technique. In other words, all-around approach that utilizes the student's senses of sight and hearing, as well as involving writing down and reading back aloud what has been written-an- that is particularly successful with dyslexics.

- The association between single-letter name, sound, and shapes should be taught firs, along with the knowledge of that some of these letter are vowels, which will be needed in every word. Gradually, the complete range of spelling patterns and sentences is taught.

- The teacher should thoroughly understand the structure of the language and how it develops. Dyslexic students should be introduced by dictation to sentence formation in its simplest form.

- Asking the child to repeat sentences while dictating also helps to improve memory for sentences. More sophisticated sentences are introduced gradually.

- Dyslexic students have to be taught reading, and spelling in a scientific manner with every step distinctly clarified and presented in a comprehensible manner.

- In addition to specially tailored reading and writing tuition, specialist dyslexia therapy should also give help, when needed, with mathematics, directional confusion, telling the time and all the other typical problems for the dyslexic

- This drill is repeated with each set of new sound patterns. The association between single-letter name, sound, and shapes should be taught firs, along with the knowledge of that some of these letter are vowels, which will be needed in every word.

- Gradually, the complete range of spelling patterns is taught and sentences. The teacher should thoroughly understand the structure of the language and how it develops. Dyslexic students should be introduced by dictation to sentence formation in its simplest form.

- Asking the child to repeat sentences while dictating also helps to improve memory for sentences. More sophisticated sentences are introduced gradually.

2. DYSGRAPHIA

A neurological-based writing disability in which a person has difficulty expressing thoughts on paper and with writing associated with unreadable penmanship and problems in gripping and manipulating a pencil.

The written form of language is the highest the most complex form of communication. In the hierarchy of language skill, writing is the last to be learned. Prerequisite to writing is a foundation of previous learning and experiences in listening, speaking, and reading. Even though dysgraphia is difficulty with handwriting, the other components of written expression- spelling and written expression which are impaired in children with learning disabilities need to be considered.

Common Signs of Dysgraphia:
- Bad or illegible handwriting
- Awkward or cramped pencil grip.
- Avoidance of tasks involving writing.
- Inconsistent in the way letters and words look.
- Difficulty in expressing ideas on paper.
- Inability to properly form letter
- Writing may be slow and labored.
- Difficulty keeping letters on the line.

- Inability to understand the relative sizes of letters.
- Crowding of letters within words.
- Poor spacing between words.
- Difficulty in reading written work even when the spelling is correct.

Strategies for helping the child with Dysgraphia

The teacher has to pay attention to the following

Handwriting Skills
- Has a good tripod grasp.
- Able to draw horizontal line (left to right) and vertical line (top to bottom).
- Able to draw a circle.
- Copies letters and words

Writing Letters
- Place a little green dot at the starting position for the letter stroke and a small red dot at the termination point. Arrow clues to indicate the direction of the stroke could also be provided.
- Teach the basic strokes for most letters sequentially. For example, teach the letter "t" as two separate strokes: and Eventually, encourage the child to join the basic strokes together.
- Teach letters with easier strokes first. The following letters are considered the least difficult for children to learn: c,i,l,o,t,v.
- Tape an alphabet chart to the child's desk.
- Use clean, lined paper for children with aligning and spacing difficulties.
- Teach children to "talk out" strokes in making specific letters. For example,
  - W - Slant down, slant up, slant down, slant up.
  - I – short line, dot.

Cursive Writing
Devise games for students to practice various cursive strokes. For example:
  - Stringing beads.
  - Making waves
  - Making curly hair.

- Use dot-to-dot or dash-to-dash letters to informally assess readiness for cursive writing. Gradually fade out the dots or dashes, allowing the child to make the complete letter independently

- Teach letters with similar movement patterns sequentially. The following four groups contain similar strokes: (1) a,c,d,g,o; (2) b,h,f,k,l,e, (3) i,j,p,r,s,t,u,w; (4) m,n,v,x,y,z.

- Place a heavy (possibly weighted) bracelet or wristband on the wrist of a child who had difficulty keeping his wrist in the proper position on the dest.

- Use verbal cues in teaching cursive writing. Teach letters with similar strokes in sequence so that the child can more easily follow the cues. For example, use the "a" strokes in teaching the "g" strokes: "First come around like the 'a', then go down…."

Handwriting Activities for Left-handed Students

Observe whether the child uses the right positioning. The left-hander's writing should be slightly sloped to the left-tape the student's paper in the right positioning, if necessary. Seat the child in the left corner of the classroom away from the aisle, if possible, to ensure movement space.

LD students usually encounter many different types of written language problems. They have difficulties in handwriting (formation, size and spacing irregularities, pressure marks and erasures), spelling and written expressions. General competencies required for each of these areas are listed below:

3. DYSCALCULIA

Dyscalculia is the type of learning disability resulting in difficulty in learning numerical and mathematical ideas and concepts.

Clinical Signs of Dyscalculia

- Difficulty with common math processes such as addition, subtraction, multiplication.

- Difficulty with math concepts such as sequencing of numbers, and sequencing of rules required in mathematical problems.

- Poor retention and retrieval of math concepts.

- Inability to work with numbers or symbols.

- Inconsistency in understanding and application of math rules.

- Poor sense of direction and time, e.g., difficulty with reading maps, telling time, etc.

- Difficulty in applying rules in sports.

- Trouble keeping track of scores and players during card and board games.

- Inability to handle money transactions in day-to-day living.

Difficulties in Mathematics

- Shape discrimination-confusion in recognizing shapes may cause difficulty in recognizing numbers.

- Size discrimination-concepts like, big, small, long and short are very important for mastering abstract quantitative concepts like more, less, greater than, less than, etc. This may also lead to difficulties in estimating area, perimeter, etc., at a later stage.

- Classification-categorizing objects into sets is a very important concept for mastering maths. Difficulties in this can also lead to difficulties in simple operation like counting.

- One-to-one correspondence- lack of understanding of this could cause problems even with counting. This may also lead to failure in understanding ordinal numbers.

- Auditory-visual integration- necessary to remember names of symbols (numbers, signs, etc.). Memory deficits could aggravate the problem.

- Place value-confusion in this area can lead to difficulties in addition (involving borrowing and carrying over), division and multiplication.

- Computation skills – in understanding commutative properties of addition/ multiplication and concepts that subtraction is an inverse operation of addition and division in an inverse operation of multiplication.

- Problem solving- difficulties in solving word problems due to problems in language, lack of analysis, and reasoning.

- Spatial concepts- difficulty in making measurements of time, distance, etc.

Strategies for Intervention

- Identifying the problem areas in maths is the first step towards helping the child. Concretizing the concepts, use of multi sensory approach, repeated drill and revision exercises once understanding of the concept is ensured, will help in consolidation and retention. Gradually increasing the difficulty level of the concepts, using examples from real life and weaving stories around mathematical concepts can be attempted to get the child involved in learning.

- It should be kept in mind that each intervention strategy is a unique instructional design based on the kind of learning difficulty the child has and the nature of the mathematical concept itself. Hence, it implies lot of creativity and imagination on the part of the teacher handling the difficulty.

As an illustration, Strategies for Intervention to clarify some of the mathematical concepts are discussed below.

1. Teaching pre-concepts, mathematical operations

- Prepare a worksheet with missing math signs. Ask the students to fill them in.

- Promote understanding of the terms longer and shorter by drawing lines of various lengths the chalkboard and asking the students to make them longer or shorter.

- Use number line to develop vocabulary such as before, after, between, larger than, smaller than, and the same as. Permit students to refer to the number lines in answering questions (e.g., what number comes just before 7? What number comes just after 13? What number comes between 6 and 8?)

- Give students a set of cards numbered from 1 to 10. Instruct them to turn up one card and ask whether that number comes before or after a number that you choose at random. Also, use more or less and smaller than or larger than for this activity.

- Print operational sign on flash cards. Let the students practice with the cards every day. Add kinaesthetic clues by cutting the signs out of sandpaper and pasting them on the cards.

- Provide colour cues for operational signs to call attention to the signs. Also, draw circles or boxes around the signs to enable students to attend more closely to the signs

2. Teaching Fractions-

Not only children but many adults also have difficulty in understanding fractions. To understand fractions, we should be aware that:

- Fractions make sense only when viewed in relation to a whole number. They make no sense as independent entities.

- The understanding of the symbols of the fractions: denominator-the number of parts the whole is divided into; and the numerator – the number of parts of whole which are in consideration.

Materials and experiences should be provided to the children to master these basic facts.

- Fraction and equal sharing – give children a bag of marbles, sweets, etc., and ask them to share equally between 2,4,8 and 10 children and write the fractional equivalent.

- Fractions and shapes – draw and cut symmetrical shapes and ask children to fold into ¼ , ½ , 1/8, etc.

- Fractions/lengths – estimating or measuring length of a long strip, its ¼ , ½ , 1/8, etc. This activity could be done with capacity, weight, time, etc., for generalization.

- Charts could be drawn to illustrate the relationship of fractional parts to the whole.

- Gradually introduce assignments requiring to work with fraction without visual clues.

- Use the measurements in simple recipes to reinforce fractional components.

5.2c   EMOTIONAL AND BEHAVIOURAL DISORDERS

i)   Attention Deficit Disorder (ADD) & Attention Deficit Hyperactivity Disorder(ADHD)
ii)   Disruptive Behaviour Disorder

There is no one single definition of emotional and behavioural disorder as this category of exceptional children covers a range of difficulties from very mild to extremely serious ones. The definition by Bower (1969) is closely related to school situation. According to him, a psychological disorder is said to be present when the child emits behaviour that deviates from discretionary and

relative social norm in that it occurs with a frequency or intensity that authoritative adults in the child's environment judge, under the circumstances, to be either too high or too low.
The twp major groups here are:

i) Attention Deficit Disorder (ADD) & Attention Deficit Hyperactivity Disorder (ADHD)
ii) Disruptive Behaviour Disorder

ATTENTION DEFICIT HYPERACTIVITY DISORDER (ADHD)

ADHD is a neurologically based disorder, characterized by developmentally abnormal degrees of inattention, impulsivity, and hyperactivity, ADHD often interferes with the child's ability to function with success academically, behaviorally or socially. Occasionally misdiagnosed as "emotionally disturbed" or "undisciplined," these children create havoc at home and school. ADHD causes highly inconsistent performance and output. Children with ADHD live in distraction and chaos all the time-bombarded with stimuli in every direction and unable to screen it out. It can be compared to listening to a lecture in a marriage hall. The child needs tremendous effort to focus on a task.

Intervention Strategies

Minor changes in the classroom environment and teaching methodology can go a long way in helping a child to cope with ADHD. Small changes in how the teacher approaches the child or what she/he expects from the child can turn a losing year into a winning one for the child.

Intervention strategy for Inattention

Seating:

- In a quite area far away from doors/windows.

- Near the teacher (to improve listening) and preferably next to a role model

Intervention strategy for completion of Assignments:

- Allow extra time to complete assignments.

- Shorten the assignment time to coincide with time of attention; gradually lengthen the sessions.

- Give assignments one at a time to avoid overload.

- Cue students to stay on a task.

- Give clear, concise instructions.

- Written instructions along with oral instructions help, as children with ADHD have difficulty in recalling what they have heard.

- Include elements in which self-reminder can also help to improve listening skills, e.g., "mustn't talk when listening."

Intervention strategy for Impulsiveness

- Ignore minor, inappropriate behavior.

- Attend to positive behavior with praise. Social praise helps the child to develop good self-esteem and also increases the frequency of positive behavior.

- Set up behavior contracts and encourage self-monitoring of behavior.

Intervention strategy for Motor activity

- Allow the child to stand at time while working.

- Set goals for maintenance of proper posture and encourage self-monitoring. Cueing also helps.

- Provide opportunity for movement, i.e., running errands, distributing, and collecting books etc.

- Provide short breaks.

- Supervise during transition times

Organization/planning

- Send weekly/daily progress reports home. Seek parental help in facilitating organization skills.

- Supervise writing down homework.

- Encourage and reward neatness rather than penalize sloppiness.

- Help students set short-term goals.

- Ho not penalize for handwriting, if visual-motor difficulties are present.

SOCIALIZATION

Structure:

External order compensates for internal chaos. Establish routine especially at potential high-stress time like breaks, lunch times, games period and after-school hours. Visual and written instructions could be used as reminders.

Supervision:

During any activity, check periodically to make sure the child is progressing correctly. Deal with problems while they are still manageable. Rules should be placed in positive terms, i.e., instead of saying "Don't grab", say "Request if you want something". Be specific in direction. Instead of saying "Don't run around, "say "Please come back to you seat," etc.

Support

To ensure continued success, provide instructions on any changes needed next time and offer encouragement.
Children with ADHD possess a lot of desirable traits. A teacher should also focus on the positive traits and us them to facilitate the child to cope better. Some of these traits include the following:

- Creative
- Spontaneous
- Energetic
- Accepting and forgiving
- Inquisitive and imaginative
- Innovative
- Resourceful
- Gregarious
- Resilient

Understanding and respecting differences and responding to children, based on their learning styles, open up a new vista for the child, in fact for all children and not only for children with special needs. Every child has the potential and motivation to learn. The teacher should realize this fact and plan teaching and evaluation strategies to suit the needs of the child.

DISRUPTIVE BEHAVIOUR DISORDER

Disruptive behaviour disorders include four clusters of behaviour problems. They are:

- Conduct Disorder

- Personality Disorder
- Immaturity
- Socialized Delinquency

Behaviour disorders also can be described in terms of severity. Most behaviour disordered children have moderate problems that can be treated effectively in the regular classroom and a home. Severely disturbed children- often called psychotic, schizophrenic or autistic – require intensive programming, usually in a more restrictive setting.

Characteristics:

- Many of them are 'slow learners' or 'mildly retarded' with a score of about 90 on an IQ test. Autistics are most of the time untestable.

- Aggression and acting out often with little or no provocation are the most common characteristic. Such noxious behaviour includes disapproval of others, negativism, non-compliance, yelling, teasing, attacking self or others, whining etc.

- Withdrawn behaviour and apparent lack of social skills displaying lack of sensory response, self stimulation, echolalic or psychotic speech, self-mutilating behaviour, tantrums and behaviour deficiencies.

Causes of Disruptive Behaviour Disorder:

- Possible biological causes more evident in severely and profoundly disturbed children. Many autistic children show neuro-chemical imbalance and genetics often seem to play a role in childhood schizophrenia.

- Psychological factors like parent-child relationship and interaction, undesirable school experiences, inappropriate expectations, cruelty from others, unfair treatment may result in disruptive behavioural disorders.

Identification and Assessment:

There no reliable method for sure identification of emotional disturbance. Psychological tests and interviews have limited practical value.

- While aggressive students stand out, withdrawn may go unnoticed.

- Screening tests for identifying disturbed students are being developed.

- Direct and continuous observation and measurement of specific problem behaviours, within the class room, is becoming more and more popular. It is an assessment technique that indicated directly what intervention is needed.

Educational Strategies for Disruptive Behaviour Disorder:

- Psychodynamic Approach- This approach relies on psycho therapy and creative projects for the child rather than academic remediation. Emotional disturbance is thought of as a psychopathological process.

- Biological Approach- It suggests that the deviant behaviour is a physical disorder with genetic or medical causes implying treatment of emotional disturbance

- Behavioural approach- This approach assumes that the child has learned disordered behaviour and has not learnt appropriate responses. To treat the problem, the teacher uses behaviour modification techniques.

- Ecological Approach- This approach suggest that the interaction of the child with the people around him and with social institutions. Treatment involves teaching the child to function within the family, school, neighbourhood, and larger community.

- Humanistic Approach- This approach suggest that 'the disturbed child is out of touch with his own feelings and cannot find self fulfilment in traditional educational setting. Treatment takes place in an open, personalized setting, where the teacher serves as resource or catalyst.

- Self management technique where the teacher plays very significant role by teaching the child self- control and or self-management skills couples with social skills is a unique approach to deal with such disturbed children. It implies a combination of professional competencies and personal characteristics to be an effective teacher for these students.

5.2d INCLUSIVE EDUCATION

i)   Concept of Mainstreaming, Integration and Inclusion
ii) Need and Importance of Inclusive Education in the Indian Context

The traditional approaches to Special education of the exceptional children had many disadvantages like depletion of resources as a result of duplication of efforts, labelling and the minority status attached to this group of students damaging their self concept further and more importantly, leading to 'social isolation', there by defeating the very objective of special education.

MAINSREAMING

Mainstreaming appeared as an alternative to traditional approaches to overcome the above mentioned disadvantages. Mainstreaming is an educational approach designed to end the segregation of exceptional children by keeping these children in the mainstream of educational system and providing them with broad range of educational alternatives. According to Stephens and Blackhurt, "Mainstreaming is the education of the mildly handicapped children in the regular class room. It is based on the philosophy equal opportunity that is implemented through individual planning to promote appropriate learning, achievement and social normalization."

INTEGRATION
The very term 'integration signifies the process of interaction of disabled children and normal children in the same educational setting. Integrated education is an educational programme in which exceptional children attend classes with normal children on either full time or part time basis. Such a combination may be taken as social integration or academic integration. It is a broader concept which includes 'mainstreaming'. The difference between the two terms is quite subtle. In mainstreaming, the normal school is letting the exceptional child be part of it. In integration, the normal school is the rightful place for the exceptional child to be in, learn and grow. But still the onus of adapting to the school environment lies largely with the exceptional child.

INCLUSIVE EDUCATION
Inclusive education is concerned with removing all barriers to learning, and with participation of all learners vulnerable to exclusion and marginalization. It is a strategic approach designed to facilitate learning success for all children. It addresses the common goals of decreasing and overcoming all exclusion from the human right to education, at least at the elementary level, and enhancing access, participation and learning, success in quality basic education for all. (Education for all 2000 Bulletin, UNESCO, No.32, 1998).

The main elements of inclusive education are:

- A human rights issue ("Education for ALL children, not almost all).

- Education of All in a School for All (disabled and non-disabled children learning together in regular schools: learning to know, learning to do, learning to be and learning to live together).

- Togetherness (enabling all to participate together in society from the beginning, contributing to social harmony and stimulating the building of relationships among individuals, groups and nations).

- Breaking barriers (familiarity and tolerance reduce fear, prejudices and rejection).

Inclusion can be realised by:

1. Removing physical barriers posed by stairs, doorways, toilets, water faucets, and other architectural aspects imperative to accessing facilities in the school.

2. Removing the barriers of the teaching system, by providing facilities for accessing information related to the curriculum, by the use of modern technology like computers using specialized software and by providing awareness, sensitivity and solutions for teachers.

3. Removing the barriers of the examination system by providing means of free and fair evaluation of the students' knowledge irrespective of his/her sensory/physical status.

4. Removing the barriers of attitude developed due to lack of awareness.

Thus, it is evident that inclusion encompasses the two concepts discussed earlier, namely, 'mainstreaming' and 'integration' and goes a step further by not only opening Its doors for ALL, but also with a promise to reinvent itself to accommodate them all with their special needs and requirements.

NEED AND IMPORTANCE OF INCLUSIVE EDUCATION IN THE INDIAN CONTEXT

India is a country with abundant human capital. This important human resource should be tended properly through education and training to engage it successfully in the nation

building activity. But unfortunately more than half of our youths are out of the school system due to various reasons. This is in violation to Human Rights issue which stresses upon upholding human dignity. The main goal of Right to Education Act is make education available to each child irrespective of his location, class, cast, religion, status and standing mental and physical limitations and other disadvantages the child may be suffering from. Investment in education to include all is the set goal before the country and as such, there are number of initiatives taken in pursuance of this objective. They are as following:

National Initiatives

1. **The Indian Education Commission (1964-66):** The Indian Education Commission was the first statutory body to suggest that the education of handicapped children has to be organized not merely on humanitarian ground, but also on grounds of utility. The Commission observed that although the Indian Constitution had issued specific directives about compulsory education for all, including children with disabilities, very little had been done in this regard. The Commission also emphasized that the education of children with disabilities should be "an inseparable part of the general education system". At the time when the Commission made its recommendations there were less than 250 special schools in India. The commission felt that services for children with disabilities were extremely inadequate and recommended the adoption of a dual approach, namely, the provision of special as well as integrated education to improve the situation. The commission set the following targets to be achieved by 1986: education for about 15 percent of the blind, the deaf and orthopedically handicapped and 5 percent of the mentally retarded. The Commission also specifically emphasized the importance of integrated education in meeting this target as it is cost-effective and useful in developing mutual understanding between children with and without disabilities.

2. **Integrated education for Disabled Children (IEDC, 1974):** In 1974, the Ministry of Social Justice and Empowerment, Government of India, initiated the IEDC program to promote the integration of students with mild to moderate disabilities into regular schools. Children were to be provided financial support for books, stationery, school uniforms, transport, special equipment and aides. The state governments were provided 50 percent financial assistance to implement this program in regular schools. However, the program met with little success. A

criticism of this program in the state of Maharashtra reported that the (a) non-availability of trained and experienced teachers; (b) lack of orientation among schools staff on the problems educational materials, were the major contributory factors for its failure. A lack of coordination amount various department to implement the scheme was also considered a major contributor for its failure. By 1979-80, only 1,881 children from 81 schools all over the country had benefited from ths program. Due to the failure of the IEDC scheme, it was revised in 1992. Until 1990, the scheme was implemented in 14 states. These were Andaman and Nicobar, Bihar, Gujarat, Haryana, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Nagaland, Orissa, Rajasthan, Tamil Nadu and Uttar Prades. Kerala is the only state that has shown remarkable progress in implementing this scheme. In Kerala, the scheme has been implemented in 4,487 schools and 12,961 children have been served under this scheme.

3. **National Policy on Education (NPE, 1986-92):** In 1968, the Indian Government formulated the National Policy on Education for all government schools and articulated a need to integrate students with disabilities. Again in 1986, the National Policy on Education devoted a specific section to the education of students with disabilities. It emphasized that whenever feasible, the education of children with motor handicaps and other mild disabilities should be provided in regular schools. The National Policy also stressed that those children whose needs could not be met in regular schools were to be enrolled in special schools. Children who were already in special school s could be integrated into regular schools as soon as they acquired reasonable levels of daily living, communication and basic academic skill. It also emphasized the need to restructure primary teacher training programs to prepare teacher to deal with the special difficulties of children with disabilities.

4. **Project Integrated Education for the Disabled (PIED, 1987):** In 1987, the Ministry of Human Resource Development (MHRD) in association with UNICEF and the National Council for Educational Research and Training (NCERT) undertook "Project Integrated Education for the Disabled" (PIED). The aim of the project was to strengthen the implementation of the IEDC scheme.

5. **District Primary Education Program (DPEP, 1994):** A centrally sponsored scheme, the District Primary Education Program aims to reduce the overall dropout rates of all students enrolled in primary classes, to raise their achievement levels and

to provide primary education for all children, including children with disabilities. This is probably the largest program of the central government in terms of funding.

6. **The Persons with Disabilities Act (PWD Act, 1995):** A close examination of the national initiatives discussed so far indicates that although the Indian Government had made several attempts to implement integrated education programs, it lacked a firm commitment to promote integration. This was largely because the Indian Government has considered provision for children with disabilities to be a welfare issue rather than an educational imperative. The PWD Act proposed the provision of improved educational services, medical care, vocation training, employment, and social security for all persons with disabilities. The Act further stated that whenever possible, students with disabilities should be educated in regular school settings.

Challenges ahead for Inclusion

The above mentioned policy statements made under different commissions highlight the importance government attaches to 'education' and then 'education for all'.

The current practice of focusing solely on the 3Rs approach has led to education being viewed not as a process, but as a product- the tangible reward consisting of a report, marks sheet, or degree at the end. When children fail to learn in school it is only too tempting to perceive something wrong within them. Educational activity is one of the many social entities that cannot be examined in isolation. Schooling interconnects with a more extensive and complex reality, reflecting continual changes and transformations with unpredictable outcomes. The character of school activity is not only a mirror of aspects of contemporary modes of production, but also the dominant economic priorities and political activities in society. Many have voiced fears that within this climate it is unlikely that schools will give priority to inclusive values and principles.

How can the Schools Respond?

Recognition and respect of all children have to be at the forefront while planning schools if inequalities are to be tackled. Maria Montessori, an educator far ahead of her time, in one of her lectures in India had said: "the world of education is like an island where people, cut-off from the world , are prepared for life by exclusion from it". For inclusion to move from mere rhetoric, the disadvantaged and marginalized groups of students must not only

have access to opportunities and share the same space, but also like their peers, must share the common wealth of the school and its culture. Inclusion means inviting those ho have been historically been locked out to "come in". Schools have to change from mere "teaching shops" to inculcating a broader change in their social climate and the way "differences" and "difficulty" is conceptualized in order to foster a "just society". Responses to differences vary amongst communities and indeed within communities come. So, what is equality? "Equality" "sameness" and "difference" do not lie on a continuum, but are the three corners of a triangle. The notion of "equality in difference" is then to treat people as equals but not necessarily the same way. Therefore, it is imperative that schools must recognize a continuum of diverse needs amongst all children and utilize all its available resources to make appropriate provisions to meet their needs. Inclusion does not necessitate denying differences amongst people, rather, every civilized nation must strive to reduce inequalities which arise from its own structure. Ideal inclusion exists when schools work towards reducing inequalities, which arise from birth or circumstances, rather than exaggerate them. This notion of ideal inclusion therefore does not set boundaries around particular kinds of supposed disabilities. Rather, it provides a framework within which all children, regardless of ability, gender, language, ethnic or cultural origin are accepted equally at school. Ideal inclusion thus proposes a far broader yet more distinct a meaning, moving from what is called an "obsession with individual learning difficulties," to an agenda of finding solutions.

Ideal Inclusion: Building Bridges

This emphasis of meeting the challenge of the ideal school inclusion will result in making educational and social sense to all those students who drop out of schools, repeat classes, live on the streets, come from disadvantaged homes or remote tribal areas, are members of ethnic linguistic minorities, child labourers or face gender discrimination. This involves a serious commitment to the task of identifying, challenging, and contributing to the removal of education systems as they are designed today-based on homogenous delivery rather than diversity. Removing exclusion in and from education is part of the process of reducing exclusion in society. Constantly challenging inequalities of power and recognizing and removing the oppression faced by a large number of excluded children can only realize this. Mahatma Gandhi had advised many decades ago, that education must become co-existent with life. Education, as it is conceived today, is estranged from social life. Interestingly, the imperative to address the issue of inclusion has

been spearheaded by the need to address the value of those students, who were believed to have the least worth for many centuries.

5.3   LET US SUM UP

To quote Charles Darwin:" it is not the strongest of species that survive, not the most intelligent, but the one most responsive to change". Education must therefore reinvent the reconstruct itself so that to be "built to last" is actually "built to change." The goal of developing schools as caring communities for all students may seem a distant dream; but then are not the fantasies of yesterday, the realization of today!

5.3   UNIT END EXERCISE:

1. Whom do we consider as exceptional children? How would you classify them?

2. Describe different groups of cognitively exceptional children. Explain the strategies before the class room teacher to deal with them

3. Explain the characteristics of the physically exceptional children. Discuss the problems faced by this student group

4. "Socio-culturally disadvantaged children need special attention and educational input." Discuss.

5. What is a learning disability? How do you deal with a dyslexic child?

6. What do you understand by the terms 'dysgraphia' and 'dyscalculia'? Describe any two activities that you can plan for helping out these students

7. Discuss in detail ADHD and remedial measure the teacher can plan to deal with these students

8. Differentiate between 'mainstreaming; 'Integration' and 'Inclusion'.

9. Elaborate the need for Inclusive Education in Indian context.

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MODULE- III
MANAGING CLASSROOM BEHAVIOUR

6

THEORIES OF MOTIVATION

Unit Structure

6.0   Objectives
6.1   Introduction
6.2   Theories of Motivation
6.3   Let us Sum up
6.4   Unit end Exercises

6.0   OBJECTIVES

After reading this unit you will be able to

- Define Motivation
- Explain the three schools of Psychology
- Explain the Motivational Implications of the schools of Psychology

6.1   INTRODUCTION

The term motivation can be traced to the Latin word "movere" which means "to move."

Definition:

Motivation is a process that starts with a physiological or psychological **deficiency** or need that activates behaviour or a **drive** that is aimed at a **goal** or **incentive**.

Motivation has been recognized as an important determiner of behaviour. Motives may range from basic wants to complicated long-term motives. Many but not all motives have a cyclical nature - they are aroused, they trigger behaviour which leads to a goal and finally they cease after the goal is reached.

Motives may be unlearned or *learned*, *intrinsic* or *extrinsic.*
Unlearned motives:

a) Primary, physiological needs - hunger, thirst, sleep, sex.

b) General, not physiological needs: curiosity, manipulation, activity.

Learned motives:

Secondary motives: power, achievement, affiliation, status.

Intrinsic motives:

Motivation is intrinsic when an individual recognizes an activity as self-rewarding. He does it because he derives satisfaction from the activity. The motives come directly from within the person and no external pressures are necessary e.g. when a child perceives a school subject such as reading to be a source of pleasure he is motivated intrinsically to learn to read.

Extrinsic motives:

Extrinsic motivation is useful when an individual does not perceive the inherent value in an activity. When an individual directs efforts towards a goal for the sake of a reward, he is motivated extrinsically. The individual pursues the activity not for its own sake but for the sake of an external reward.

6.2   THEORIES OF MOTIVATION

The Theories of Motivation in this module each represent a particular school in Psychology. Let us understand how these three schools differ from each other,

No	School / Approach of Psychology	Theory	Psychologist
1.	Cognitive	Attribution Theory	B. Weiner
2.	Behaviouristic	a. Drive Reduction Theory	C. L. Hull
		b. Operant Conditioning	B. F. Skinner
3.	Humanistic	a. Theory of the Self	C. Rogers
		b. Hierarchy of Needs Theory	A. Maslow
		c. Theory X Theory Y	D. McGregor

Cognitive Psychology:

The Cognitive Approach or School of Psychology is a discipline within psychology that investigates the internal mental processes of thought such as visual processing, memory, problem solving, and language. The school of thought arising from this approach is known as cognitive which studies how people mentally represent information processing. It had its foundation in the work of Wilhelm Wundt, Gestalt Psychology of Max Wertheimer, Wolfgang Kohler, Karl Koffka and in the work of Jean Piaget. Ulric Neisser coined the term " cognitive psychology" in his book "Cognitive Psychology" published in 1967. Major research areas in cognitive psychology are Perception, Memory, Knowledge Representation, Numerical Cognition, Language, Thinking (Concept Formation, Decision Making, Logic, Problem Solving).

Famous Cognitive Psychologists are:

Albert Bandura, Hermann Ebbinghaus, Jerome Bruner, James McClelland, Jean Piaget, Lev Vygotsky.

Behaviouristic Psychology:

Behaviourism which is also called the Learning Perspective (where any physical action is a behaviour) is a philosophy of psychology based on the proposition that all things that organisms do, including acting, thinking and feeling should be regarded as behaviourism. It maintains that behaviour can be described scientifically without recourse either to internal physiological events or to hypothetical constructs such as the mind. This school is mainly influenced by Ivan Pavlov (Classical Conditioning), Edward Lee Thorndike and John B. Watson (Experimental Methods), B.F.Skinner (Operant Conditioning).

Famous Behaviourists are :

Albert Bandura, Edwin Ray Guthrie, Clark L. Hull, Ivan Pavlov, B.F.Skinner, Edward Lee Thorndike and John B. Watson.

Humanistic Psychology:

The Humanistic School of Psychology emerged in the 1950s in reaction to both behaviourism and psychoanalysis. It is explicitly concerned with the human dimension of psychology and the human context for the development of psychological theory. It thus focuses on uniquely human issues such as the self, self- actualization, health,

nature, being and individuality. Humanistic Psychology stresses a phenomenological view of human experience and includes several approaches to counselling and therapy for example, Abraham Maslow's developmental theory emphasizing a hierarchy of needs and motivation, R.May's existential psychology acknowledging human choice and the tragic aspects of human existence and Carl Rogers' client-centered therapy which focuses on the client's capacity for self-direction and understanding of his/her own development. Humanistic psychology thus is the science of human experience and focuses on the actual lived experiences of persons. It is interesting to note that while humanistic psychologists have mostly worked upon self-actualization and individual fulfillment, they have also focused upon social issues such as the promotion of international peace and understanding, the reduction of violence and the promotion of social welfare and justice for all.

Famous Humanists are: Abraham Maslow, Rollo May, Carl Rogers, Gordon Allport.

A. Cognitive School / Approach of Psychology

a) Attribution Theory:

Attribution theory is a social psychology theory developed by **Fritz Heider, Harold Kelley, Edward E. Jones and Lee Ross.** This theory explores how individuals "attribute" causes to events and behaviour.

Attribution Theory is one of the most influential contemporary theories which deal with academic motivation. It focuses upon behaviour modification while emphasizing the idea that learners are highly motivated when they are able to feel good about themselves. The learners' current perception about self strongly influences the ways in which they interpret the success or failure of their current efforts and hence their future tendency to behave in the same manner.

Elements of Attribution Theory: developed by **Bernard Weiner**, 1980, 1992

1. **Locus:** The location of the cause may be either internal (dispositional) or external (situational) and is closely related to the individual's feelings of self-esteem. When success or failure is attributed to internal factors, success leads to pride and increased motivation, whereas failure diminishes self-esteem.

2. **Stability:** This indicates whether the cause is likely to stay the same in the near future or may change. It thus is closely related to the individual's expectations about the future.

When a learner attributes his failure to stable factors such as the difficulty of the subject he will expect to fail in that subject in the future too.

3. **Controllability:** indicates whether the individual can control the cause or not. It thus is related to feelings such as anger, pity, gratitude or shame. When an individual feels responsible for his failure he may feel guilt, if he feels responsible for his success he may feel pride. Also failing at a task one cannot control may lead to shame or anger.

According to the attribution theory the basis on which people tend to explain their success or failure can be characterized into three different sets:

1. The cause of success or failure may be either internal or external. That is the learner believes that his success or failure is dependent upon factors within himself or on factors that originate in the environment.

2. The cause of success or failure may be either stable or unstable. If the learner believes that the cause is stable then the outcome is expected to be the same on repetition of the same behaviour. However the cause is believed to be unstable then the outcome is likely to differ on another occasion.

3. The cause of success or failure may be either controllable or uncontrollable. When a learner believes that he can alter a factor if he wishes to it's a controllable factor. When the learner believes that the factor is difficult to alter it is an uncontrollable factor.

It is important to remember that the attribution theory assumes that learners interpret their environment in a manner which allows them to maintain a positive self - image. That is when learners succeed at an academic task they attribute it to their own efforts or abilities. However on failing they mostly attribute their failure to factors over which they have no control such as poor teaching or bad luck.

The basic principle on which the attribution theory is based that a learner's perceptions or attributions for either success or failure determines the amount of effort the learner expends on an activity in the future.

The four factors related to the attribution theory which influence motivation in education are:

1. **Ability:** a relatively internal and stable factor over which the learner does not exercise much direct control.

2. **Task Difficulty:** an external and stable factor that is largely beyond the learner's control.

3. **Effort:** an internal and unstable factor over which the learner can exercise a great deal of control.

4. **Luck:** an external and unstable factor over which the learner exercises very little or no control.

The following are some additional concepts related to attribution theory:

Learning goals are set by individuals who seek to increase their competence. Such individuals who emphasize learning goals seek challenges for they believe that challenges lead to greater competence. They respond to failure by increasing their effort. Therefore it is better to encourage learners to set and pursue learning goals rather than performance goals.

Performance goals are set by those individuals who seek to gain favorable judgments or in order to avoid unfavorable judgments in the eyes of others. Individuals who emphasize performance goals are likely to avoid challenges unless they are certain that they will succeed. They tend to respond to failure with feelings of learned helplessness or those associated with self-handicapping. Though it is undesirable to emphasize performance goals, schools, parents and society unfortunately often overemphasize them to the detriment of learners.

Learned helplessness refers to the expectation based on previous experience that one's actions cannot possibly lead to success. Performance goals as opposed to learning goals lead to ability attributions rather than effort attributions and result in feelings of learned helplessness. Learners must therefore be encouraged to focus primarily on learning goals while keeping performance goals in perspective by enjoying recognition without letting it become the only criteria. Teachers can achieve this by focusing on learning rather than on normative comparisons when reinforcing students, by modelling the use of learning goals or by using scaffolding strategies to teach effective goal - setting and self- monitoring.

Self-handicapping occurs when learners create impediments that make good performance less likely, for e.g. using drugs or alcohol, refusing to practice, reducing effort. These impediments actually serve to protect the person's sense of self- competence. When the self-handicapping individual fails, he explains his failure as a result of the impediment. At the same time if the individual does well. his success is exalted because he has overcome an impediment. Since the impediments interfere with learning, they serve to reduce motivation and performance. Self-handicapping becomes more prominent during adolescence. Self-handicapping occurs most often among individuals with a deep concern for their competence image. This problem can be best minimized by focusing on effort attributions and by helping learners to develop secure feelings of self-efficacy.

It is interesting to note that self-handicapping may be supported by a learner's culture or sub-culture or even by the prevalent atmosphere in the school. For example, adolescents may handicap themselves by reducing their effort because they feel that studying hard is viewed as an undesirable form of competition with their peers.

Similarly African-American learners may reduce their effort in a predominantly white school because they resist conforming to the norms of an oppositional culture.

Expectancy-valence models state that a person's motivation to achieve a goal depends on a combination of the value of that goal that is its valence and the learner's estimation of the likelihood of success. However the combination of expectancy and valence is complex. For example, under certain circumstances, a high probability of success can actually reduce motivation. An individual expends more effort when there is a moderate (rather than a high or low) probability of success.

Self-worth theory focuses on the notion that individuals are largely motivated to do what it takes to enhance their reputation in various areas. Many a times learners engage in counterproductive activities such as setting goals that are either too high or too low, reducing effort and procrastinating in the often illusory hope that they will feel better about themselves if they refrain from putting forth their best effort rather than risking failure.

Educational Implications to help learners persist at academic tasks:

1. Learners must be encouraged to believe sincerely that they are competent and that occasional failures or imperfections are the result of other factors like bad luck or lack of sufficient effort which may not be present on future occasions.

2. Learners must be made aware that it is not always beneficial to attribute their success to ability entirely. Doing so may result in the feeling that putting in additional effort is unnecessary. The ideal attribution for success is " I succeeded because I am a competent person and I worked hard."

3. When a learner fails he is most likely to persist and eventually succeed if he attributes his failure to a lack of appropriate effort. It is therefore important for teachers to develop the conviction in learners who perceive themselves as unsuccessful that they can succeed if they put in their best.

4. It is extremely hazardous to a learner's motivational health if the learner fails repeatedly in spite of making serious efforts to succeed at academic tasks. When this happens frequently the learner either stops believing that he is competent or stops attributing his failure to a lack of effort and simply reduces persistence at academic tasks. Thus the tasks must be arranged such that learners who work hard are able to perceive themselves as successful inspite of differences in ability.

5. Teachers must define effort correctly and emphasize the importance for learners to internalize an accurate concept of effort. In practical terms effort is defined as devoting effective academic learning time to task. However just trying harder or spending more time doing ineffective activities does not constitute effort.

It is desirable for learners to know the difference between "working hard" and achieving their actual potential. Thus teachers must show learners various ways of improving their efforts and to help them channel their energies in a fruitful manner. Doing so enables the learners to have an accurate perception of their "effort" and that increased effort is more likely to pay off.

6. Excessively competitive grading and evaluation systems many a time impair learning amongst learners. Competition encourages learners to persist only to an extent wherein they believe that additional effort will help them to succeed in the competitive

environment. What must be remembered is that success in competition is completely beyond the learner's control for another more competent and equally energetic competitor is as likely to win.

Highly competitive grading systems foster comparisons with others and give the impression that only a few students meet the high standards. This promotes performance goals and learned helplessness thereby reducing much motivation in many learners.

7. It is useful to evaluate learners partly on the basis of application. However this does not mean that the weakest learners be given the highest grades simply because they may spend more time in mastering the subject matter. Ideally course assignments should be planned in such a manner that diligent work actually leads to academic success; the learner must be able to see this connection based on the teacher's evaluation.

8. It is best for learners to believe that it is their own behaviour rather than external circumstances that leads to either success or failure. Learners must realize the importance of internal locus of control. Learners must also have a realistic understanding of the environment around them and refrain from overestimating the degree to which their own behaviour leads to success or failure.

9. Sometimes learners are convinced that they lack ability and tend to repudiate success by attributing it to luck. It is difficult to alter this conviction for trying to do so is akin to trying to alter the learner's self-concept and therefore can't be altered in a short while. A teacher may in such conditions seek to enhance the learner's self-concept and focus on effort as the factor critical to success. While the teacher's long-range goal is to enhance the learner's self-concept the immediate goal is to promote motivation with regard the subject matter at hand.

10. When learners reject the value of effort it is necessary to change their perception. Also when learners attribute their success to luck it is best to refrain from arguing with their attributions and instead praise or reinforce them for the effective use of academic learning time.

Conclusion:

Attribution theory thus explains the difference in motivation between high and low achievers. While high achievers approach rather than avoid tasks related to success because they believe that success is due to high ability and effort which they are confident of. Failure is viewed as caused by bad luck or a poor exam and is

therefore not their fault. Thus while failure doesn't affect their self-esteem, success builds pride and confidence. On the other hand low achievers avoid success-related tasks because they tend to either doubt their ability and or assume that success is related to "luck" or to "who you know" or to other factors beyond their control. Thus even when successful, it isn't as rewarding to the low achiever because he doesn't feel responsible, it neither increases his pride nor his confidence.

Teachers must define effort clearly and correctly when helping learners make effort attributions for their failures. Teachers must actually promote strategic effort attributions, that is, learners must believe that working hard in a **particular way** is what leads to success. By consistently helping learners to make strategic effort attributions, teachers can encourage them to view failures as problem solving situations in which the search for an improved strategy becomes the main focus of attention.

B. Behaviouristic School / Approach of Psychology

a) Drive Reduction Theory: Clark Hull

Hull's drive reduction theory sought to explain the laws of motivation by studying the behaviour of organisms in a laboratory setting. Hull based his theory on the concept of **homeostasis** which is prevalent in biology. Homeostasis refers to the active regulation of critical biological variables or maintaining a balance, for example, the kidney regulates the salt and water balance in the body while the pancreas regulates blood sugar. There are many homeostatic systems in the body: levels of blood pressure, salt, glucose, water, carbon dioxide are maintained within normal ranges in order to maintain the health of the organism. Hull believed that the organism regulated itself and kept it self healthy and alive through its behaviour, therefore he borrowed the concept of homeostasis processes from biology.

Hull conceived of all motivation as resulting from biological imbalances or needs. The organism is thrown into movement / or forced to act (motivated) when it needs something which is not present at its current location. A need, in Hull's system therefore was a biological requirement of the organism. For example, hunger was the need for more energy while thirst was the need for more water. Thus, motivation according to Hull was aimed at making up or erasing a deficiency or lack of something in the organism.

Hull used the word **drive** to describe the state of behavioural arousal resulting from a biological need. In Hull's system, the drive

was the energy that powered behaviour. However the drive was not pleasant because it was an uncomfortable state resulting from a biological need, therefore the organism tried to eliminate drive.

While experimenting with rats in a maze Hull discovered that the rat searched for food in order to reduce the hunger drive. Hull believed that the rat repeated any behaviour that reduced the drive if the same need recurred. Therefore Hull's theory was called a drive-reduction theory of motivation.

Hull used specific formulas to predict the likelihood of specific behaviours. He specified the probability that a particular stimulus would lead to a particular response (the "Excitation Potential") using a formula.

Excitation Potential = S H R [D x K x J x V] where

S H R was the number of reinforced training trials

D was the amount of biological deprivation or drive

K was the size or magnitude of the goal

J was the delay before the organism was allowed to pursue the goal

V was the intensity of the stimulus that set off the behaviour.

Hull postulated that:

1. Organisms possess a hierarchy of needs which are aroused under conditions of stimulation and drive.

2. Habit strength increases with activities that are associated with primary or secondary reinforcement.

3. Habit strength aroused by a stimulus other than the one originally conditioned depends upon the closeness of the second stimulus in terms of discrimination thresholds.

4. Stimuli associated with the cessation of a response become conditioned inhibitors.

5. The more the effective reaction potential exceeds the reaction threshold the shorter the latency of response.

Hull thus proposed many types of variables that accounted for generalization, motivation and variability (oscillation) in learning.

Conclusion:

Each variable was given a precise operational definition in order to aid research and replication. Hull hoped to make psychology as scientific and precise in its predictions as physics or chemistry. However many predictions based on Hull's equations did not come true and after much debate researchers agreed that there could not be such a simple system for predicting animal behaviour. Thus Hull's theory was abandoned thirty years after he had initially proposed it. However many motivational theories of the 1950s and 1960s were reactions to the then dominant Hullian theories.

b) Operant Conditioning: B.F.Skinner

Operant Conditioning may be defined as any learning which is based on response contingent reinforcement and does not involve choice among experimentally defined alternatives. The term "operant" emphasizes the fact that behaviour operates upon the environment to generate its own consequences.

An operant is a response which is emitted by the subject without any particular forcing stimulus, rather than elicited by a reinforcing stimulus (UCS) as in classical conditioning.

The Operant Experiment:

To study operant conditioning Skinner developed the Skinner box. The box was dark and soundproof. A brass lever in the compartment delivered a food pellet when pressed. A rat was placed within the box. Arrangements were made to record the movements of the rat electronically.

When the rat was placed in the box it made random movements when hungry. Skinner **shaped** or moulded the behaviour of the organism by systematically reinforcing closer approximations to the desired behaviour, for example, instead of waiting for the rat to press the lever; Skinner reinforced some bit of the rat's behaviour that formed the **chain**, the terminal link being pressing the lever. The rat was reinforced at first for simply turning in the direction of the lever. When the rat made a definite movement towards the lever it was reinforced once again. The rat continued to be reinforced for all the movements it made to come closer to the lever and ultimately press the lever and release the pellet of food.

Based on the above experiment we can highlight several **operations in the process of Operant Conditioning,** namely:

1. Shaping: Shaping is the most important mechanism used in operant conditioning. It refers to the careful use of **selective reinforcement** to bring about certain desirable changes in the behaviour of the organism. The principles involved in shaping behaviour are:

(a) Generalization

(b) Habit formation and chaining

2. Extinction: Extinction consists of simply holding back the reinforcer when the appropriate response occurs. When done repeatedly the lever pressing behaviour of the rat ceased and was extinguished.

3. Spontaneous Recovery: Spontaneous Recovery refers to the fact that if an organism is removed from the situation for a while and is later presented with the same stimulus again, its performance will be better than its performance at the end of the preceding extinction.

4. Concept of Reinforcement: Any environmental event that is programmed as a consequence of a response that can increase the rate of responding is called a reinforcer.

Operant Conditioning does not need elaborate approaches. It goes on around us all the time , all that is necessary is that reinforcement be made contingent upon the making of a particular response.

Types of Reinforcers:

1. **Positive Reinforcer:** A positive reinforcer strengthens or maintains the response. It is any stimulus which an individual will work for to obtain food, money, approval and recognition, others agreeing with our ideas, feeling of self-worth and importance, accomplishment of different tasks.

2. **Negative Reinforcer:** A negative reinforcer strengthens the avoidance response. It is that in which the organism does something to avoid a particular reaction for example, social disapproval, condemnation etc.

3. **Punishers:** A punisher or an aversive stimulus means a stimulus that the organism finds noxious or unpleasant. It follows a response and serves to suppress it for example corporal punishment in school. The removal or absence of a particular stimulus (usually aversive) strengthens or maintains the response.

Educational Implications:

1. For a learner, behaviour in school is dominated by aversive stimulation. Teachers must try to convert these into positive reinforcers.

2. Programmed learning which is a self-learning, learner-centred approach is a step by step approach to learning which has been developed on the basis of Skinner's operant conditioning.

3. Teachers should focus upon shaping learners' behaviour by narrowing the gap between behaviour and reinforcement.

4. It is very important to have clearly defined objectives in measurable terms because it helps to reach terminal behaviour by shaping.

5. Almost any response can be made more likely to occur if followed by appropriate reinforcement.

6. The behaviour of animals and humans can be "shaped" and moulded by an appropriate arrangement of responses and reinforcers.

Conclusion:

Operant conditioning is distinct from classical conditioning. The key feature in this learning situation is that some action/behaviour of the learner is instrumental in producing reinforcement / a reward when it operates upon the environment. Psychologists refer to this behaviour as a response. A response is strengthened and more likely to occur in the future when it gives rise to reinforcement. We expect people to respect responses and behaviour / actions that "pay off".

Reinforcement is a key term for understanding Operant conditioning. A reinforcer in operant conditioning is any event which when produced by a response makes that response more likely to occur in the future. Reinforcers correspond roughly to rewards, for example food for hungry animals, praise and appreciation for a child, relief from pain.

In Operant conditioning the reinforcing event is said to be contingent upon the occurrence of a certain response. When a response "operates" on the environment in the appropriate manner a reinforcer / strengthener is forthcoming. Responses leading to

reinforcers are thus strengthened and more likely to occur in the future. The likelihood of occurrence of responses which do not lead to reinforcement either remains the same or decreases.

The **major principle** of Operant conditioning therefore is that **if reinforcement is contingent upon a certain response that response will become more likely to occur.**

C. Humanistic School / Approach of Psychology

a) Theory of the Self: Carl Rogers

Carl Rogers' theory of the self is considered to be humanistic and phenomenological.

[phenomenological/ phenomenal - a study of phenomena: in philosophy the science/ study of phenomena, things as they are perceived as opposed to the study of being, the nature of things as they are; philosophical investigation of experience: the philosophical investigation and description of conscious experience in all its varieties without reference to the question of whether what is experienced is objectively real.]

Rogers' theory is based directly on the "phenomenal field" personality theory of Combs and Snygg (1949).

Rogers' proposed his theory on the basis of the following factors:

1. All individuals exist in a continually changing world of experience (phenomenal field) of which they are the centre.

2. The individual reacts to the field as it is experienced and perceived. This perceptual field is "reality" for the individual.

3. The individual reacts as an organized whole to this phenomenal field.

4. A portion of the total perceptual field gradually becomes differentiated as the self.

5. As a result of interaction with the environment, and particularly as a result of evaluational interaction with others , the structure of the self is formed - an organized, fluid but consistent conceptual pattern of perceptions of characteristics and relationships of the "I" or the "me", together with values attached to these concepts.

6. The individual has one basic tendency and striving - to actualize, maintain and enhance the experiencing individual.

7. The best vantage point for understanding behaviour is from the internal frame of reference of the individual.

8. Behaviour is basically the goal directed attempt of the individual to satisfy its needs as experienced in the field as perceived.

9. Emotion accompanies and in general facilitates such goal directed behaviour, the kind of emotion being related to the perceived significance of the behaviour for the maintenance and enhancement of the individual.

10. Values experienced directly by the individual, and in some instances values interjected from others but perceived in a distorted fashion as if they had been experienced directly.

11. As experiences occur in the life of the individual, they are either
    (a) symbolized, perceived and organized into some relation to the self,
    (b) ignored because there is no perceived relationship to the self structure,
    (c) denied symbolization or given distorted symbolization because the experience is inconsistent with the structure of the self.

12. Most of the ways of behaving that are adopted by the individual are those that are consistent with the concept of self.

13. In some instances, behaviour may be brought about by organic experiences and needs which have not been symbolized. Such behaviour may be inconsistent with the structure of the self but in such instances the behaviour is not "owned" by the individual.

14. Psychological adjustment exists when the concept of the self is such that all the sensory and visceral experiences of the individual are, or may be, assimilated on a symbolic level into a consistent relationship with the concept of self.

15. Psychological maladjustment exists when the organism denies awareness of significant sensory and visceral experiences which consequently are not symbolized and organized into the gestalt of the self structure. When this situation exists, there is a basic or potential psychological tension.

16. Any experience which is inconsistent with the organization of the structure of the self may be perceived as a threat, and the

more of these perceptions there are, the more rigidly the self structure is organized to maintain itself.

17. Under certain conditions, when there is a complete absence of threat to the self structure, experiences which are inconsistent with it may be perceived and examined and the structure of self revised to assimilate and include such experiences.

18. When the individual perceives and accepts into one consistent and integrated system all his sensory and visceral experiences, then he is necessarily more understanding of others and is more accepting of others as separate individuals.

19. As the individual perceives and accepts into his self structure more of his organic experiences, he finds that he is replacing his present value system, based extensively on introspections which have been distorted and symbolized with a continuing valuing process.

Development of the Personality:

Rogers is known for practicing "unconditional positive regard" which is defined as accepting a person "without negative judgement of … [a person's] basic worth".

Rogers described principles rather than stages while discussing the development of personality. He focused upon the development of the self concept and the progress from an undifferentiated self to being fully differentiated.

"**Self Concept:** the organized, consistent, conceptual gestalt composed of perceptions of the characteristics of "I" or "me" and the perceptions of the relationships of the "I" or "me "to others and to various aspects of life, together with the values attached to these perceptions. It is a gestalt which is available to awareness though not necessarily in awareness. It is a fluid and changing gestalt, a process, but at any given moment it is a specific entity." (Rogers, 1959)

In the development of the self concept Rogers saw conditional and unconditional positive regard as a key. Those raised in an environment of unconditional positive regard have the opportunity to fully actualize themselves. Those raised in an environment of conditional positive regard only feel worthy if they match conditions (what Rogers described as *conditions of worth*) that have been laid down by others.

The Fully-functioning Person:

Optimal development as mentioned in proposition 14 results in a certain process rather than a static state. Rogers describes this as *the good life* where the individual continually aims to fulfill his full potential. The characteristics of a fully functioning person according to Rogers, 1961 are:

1. A growing openness to experience - such individuals move away from defensiveness and have no need for subception (a perceptual defense that involves unconsciously applying strategies to prevent a troubling stimulus from entering consciousness)

2. An increasingly existential lifestyle - living each moment fully - not distorting the moment to fit personality or self concept but allowing personality and self concept to emanate from the experience. This results in excitement, daring, adaptability, tolerance, spontaneity and a lack of rigidity and suggests a foundation of trust. "To open one's spirit to what is going on now, and discover in that present process whatever structure it appears to have."(Rogers, 1961)

3. Increasing organismic trust - such individuals trust their own judgment and their ability to choose behaviour that is appropriate for each moment. They do not rely on existing codes and social norms but trust that as they are open to experiences they will be able to trust their own sense of right and wrong.

4. Freedom of choice - not being shackled by the restrictions that influence an incongruent individual, these individuals are able to make a wider range of choices more fluently. They believe that they play a role in determining their own behaviour and so feel responsible for their own behaviour.

5. Creativity - such individuals feel freer to be creative. They are also more creative in the way they adapt to their own circumstances without feeling a need to conform.

6. Reliability and constructiveness - such individuals can be trusted to act constructively. An individual who is open to all his needs will be able to maintain a balance between them. Even aggressive needs will be matched and balanced by intrinsic goodness in congruent individuals.

7. A rich full life - Rogers described the life of the fully functioning individual as rich, full and exciting and suggested that they

experienced joy and pain, love and heartbreak, fear and courage more intensely.

Rogers' description of *the good life:* "This process of the good life is not, I am convinced, a life for the faint-hearted. It involves the stretching and growing, of becoming more and more of one's potentialities. It involves the courage to be. It means launching oneself fully into the stream of life." (Rogers, 1961)

Incongruity:

Rogers identified the "real self" as the aspect of one's being that is founded in the actualizing tendency. It follows organismic valuing, needs and receives positive regard and self-regard. It is the "you", that if all goes well, you will become. On the other hand, to the extent that our society is out of sync with the actualizing tendency, and we are forced to live with conditions of worth that are out of step with organismic valuing, and receive only conditional positive regard and self-regard, we develop instead an "ideal self". By ideal, Rogers suggests something not real, something that is always out of our reach, the standard we cannot meet. This gap between the real self and the ideal self, the "I am" and the "I should" is called *incongruity.*

Psychopathology:

Rogers describes the concepts of *congruence* and *incongruence* as important ideas in his theory. In proposition 6 he refers to the actualizing tendency though he recognizes the need for positive regard at the same time. In a fully congruent individual, realizing his potential is not at the expense of experiencing positive regard. Such an individual is able to lead a life that is authentic and genuine. Incongruent individuals in their pursuit of positive regard, live lives that include falseness and do not realize their potential. Conditions put on them by those around them make it necessary for them to forego their genuine, authentic lives to meet with the approval of others. They live lives that are not true to themselves, to who they are on the inside.

Rogers suggested that the incongruent individual is more likely always on the defensive and is not open to all experiences. He thus is not functioning ideally and may even be malfunctioning. He works hard at maintaining/protecting his self concept. Since his life is not authentic, this is a difficult task and he is under constant threat. He deploys defense mechanisms to achieve this, namely, *distortion* and *denial*. Distortion occurs when the individual perceives a threat

to his self concept. He distorts the perception until it fits into his self concept. Denial follows the same process except instead of distorting, he denies the threat exists.

This defensive behaviour reduces the consciousness of the threat but not the threat itself. And so as the threats mount, the work of protecting the self concept becomes more difficult and the individual becomes more defensive and rigid in his self structure. If the incongruence is immoderate this process may lead the individual to a state that typically may be described as neurotic. His functioning may become precarious and psychologically vulnerable. If the situation worsens it is possible that the defenses may cease to function altogether and the individual becomes aware of the incongruence of his situation. His personality becomes disorganized, bizarre and irrational and is associated with earlier denied aspects of self and may erupt uncontrollably.

Conclusion:

Rogers originally developed his theory to be the foundation for a system of therapy. He initially called this "non-directive therapy" and later changed it to "client-centred" and lastly to "person-centred". The application to education was described in *Client-centred Therapy* and in *Freedom to Learn*. The new *Learner-centred Model* is similar in many regards to this classical person-centred approach to education.

b) Hierarchy of Needs: Abraham Maslow

Abraham Maslow saw motivation as a process that starts with a **physiological** or **psychological deficiency** or **need** that activates behaviour or a **drive** that is aimed at a **goal** or **incentive.**

The nature of motivation according to him is made up of:

1. **Needs:** Needs are created whenever there is a physiological or psychological imbalance. An unsatisfied need creates tension that stimulates drives within the individual. These drives generate a search behaviour to find particular goals that if attained will satisfy the need and lead to the reduction of tension. The greater the tension the higher the effort level. If effort successfully leads to the satisfaction of the need, tension is reduced.

2. **Drives:** Drives or motives are set up to alleviate needs - these are action oriented and provide an energizing thrust toward reaching an incentive.

3. **Incentives:** Incentives are anything that will alleviate a need and reduce a drive.

According to Maslow, within every human being there exists a hierarchy of the following five needs:

1. Physiological Needs :
   basic life needs: air, food, drink, shelter, warmth, sex, sleep etc.

2. Safety Needs : protection, security, order, law, limits, stability etc.

3. Belongingness and Love Needs : family, affection, relationships, work group, etc.

4. **Esteem Needs :** achievement, status, responsibility, reputation

5. **Self-actualization :** personal growth and fulfillment

Physiological, Safety, Belongingness and Love and Esteem needs are *Deficiency* needs. Self-actualization is a *Growth* need.

Each of us is motivated by needs. Our most basic needs are inborn having evolved over tens of thousands of years. Maslow's theory states that we must satisfy each need in turn, starting with the first which deals with the need for survival itself. Only when the lower order needs of physical and emotional well - being are satisfied are we concerned with the higher order needs of self-esteem and personal development. Conversely if our lower order needs are not satisfied then the fulfillment of our higher order needs ceases to be of importance.

These needs entail:

1. **Physiological Needs:** Physiological needs are bodily needs which are required for survival.

2. **Safety Needs:** Safety needs refer to security and protection from physical and emotional harm. This is demonstrated in infants and children by their preference for some kind of routine or rhythm, rather than disorder; their avoidance of various forms of perceived danger situations and their withdrawal from strange and unfamiliar situations that elicit danger and terror reactions. Safety needs in children and adults are observed as an active and dominant mobilizer of the individual/organism's resources in emergencies for example, war, disease, natural catastrophes and the like.

3. **Belongingness and Love / Social Needs:** Social needs refer to the need for affection, belongingness, acceptance and friendship. A desire or a hunger for affectionate relations with people in general and for a place in the group is present and manifested in all mentally healthy human beings.

4. **Esteem:** Esteem needs involve seeking recognition as a worthwhile person and include internal esteem factors such as self-respect, autonomy and achievement and external esteem factors such as status, recognition and attention. The satisfaction of esteem need is accompanied by feelings of confidence, worth, strength and usefulness. Deprivation of these needs produces feelings of inferiority, weakness, or helplessness.

   Coopersmith in 1967 observed that a student's success in school is markedly affected by his sense of self-esteem.

5. **Self-actualization:** Self-actualization is the drive to become what one is capable of becoming and includes growth, achieving one's potential and self-fulfillment.

   The need for self-actualization is the need to be or to become the person one can be, that is, the tendency for the individual to become in actuality what he is potentially.

   Self-actualization is possible only when lower order needs are completely satisfied and do not consume or distract all available energy. The persons in whom these needs have been relatively well satisfied are the healthiest in our society.

Characteristics of Self-actualized individuals according to Maslow:

A self-actualized individual:

1. is open to experiences, vividly, selflessly, with full concentration and total absorption, is problem focused.

2. is in tune with himself , his inner being.

3. is spontaneous, autonomous, independent with a fresh unstereotyped appreciation of people and events and incorporates an ongoing freshness of appreciation of life.

4. devotes total effort to his goals, wanting to be first rate or as good as he could be, is concerned about personal growth and has the ability to have peak experiences.

5. is dedicated , fully and creatively to some cause outside himself.

6. relates to and specially loves others on a deep and emotional level.

7. resists conformity to culture, can be detached and private.

Conclusion:

These basic goals are related to each other, being arranged in a hierarchy of prepotency, that is, the most prepotent goal will monopolize consciousness and will tend of itself to organize the recruitment of the various capacities of the organism. The less prepotent needs are minimized, even forgotten or denied. But when a need is fairly well satisfied, the next prepotent need emerges in turn to dominate the conscious life and to serve as the centre of organization of behaviour, since gratified needs are not active motivators. Man thus is a perpetually wanting animal.
Example: a disadvantaged child may have a much stronger need for love and belonging than a need to know and understand, and therefore directs his energy to the satisfaction of his need than the learning task.

Educational Implications:

It is the secondary motives to which the teacher appeals. If the learner finds that a particular activity in school gives him status or recognition or success, he is naturally motivated to do that activity since it satisfies his need. The teacher should thus organize activities such that they appeal to a learner's needs.

I. Praise and Blame:

Research has shown that reproof or blame is relatively more effective with boys than with girls, with the bright than with the dull, and with extroverts than with introverts.

Praise tends to be cumulative in its effects; reproof if overdone loses its effectiveness and is taken as a matter of routine.

Both praise and blame can be used effectively if the personalities of the learners are taken into account. The teacher should recognize the differential effect of praise and blame on students for both have value as motivational devices if used judiciously. Usually reproof has best effects when used sparingly with very bright learners. Dull learners respond best to praise and therefore the teacher should find and utilize the occasions when the

work of dull learners merit praise. Very often the capacity to note and make ready use of situations where poor learners can be justly praised is what distinguishes a good from a bad teacher.

II. Reward and Punishment:

The learning of an individual can be directed by rewarding approved conduct and by punishing disapproved ones. Reward directly strengthens the rewarded behaviour, while punishment works only indirectly and does not universally weaken the punished behaviour. Results of punishment are said to be less permanent than the results of reward. The by-products of punishment may be unfortunate because punishment often leads to the dislike of the punishing person and also to the dislike of the activity that led to punishment. A threatened punishment is also rewarding, for example, a policeman in uniform influences us to drive carefully.

III. Competition:

Rivalry is one of the oldest motivational devices in the history of education as also in athletics. The drive for success and for recognition is brought into play through rivalry. Competition against oneself and group competition are other forms.

IV. Knowledge of Progress:

Cricket players frequently glance at the scoreboard during a match so that they know just what the score is. This feedback, the incoming knowledge of how they are doing keeps up the interest of the players and motivates them to improve their performances. Also students who are kept informed of their progress learn more readily than others who are not so informed. Self-competition is a desirable motive for it eliminates unfavourable comparisons with others, permits every individual to achieve some success, serves to protect his ego and allows him to progress at his own rate.

V. Success and Failure:

The urge to succeed or to avoid failure is a fundamental drive in an individual's life. Individuals reach new heights as a result of their continued success, and they reach new lows as a result of their continued failure. However success and failure are related to the level of aspiration. An experience which one person considers as rewarding may be interpreted as failure by another. Success and failure depend not only upon actual achievements of an individual but also upon the goals and expectations which he has set for

himself. An appropriate level of aspiration has two characteristics: it is high enough to be challenging and low enough to be attainable.

Important pointers:

1. Reinforcement of any learning should be immediate. Teachers should correct the work done by learners as soon as possible and also employ praise, blame or punishment as early as possible after the activity is over.

2. Over motivation is as bad as lack of motivation. Spurring a learner on to aim at doing more than what he is capable of doing will make him unhappy at his failure. Blaming him for failure to achieve something beyond his capacity will make him frustrated.

3. Teachers should understand the learner's abilities and aim at developing his interests in those areas in which he has some natural talent. Success in some areas helps the learner to face failure in some others with equanimity.

4. Both praise and blame lose their effectiveness if a lot of time is allowed to lapse between the event and the administration of praise or reproof. The teacher should apprise the learners of their performance as early as possible.

A teacher must also remember the *dangers* **of over motivation:**

1. Attaching great significance to marks, prizes, etc. may develop a wrong attitude; a learner may work only for winning the prize.

2. Scolding a learner for his shortcomings may lower his self-concept and he may withdraw from the learning situation or may be embittered towards the teacher or the school.

3. Excessive praise may make the learner proud or arrogant.

4. Spurring a learner to levels of achievement beyond his abilities may lead to helplessness and frustration.

D) Theory X and Theory Y: Douglas McGregor

Douglas McGregor proposed two distinct views of human beings: one basically negative, labelled Theory X, and the other basically positive, labelled Theory Y.

After viewing the way in which managers dealt with employees in work situations, McGregor concluded that a manager's

view of the nature of human beings is based on a certain grouping of assumptions and that he tends to mould his behaviour towards subordinates according to these assumptions.

According to Theory X, the four assumptions held by managers are as follows:

1. Employees inherently dislike work and whenever possible will attempt to avoid it.

2. Since employees dislike work, they must be coerced, controlled, or threatened with punishment to achieve goals.

3. Employees will avoid responsibilities and seek formal direction whenever possible.

4. Most workers place security above all other factors associated with work and will display little ambition.

    In contrast to these negative views about the nature of human beings, McGregor listed four positive assumptions, which he called Theory Y:

1. Employees can view work as being as natural as rest or play.

2. People will exercise self-direction and self-control if they are committed to the objectives.
3. The average person can learn to accept, even seek responsibility.

4. The ability to make innovative decisions is widely dispersed throughout the population and is not necessarily the sole province of those in management positions.

The motivational implications of this theory are:

    Theory X assumes that lower order needs dominate individuals. Theory Y assumes that higher order needs dominate individuals. McGregor himself held the belief that the Theory Y assumption was more valid than Theory X. Therefore he proposed ideas like participative decision making, responsible and challenging jobs, and good group relations as approaches that would maximize an employee's job motivation.

    In a learning situation, the manager becomes the teacher and the employees become the learners. Based on this theory teachers therefore must avoid being autocratic in manner or use autocratic management styles.

Typically a teacher must avoid:

1. being results-driven and deadline driven to the exclusion of everything else.

2. being intolerant

3. issuing deadlines and ultimatums

4. being distant and detached

5. being aloof and arrogant

6. being elitist

7. being short tempered

8. issuing instructions, directions, edicts

9. issuing threats

10. being demanding

11. stifling participation of learners, freedom in the learning environment

12. being unconcerned about building morale

13. being a one-way communicator, a poor listener

14. being miserly with praise/appreciation

15. withholding rewards

6.3   LET US SUM UP

The unit highlights the motivational implications of the different schools of Psychology. The characteristics of the different theories are explained and their implications in managing classroom behaviour have been elucidated.

6.4   UNIT END EXERCISES

1. Define Motivation
2. Explain the implications of the Attribution Theory in the motivation of learners.
3. Discuss the contribution of Behavioural Psychologists to the theory of Motivation.
4. How have the Humanist Psychologists contributed to the understanding of Motivation?

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7

PROBLEMS AND APPROACHES TO MANAGING CLASSROOM BEHAVIOUR -I

Unit Structure

7.0   OBJECTIVES

After going through this unit you will be able to
*   Define Behaviour
*   Describe the different Behaviour Problems
*   Explain the chain of events leading to Behaviour Problems

7.1   INTRODUCTION

Under our normal behaviour what we do or perform has some define purpose, aim or motive. Thus all our activities are always directed towards the satisfaction of our basic needs, desires, ambitions, instincts and emotions. Our goal directed and purposeful behavioural activities help us on seeking adjustment to our self and the environment. As a social being, we try to maintain proper give and take relationship in the society, where society provide us means and materials for our maintenance and proper development and we, in turn, contribute towards its progress and advancement according to our capacities. The way in which this give and take relationship is maintained decides the course of our adjustment with the society. Satisfactory adjustment gives satisfaction to us and the society. Consequently our actions and behaviour are adjudged proper and get rewarded or praised. Contrarily when our equilibration, the balance between our self and the social environment, is disturbed, we begin

to suffer from social maladjustment. Then it becomes difficult to maintain harmony in our relationship with the society.

Thus, we are forced to drift from the norms, rules and regulations and the expectations of the society and there begins a war like situation between our self' and the social environment. We are confronted with the feelings if insecurity, anxiety, frustration and other similar emotions resulting in various abnormalities in our behaviour. As a consequence, our behaviour no longer remains a social behaviour but becomes anti –social or abnormal leading to many behaviour problems to our self and the society. Such types of behavioural problems are quite common and universal, existing at all the stages of our life from infancy to old age.

7.2   IDENTIFYING BEHAVIOUR PROBLEMS

Some of the common behavioural problems among the students are:

Mere capturing or attracting attention of the students is not enough. It is the beginning of a process and not the end. In the words of Woodworth, "To sustain attention is to concentrate one's activity continuously upon some object or happening or problem" (1945, p. 48). Thus, in the case of sustained attention, there is no wandering.

This wandering attention of the students is known as the distraction.

1. Distraction:
When we are attending to a stimulus (object, person, place, idea or activity) for its perception, something may happen in the external environment as well as within ourselves that tend to intrude or divert our attention from the stimulus. This thing or event belonging to our environment thus interferes with the natural process of our attention. Thus the process that interferes with the natural process of paying attention towards a stimulus is known by the term 'distraction' and the things or events lying in the environment responsible for distraction are termed as distracters.

Distractor as a psychological term has been defined by H.R. Bhatia in the following way: "A distractor may be defined as any stimulus whose presence interferes with the process of attention or draws away attention from the object to which we wish to attend." (1968, p. 139).

The stimuli that are responsible for distracting an attention can be mainly divided into two parts- external distractors and internal distractors.

1. Among the external or outside factors the more common and prominent are noise, music, improper lighting, uncomfortable seats, unfavorable temperature, inadequate ventilation, defective methods of teaching, improper use of teaching aids, defective voice of teacher and his improper behaviour etc.

2. Internal distractions such as emotional disturbances, ill health, boredom, lack of motivation, feelings of fatigue or interesting thoughts unrelated to the matter in hand have more effect than the everyday external distractors.

2. Aggression:

Expression or demonstration of one's angry behaviour through verbal dialogue or physical assault or both may be termed as aggression. Such over assertiveness may help one deal effectively with other persons, situations and problems etc. Others may get influenced or become fearful of his aggressive behaviour and thus may fall in line with him or they may avoid unnecessary dialogues or conflicts leading to spoiled relationship or bitterness with him. Reinforced by such impact of his aggressive behaviour, one may then be tempted to adopt it as an important component of one's behaviour. However, it is not essential that his resorting to such mechanism may always prove a boon for him. It has an equal chance of going otherwise.

The question arises as to from where do we pick or learn such aggressiveness. The reason lies well in our environmental surroundings where an in individual from the very beginning of his life encounters or perceives the aggressive behaviour. Knowingly or unknowingly, this type of aggressiveness is then transferred in one's behaviour by way of imitation and thus becomes his style of coping with the environmental situations. The sudden outburst of foul and aggressive language or fighting may provide a certain type of relief to the children at the specific moment, but the ultimate consequences are always negative and painful both to the individual as well as others who are subjected to such aggressiveness.

Aggression is of two types:

*   **External Aggression**: This aggression may be directed towards either the person or persons who caused emotions to this extent or towards a substitute or substitutes.

- **Internal aggression:** It is an aggression that is turned inward towards the self. Instead of releasing one's emotional tensions by attacking others, one resorts to attacking one's self. Instead of blaming others, the individual blames himself. No doubt certain amount of self criticism does not do any harm but excessive aggression towards the self is sure to destroy the self. Eventually the person becomes a mental patient.

There are two causes of aggression:

- **External factors**: which include physical factors, social factors and economic factors.

- **Internal factors:** include physical defects, conflicting desires, individual's morality and high ideals, high level of aspiration and lack of persistence and sincerity in efforts.

3. Interpersonal Problems:

This sphere of adjustment is concerned with one's adjustment to his social surroundings. Such adjust is much essential as one's adjustment with his self. In all circumstances, one should feel reasonably satisfied with what he gets in terms of his social environment. By doing so, he may get along well with others and keep himself in the category of socially adjusted individual, but if it does not happen he may become a socially maladjusted person. In such circumstances, either he may cut himself off from the society or may turn into an anti- social and criminal personality. In this sense, one's adjustment with his social set up, started from his parents, home and friends and extended to the neighborhood, state, country and encircling the whole world, is quite essential for the welfare of his own and the society.

Individuals with borderline personality disorder frequently possess good interpersonal skills in a general sense. The problems arise in the application of these skills to specific situations. An individual may be able to describe effective behavioural sequences when discussing another person encountering a problematic situation, but may be completely incapable of generating or carrying out a similar behavioural sequence when analyzing his or her own situation.

The interpersonal effectiveness focuses on situations where the objective is to change something (e.g., requesting that someone do something) or to resist changes someone else is trying to make (e.g., saying no). This is intended to maximize the chances that a person's goals in a specific situation will be met, while at the same

time not damaging either the relationship or the person's self-respect.

Check Your Progress:
1.   Explain the concept of Behavioural Problems.

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2.   How will a teacher identify behaviour problems in a classroom with special reference to distraction, aggression and interpersonal problems?

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7.3   ANALYZING BEHAVIOUR PROBLEMS

Behaviour became an important construct in early 20th century Psychology with the advent of the paradigm known subsequently as "behaviourism". Behaviourism was a reaction against "faculty" psychology which purported to see into or understand the mind without the benefit of scientific testing. Behaviourism insisted on working only with what can be seen or manipulated and in the early views of John B. Watson, a founder of the field; nothing was inferred as to the nature of the entity that produced the behaviour. Subsequent modifications of Watson's perspective and that of "classical conditioning" led to the rise of operant conditioning or "radical behaviourism," a theory advocated by B.F. Skinner, which took over the academic establishment up through the 1950s and was synonymous with "behaviourism" for many.

WHAT IS BEHAVIOUR?

Behaviour is that portion of an organism's interaction with its environment that is characterized by detectable displacement in space through time of some part of the organism and that results in a measurable change in at least one aspect of the environment. Often, the term behaviour is used to reference a larger class of responses

that share physical dimensions or function. In this instance, the term *response* indicates a single instance of that behaviour. If a group of responses have the same function, this group can be classified as a response class. Finally, when discussing a person's collection of behaviour, repertoire is used. It can either pertain specifically to a set of response classes that are relevant to a particular situation, or it can refer to every behaviour that a person can do.

Behaviour refers to the actions of an organism, usually in relation to its environment, which includes the other organisms around as well as the physical environment. It is the response of the organism to various stimuli, whether internal or external, conscious or subconscious, overt or covert, and voluntary or involuntary.

IDENTIFYING ANTECEDENTS AND CONSEQUENCES

What is an Antecedent?
Antecedents are the conditions that immediately precede the occurrence of the child's behavior (Cooper, Heron, & Heward, 1987; O'Neill et al., 1997; Hieneman et al., 1999).Antecedents include the specific times of day, settings, people, and activities that either occur or are present before the child exhibits challenging behavior.

Example:
Alex screams and pounds on his desk whenever his teacher asks him to work independently on his assignments. The request for Alex to work independently may be an antecedent to his behavior. Antecedents According to Alberto & Troutman:

A. Frustration due to:

1. Response ignorance
2. Complex materials, lacking in appropriate adaptations
3. Lack of functional vocabulary to communicate (verbal or augmentative/alternative communication system)
4. Goal or performance interruption

B. Understimulation:

1. Being ignored
2. Meaningless repetition beyond criterion
3. Non functional activity
4. Pacing too slow
5. Boredom

C. Overstimulation:

1. Environment: For example, number of students, noise
2. Rate of physical prompting or verbalizations
3. Pace of activity.

Social Antecedents

1. Verbal requests for work or other demands
2. Teacher asks the individual to move to the front of the line
3. Critical feedback from others
4. A co-worker calls the individual attention to a mistake made in a project
5. Absence of Attention
6. The individual is asked to pay attention during an activity
7. Unexpected change in routine
8. An unscheduled meeting which interrupts the normal daily routine
9. Specific tasks or activities

Sensory Antecedents

1. Sounds of lights humming
2. Seeing florescent lights flickering
3. Taste of certain foods; toothpastes
4. Being stared at by an individual
5. Certain mannerisms of others
6. Large, discount stores
7. Certain ordinary smells

Emotional Antecedents

1. Unexpected change in routine
2. Viewing unexpected actions
3. Parental squabbling
4. No relaxation in the home environment
5. Anxiety over high-stakes testing

Antecedent-Behavior-Consequence Chart

1. An A-B-C Chart is used to identify patterns which identify specific antecedent events that are associated with undesired behaviors.
2. The A-B-C Chart is utilized during scheduled observations.
3. The types of behaviors observed, the events leading to the behavior and the events occurring after the behavior are collected.

A-B-C Chart

Antecedent: event that occurs before behaviour is exhibited

Behaviour: refers to specific observable behaviours exhibited by students (appropriate and inappropriate)

Consequence: refers to what a student experiences after behaviour and determines whether or not the behaviour will be repeated.

- The A-B-C Chart analyzes the purpose or function of a specific behavior used to find out under what conditions the behavior occurs, what antecedent precedes the behavior, and what consequences follow the occurrence of that behavior.

- The most useful functional analysis includes sensory and communication issues identifying conditions, antecedents, and consequences related to the behavior.

  A simple way to remember how to complete A-B-C is to ask the following questions before and after the behavior occurs:

- WHAT happens?
- WHEN does it happen?
- WHERE does it happen?
- HOW does it happen?
- WHOM does it happen with?

Sample A-B-C Chart:

Date	Time	Antecedent	Behavior	Consequence	Possible Function
4/15/05	10:30am	Other students speaking while teacher is speaking	Student places hands over ears and screams	Increased social isolation	Communication of frustration and overstimulation
4/15/05	10:35am	Teacher yells at students about being loud	Student, still holding hands over ears, crawls under desk	Trip to the principal's office	Escape from overstimulation
4/16/05	10:25am	Relative comes to visit and hugs individual 3 times in 4 minutes	Individual runs out of the room	Relative assumes that the individual dislikes them	Escape due to touch sensitivity
4/16/05	10:30am	Mother retrieves individual from room and forces individual to stay in room with relative - more hugs	Individual shoves relative away from him or her	Mother becomes very angry and sends individual to his or her room	Escape
4/16/05	10:40am	Mother threatens to take something to do with area of interest away from individual	Individual cries	Mother thinks that everything is better	Communication of increased frustration and despair

CHAIN OF EVENTS LEADING TO BEHAVIOUR PROBLEMS

1. Depression can manifest as a large variety of symptoms, most often feelings of sadness or despair that do not go away. Depression can negatively affect a person's ability to function effectively in the activities of daily living, such as going to work and school, caring for family.

Depression is often thought of as experiencing feelings of sadness, "having the blues", or being disheartened. However, there is

a major difference between having normal feelings of sadness in reaction to a situation, such as a death in the family, and having depression. Normal feelings of sadness, although painful, generally resolve after a short time. For people with depression, feelings of sadness linger beyond a short time and intensify to the point that they interfere with the ability to function normally. This in turn can intensify the depression of children and thus become a behavioural problem in a classroom.

There are many factors associated with the development of depression. These include an imbalance in the brain of chemicals called neurotransmitters, including serotonin, nor epinephrine, and dopamine. Neurotransmitters function within areas of the brain that regulate emotions and mood. Situational or environmental factors also play a role.

2. **Inattention:** Lack of attention or reduced attention span.

3. **Bipolar disorder**, also known as manic-depressive disorder, involves cycles of alternating mania and depressive symptoms. It is an under-diagnosed disorder with many cases misdiagnosed for years. Many cases of bipolar disorder are misdiagnosed as clinical depression because patients tend to seek treatment during the down phases, rather than the euphoric manic phases. Other possible misdiagnoses include anxiety disorders, borderline personality disorder, and schizophrenia. There are several subtypes of bipolar disorder, including the milder bipolar II disorder, that need to be carefully distinguished for accurate diagnosis

4. **Autism:** Autism is not a disease, but a developmental disorder of brain function. **Autism:** Childhood mental condition with social and communication difficulties.

5. **Anxiety:** Excessive worry, anxiety, or fear.

6. **Moodiness:** Inappropriate moods or excessive mood changes.

7.4   LET US SUM UP

Human behaviour (and that of other organisms and mechanisms) can be common, unusual, acceptable, or unacceptable. Humans evaluate the acceptability of behaviour using social norms and regulate behaviour by means of social control. In sociology, behaviour is considered as having no meaning, being not directed at other people and thus is the most basic human action, although can

play a part in diagnosis of disorders such as autism. Animal behaviour is studied in comparative psychology, ethologic, behavioural ecology and socio-biology. Behaviour is the activity of living organisms. Human behaviour is the entire gamut of what people do including thinking and feeling.

7.5 UNIT END EXERCISES

1. Define behaviour.

2. What are Antecedents?

3. How would a teacher identify antecedents and their consequences in a classroom?

4. Explain the chain of events that lead to behaviour problems.

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8

PROBLEMS AND APPROACHES TO MANAGING CLASSROOM BEHAVIOUR-II
c: Changing behaviour
d:Group dynamics

Unit Structure

8.0   OBJECTIVES

After reading this unit, you will be able to:
- Explain the meaning of Behaviour Change
- Explain the Approaches to Behaviour Change.
- Classify Leadership Styles.
- Describe the Model for team development.
- Explain the Techniques of Managing Groups.

8.1   INTRODUCTION

An effective teacher not only manages instruction but also student behaviour. In order that students develop important life skills it is imperative to understand students and their behaviour patterns. Teachers can help in the development of positive and desirable behaviour through carefully planned and designed activities. For this it is essential to understand the concepts related to behaviour and behaviour change.

8.2c   CHANGING BEHAVIOUR

Behaviour can be defined as the way in which an individual behaves or acts. It is the way in which an individual conducts

himself/herself. It is the way in which an individual acts towards people, society or objects. It can be either good or bad. It can be normal or abnormal according to society norms. Society will always try to correct bad behaviour and try to bring abnormal behaviour back to normal. The root causes of behaviour differences are as follows;

- individual differences

- differences in family patterns

- impairment/disabilities

- environmental factors

- psychological factors.

Behaviour change is based on a simple idea of learning. It is based on the idea that behaviour followed by reward is more likely to be repeated, or retained, than not. On the other hand, behaviour which results in an unpleasant outcome tends to be quickly dropped or disappear. Behaviour change is based on the idea that behaviour is, in part, controlled by its consequences. The idea has been demonstrated in both humans and animals.

Fundamental Principles of Behaviour change

The principles of behaviour change are as follows;

a) Human behaviour is caused by learning; therefore it is guided by the laws of learning.

b) Human behaviour is the product of learning, and can be assumed to be liable to unlearning or correction.

c) Human behaviour is influenced by consequences, and is strengthened when followed by rewards, and spoilt when followed by negative consequences.

d) Human behaviour is controlled not only by internal factors, but also by external factors, such as the presence of significant role models and other social rewards like praise or prizes.

e) Maladjusted behaviour may be changed by changing the circumstances which maintain it.

f) Behaviour in life is learnt individually, or by watching others learn or by training or conditioning.

APPROACHES TO BEHAVIOUR CHANGE

1)   Behavioristic Approach

Founded by JB Watson in 1915 the behaviourist approach studies observed behavioural responses of humans and animals. The behaviourist approach believes we learn to behave in response to our environment, either by stimulus-response association, or as a result of reinforcement. Important contributors to the behaviourist approach are Ivan Pavlov, with his theory of classical conditioning, and BF Skinner, and his work into operant conditioning.

Classical conditioning concerns learning by association. Operant conditioning concerns the use of environmental reinforcers in its explanation of why we learn to behave as we do. Classical conditioning emphasizes conditioning, spontaneous recovery, stimulus generalization, stimulus discrimination, and reinforcement in the learning process. Operant conditioning tells us that the type of reinforcer encountered by the organism can influence this process of reinforcement. Reward or positive reinforcement tends to encourage the repetition of a learned behaviour. Avoidance of unpleasant consequence, or negative reinforcement, tends to discourage the repetition of a discomforting behaviour.

Classical conditioning has been applied regards behaviour shaping and to behaviour therapies, such as systematic desensitization, implosion therapy, and aversion therapy. Operant conditioning has been applied to behaviour modification regimes such as the token economy and programmed learning. Reinforcement techniques like fixed ratio and fixed interval schedules have been found to be of benefit in new learning situations. Behaviourist ideas, especially those of BF Skinner, have been particularly influential to education. However, the thoughts, feelings, and behaviours of higher-level species, such as human beings, are nowadays thought far more sophisticated than the behaviourist approach originally thought.

Behavioural Therapies

Behavioural Therapy is a common approach used by counsellors and other professional psychologists to help ease emotional distress by recognizing and treating the underlying psychological problems. This type of therapy has proven to be an effective method of treatment for a variety of problems, including anxiety disorders, depression disorders, stress, anger and coping with loss. It is possible for the therapy to take place on a one-to-one basis,

with family members or even as a group depending on the issue and how the individual feels most comfortable.

Behavioural and Cognitive therapies mainly concentrate on the theory of *here and now*, however, they do not dismiss the individuals past altogether and the professional and client must work together to address the current issues. It is imperative that the relationship formed between the counsellor and the sufferer is positive in order to develop a shared outlook of the issues that need to be confronted. If this occurs the pair can set goals and find ways of achieving these goals together. The counsellor will often set the client home projects to complete in order to put their new skills into practice.

Behavioural Therapy

This approach addresses the unusual thoughts, feelings and behaviour directly by issuing the sufferer with rewards and by confronting the factors that influence these recurrent thoughts. This therapy does not ignore the past like some other approaches, but does concentrate on the present events which are in control of the sufferer's behaviour.

Cognitive Therapy

This type of therapy attempts to recognize unusual thoughts or events that could potentially result in unwanted feelings and negative behaviour. The main objective is to amend these initial thoughts and replace them with a different perspective in order to prevent the distressing consequences from occurring.

Many professionals combine the two approaches, which can have effective results in changing a persons distorted thoughts and feelings.

The main objective of this therapy is to identify and alter an individual's thought process in order to change both behaviour and emotional development. The sessions consist of a number of activities; a few of the techniques are listed below.
Coping skills
Assessments
Relaxation
Challenging certain thoughts
Thought stopping
Homework projects
Training in communication

Behavioral therapies focus on altering abnormal behaviors. There are 3 major categories of actions to take in establishing a behaviorally-oriented classroom management program:

A)   **Structuring/Selecting and Arranging Activities**
- Establish rules and procedures early
- Establish consequences: Consequences are environmental stimuli that increase or decrease the probability that a behavior will occur again. The consequences could be;
  a)   reinforcers
  b)   punishers
- Establish method of delivering reinforcers

For structuring activities it is essential to
- State expectations clearly
- Focus on positive expectations
- Practice "positive" behavior
- Establish group cohesiveness and responsibility
- Establish cues
- Model appropriate behavior

B)   **Monitor Student Behavior**
- Physical layout: ability to see all students
- Teacher movement: move around the room
- Group focus: keep students involved
- Overlapping: ability to supervise several activities at once
- Withitness: communicate to students you are aware of what's happening
- Pacing/movement management: keep lessons and students moving

C)   **Reinforce Positive Behavior / Redirect Inappropriate Behavior**
- Anticipate occurrence of positive and inappropriate behavior
- Hold students accountable
- Provide specific feedback regarding behavior and expectations
- Focus on positive behavior; teacher attention to inappropriate behavior can be reinforcing

Behavioural Therapy for Self-Modification

The theories and research of the Behaviorist Approach gave rise to therapies designed to change behavior by using learning principles. Many of these therapies have been remarkably successful for several people who have specific behaviours or habits that they want to alter. Research has found that once you understand the principles of learning, you may even be able to modify your own behavior. Here's how it's done:

STEP ONE: IDENTIFY A PROBLEM BEHAVIOR

The first step in habit change is to identify a behavior that you wish to alter. Decide on the one most important problem which you would like to change. Now check to see that your problem is specific. If you are having trouble stating your problem in this form, you might try making a list of concrete examples. So, rather than saying, "I procrastinate", try rephrasing it as "I put off studying for a test until the day before". Rather than saying, "I'm physically out of shape", try restating the problem as "I avoid going to the gym" or "I drive my car instead of walking two blocks." If the problem you selected is too general, look for a more concrete form to describe it.

STEP TWO: SELECT SPECIFIC TARGET BEHAVIORS

Now that you have identified a specific problem which you would like to address, the next step is to state the goal. Like the problem, the target behavior should also be specific. Decide on what behaviours you would have to change in order for you to attain your goal. For example, if your goal is to stop procrastinating and study more consistently, you may be tempted to aim immediately for 8 hours of studying, 7 days a week. But this schedule may be such a drastic change from your present behavior that you may risk burning yourself out within a few days, and then dropping the whole program because you feel that you have "failed". It's important to ensure that you do not set yourself up for a failure by making the goal too strenuous at the beginning of the program. So check to make sure that your target behavior and the time-frame to achieve it are realistic. If they are not, try breaking your goal into smaller steps– the steps can never be too small, but they can be too big.

STEP THREE: COLLECTING BASELINE DATA

Often, although we have identified a problem behavior, we aren't really aware of how often we do it or if it is more likely to occur in some circumstances than others. This type of information is

called baseline data. For example, if your problem behavior is smoking, are you aware of how many cigarettes you smoke each day or if you smoke more at certain times or places or with certain people? In order to effectively change behavior, we need to be cognizant of what we are doing now. For a week or two before you begin a behavior change plan, keep track of the occurrence, the antecedents and the consequences of your behavior.

STEP FOUR: PLAN YOUR PROGRAM

When you have collected sufficient baseline data to identify the discriminative and consequent stimuli, the next step is to plan your program. To be maximally effective, your program should do the following:

1. Control discriminative stimuli. This might be accomplished by eliminating, avoiding, or reducing the incidence of these stimuli. For example, if you bite your nails every time you watch television, you might want to avoid watching television for a while.

2. Develop small, realistic steps for accomplishing your goal. You should already have done this in Step Two.

3. Provide a schedule of frequent reinforcement. Your program should emphasize positive reinforcement and minimize punishment. A structured way to do this is to create a contract in which you specify what reinforcer(s) you will receive for particular accomplishments.

4. Consider using imagery of being successful at achieving your goal. If the problem involves a skill deficit, imagine the situation in which you wish to improve your skills and mentally practice how you can and will be effective in that setting.

5. If social skills are a part of your goal, seek models that are more proficient with the target behavior. Remember not to use a model whose skill level is significantly above yours. The best models are similar to ourselves and a couple of skill levels better on the target behavior.

STEP FIVE: CARRYING OUT THE PROGRAM

Now that you have collected baseline data and all the planning has been accomplished, it is time to execute your program. As you carry out your program, you may find that you have to make some adjustments. You may have identified new discriminative

stimuli, found that the steps you have outlined are unrealistic, or realized that the reinforcers you have selected are not sufficient or are not delivered with enough frequency to change the undesirable behavior. However, give your program some time to work- at least a week or two. The behavior you wish to change has probably been around for some time; don't expect it to disappear overnight.

STEP SIX: TERMINATING YOUR PROGRAM

At last you have accomplished your goal. Now you only need to do one more thing- develop a plan for ending your program. Since you have likely modified your behavior through planned rather than natural consequences, you need to phase out the planned consequences. A good approach is to gradually move from continuous reinforcement to partial reinforcement since this lessens the probability of extinction of your new behavior.

2)   The Humanistic Approach

Humanistic approach emphasizes that each individual has great freedom in directing his/her own future, a large capacity for achieving personal growth, a considerable amount of intrinsic worth, and enormous potential for self-fulfillment. The main objectives of humanistic psychology are to find out how individuals perceive themselves here and now and to recognize growth, self-direction and responsibilities. This method is optimistic and attempts to help individuals recognize their strengths by offering a non-judgmental, understanding experience.

The Humanistic Approach began in response to concerns by therapists against perceived limitations of Psychodynamic theories, especially psychoanalysis. Individuals like Carl Rogers and Abraham Maslow felt existing (psychodynamic) theories failed to adequately address issues like the meaning of behavior, and the nature of healthy growth. However, the result was not simply new variations on psychodynamic theory, but rather a fundamentally new approach.

There are several factors which distinguish the Humanistic Approach from other approaches within psychology, including the emphasis on subjective meaning, a rejection of **determinism**, and a concern for positive growth rather than pathology. Most psychologists believe that behavior can only be understood objectively (by an impartial observer), but the humanists argue that this results in concluding that an individual is incapable of understanding their own behavior--a view which they see as both

paradoxical and dangerous to well-being. Instead, humanists like Rogers argue that the meaning of behavior is essentially personal and subjective; they further argue that accepting this idea is not unscientific, because ultimately all individuals are subjective: what makes science reliable is not that scientists are purely objective, but that the nature of observed events can be agreed upon by different observers (a process Rogers calls **intersubjective verification**).

Carl Rogers was one of the founders of the Humanistic Approach. His theory describes the characteristics of a fully functioning person. In terms of his theory, there are two fundamental ideas which are particularly worth noting. First, Rogers talked about healthy development in terms of how the individual perceived their own being. A healthy individual will tend to see **congruence** between their sense of who they are (**self**) and who they feel they should be (**ideal self**). While no one tends to experience perfect congruence at all times, the relative degree of congruence is an indicator of health. The second fundamental idea is Rogers's concept of the **conditions for healthy growth**, and the role of a therapist in fostering healthy growth. Through a process Rogers called person-centered therapy, the therapist seeks to provide empathy, openness, and unconditional positive regard. Originally, Rogers called his technique non-directive therapy, based on the concept that the therapist is simply a "mirror" who reflects the individual's thoughts and feelings. As his own research showed, no therapist is truly non-directive--and if they were, it would likely be poor therapy.

Like Carl Rogers, **Abraham Maslow** is widely regarded as one of the founders of the Humanistic Approach. Maslow coined the term "the Third Force" to describe the Humanistic Approach, to emphasize how it differed from the Psychodynamic and Behaviorist Approaches, which dominated psychology in the 1950's. His theory emphasizes motivation as the key to understanding human behavior. One difference between Maslow and Rogers is the emphasis that Maslow gave to **peak experiences**. Peak experiences are moments in life which take us beyond our ordinary perceptions, thoughts, and feelings. Typically, the individual feels energized, more "alive". In some ways, peak experiences are similar to the Zen concept of satori (literally "enlightenment"), which, like a peak experience, comes unexpectedly, and transforms the individual's understanding of themselves and the world.

Humanistic therapies focus on looking at the 'here and now'. Humanistic Counselling became known over 50 years ago and has become an extremely effective approach to counselling. Although

behavioural therapy and psychoanalytic methods were available, a Humanistic approach offered sufferers another alternative. This type of counselling focuses on recognizing human capabilities in areas such as creativity, personal growth and choice.

When an individual is choosing a counsellor, it is extremely important that the client is aware of the approach the counsellor uses before arranging an appointment. This is because each method is different and depends on the person's needs as to which approach should be taken.

Person-Centred Counselling

This approach to counselling sees human beings (along with all other living organisms) as having an innate tendency to develop towards their full potential. But this is inevitably blocked or distorted by our life experiences, in particular those that tell us we are only loved or valued if we behave in certain ways and not others, or have certain feelings and not others. As a result, because we have a deep need to feel valued, we tend to distort or deny to our awareness those of our inner experiences that we believe will not be acceptable.

The counsellor in this approach aims to provide an environment in which the client does not feel under threat or judgment. This enables the client to experience and accept more of who they are as a person, and reconnect with their own values and sense of self-worth. This reconnection with their inner resources enables them to find their own way to move forward.

The counsellor works to understand the client's experience from the client's point of view, and to positively value the client as a person in all aspects of their humanity, while aiming to be open and genuine as another human being. These attitudes of the counsellor towards the client will only be helpful if the client experiences them as real within the relationship, and so the nature of the relationship that the counsellor and client create between themselves is crucial for the success of therapy.

Gestalt Counselling

Unlike Person-Centred Counselling, this method is directive and concentrates on the client's thought process and feelings. The main objective of this approach is for the individual's to become more aware of themselves taking into account their mind, body and spirit. The purpose of this is to improve the person's personal experiences and therefore creating a better quality of life.

A gestalt professional constantly promotes the client's awareness of themselves and uses experiments that are often invented by the counsellor and client. These experiments can be anything from creating patterns with objects and writing to role-playing. Promoting awareness is the main objective of Gestalt Counselling but other areas such as improving the ability to support ones emotional feelings are also important.

Transactional Analysis Counselling

Transactional Analysis (TA) is a theory that involves an individual's growth and development. It is also a theory related to communication and child development explaining the connections to our past and how this influences decisions we make. The TA theory was developed by Eric Berne who was a psychiatrist and he recognized three key ego-states that are present in everyone; Parent, Adult and Child.

This method of counselling encourages individuals to analyze previous decisions they have made and understand the direction and patterns of their life for themselves. It also helps clients to trust their decisions and think/act as an individual improving the way they feel about themselves. TA is a humanistic approach and like Person-Centred Counselling focuses on the *here and now* concept.

Transpersonal Psychology and Psychosynthesis

Transpersonal psychology began within humanistic psychology, however today it is gaining recognition by many psychologists and a number of professional organizations, and is now often seen as its own separate psychological theory (along with the other three main categories: behavioural, psychoanalytical and psychodynamic and humanistic).

Transpersonal psychology literally means "beyond the personal" and involves encouraging the individual to discover the deep core of *who they really are* (the real person that transcends an individual's body, age, gender, physical space, culture, appearance etc.) It involves building and expanding on an individual's qualities, their spirituality and self development.

Psychosynthesis was developed by psychiatrist Roberto Assagioli and involves an integration of the psychological and transpersonal elements. Psychosynthesis accepts the idea of a higher, spiritual level of consciousness, sometimes referred to as the "higher

self". Techniques such as meditation and visualization are often used for self-exploration and personal growth.

Check your Progress:

1) What is Behaviour?

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_____

2) Explain the concept of Behavioural Change

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3) Describe the Approaches to Behaviour Change

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8.2d   GROUP DYNAMICS

What is a Group?

A group is:

- "two or more people who share a common definition and evaluation of themselves and behave in accordance with such a definition" (Vaughan & Hogg, 2002, p. 200)
- a collection of people who interact with one another, accept rights and obligations as members and who share a common identity.

Criteria for a group include:
- formal social structure
- face-to-face interaction
- 2 or more persons

- common fate
- common goals
- interdependence
- self-definition as group members
- recognition by others

Societies can be seen as large groups consisting of a myriad of sub-groups.

What is Group Dynamics?

Group Dynamics is;

- The interaction of complex intra- and inter-personal forces operating in a group which determines its character, development, and long-term survival.

- Field of study concerned with determination of laws underlying group behavior.

Leadership

Leadership can be defined as;

- The ability to influence a group toward the achievement of goals

- "When you boil it down, contemporary leadership seems to a matter of aligning people toward common goals and empowering them to take the actions needed to reach them."

Sherman, 1995

There are different types of leaders ;

The people-oriented leader (Fiedler, 1967) is the one that, in order to comply with effectiveness and efficiency, supports, trains and develops his personnel, increasing job satisfaction and genuine interest to do a good job.

The task-oriented leader (Fiedler, 1967) focuses on the job, and concentrates on the specific tasks assigned to each employee to reach goal accomplishment. This leadership style suffers the same motivation issues as autocratic leadership, showing no involvement in the teams needs. It requires close supervision and control to achieve expected results. Another name for this is deal maker (Rowley & Roevens, 1999) and is linked to a first phase in managing Change, enhance, according to the Organize with Chaos approach.

The servant leader (Greenleaf, 1977) facilitates goal accomplishment by giving its team members what they need in order to be productive. This leader is an instrument employees use to reach

the goal rather than an commanding voice that moves to change. This leadership style, in a manner similar to democratic leadership, tends to achieve the results in a slower time frame than other styles, although employee engagement is higher.

The transaction leader (Burns, 1978) is given power to perform certain tasks and reward or punish for the team's performance. It gives the opportunity to the manager to lead the group and the group agrees to follow his lead to accomplish a predetermined goal in exchange for something else. Power is given to the leader to evaluate, correct and train subordinates when productivity is not up to the desired level and reward effectiveness when expected outcome is reached.

The transformation leader (Burns, 1978) motivates its team to be effective and efficient. Communication is the base for goal achievement focusing the group in the final desired outcome or goal attainment. This leader is highly visible and uses chain of command to get the job done. Transformational leaders focus on the big picture, needing to be surrounded by people who take care of the details. The leader is always looking for ideas that move the organization to reach the company's vision.

The environment leader (Carmazzi, 2005) is the one who nurtures group or organisational environment to affect the emotional and psychological perception of an individual's place in that group or organisation. An understanding and application of group psychology and dynamics is essential for this style to be effective. The leader uses organisational culture to inspire individuals and develop leaders at all levels. This leadership style relies on creating an education matrix where groups interactively learn the fundamental psychology of group dynamics and culture from each other. The leader uses this psychology, and complementary language, to influence direction through the members of the inspired group to do what is required for the benefit of all. Leadership associated with positions of authority

According to Thomas Carlyle, leadership emerges when an entity as "leader" contrives to receive deference from other entities who become "followers". The process of getting deference can become competitive in that the emerging "leader" draws "followers" from the factions of the prior or alternative "leaders"

Bernard M Bass developed this model for types of leadership based on two simple objectives; which is task orientation and people orientation. The leadership styles proposed below reflect different levels of task and people orientation.

- **Directive leadership style**

The directive leader tells his followers what to do, and how to do it exactly. He specifies standards required of his followers and exercise firm authority over them.

- **Consultative leadership style**

The consultative leader seeks the counsel of the whole team before making a decision on what the team should do. He is also task oriented, but he seeks the opinion of his followers as well.

- **Participative leadership style**

The participative leader puts himself as a member of the team and discusses possible decisions with the team. He seeks consensus before coming to a decision and everyone is supposed to take ownership in the final decision.

- **Negotiative leadership style**

The negotiative leader employs a more political approach to leadership. He has a personal interest in his decisions and he uses incentives to entice his followers to do certain things.

- **Delegative leadership style**

He takes back seat toward decision making, and allows his team to take their own course of action. He only sits down together with the team to discuss possible decisions that could be adopted.

The New Leadership Model

The new leadership consisted of new words describing leadership like visionary, charismatic and transformational, and it was developed by Burns in 1978. He contrasted the transactional leadership style to the transformational leadership style.

- **Transactional leadership**

Transactional Leaders practice management-by-exception and contingent reward. They set performance standards and do performance reviews for their followers.

- **Transformational leadership**

Transformational leaders have the ability to inspire and motivate their followers beyond their job description. They seek to bring change in their environment or community by improving on the current situation, whatever it may be. They tend to anticipate problems before they come and act accordingly.

- **Charismatic leadership**

Charismatic leaders have a natural ability to attract people and inspire commitment to their cause.

- **Visionary leadership**

Visionary leaders have the ability to see what things could be in the future, rather than what things are. Through the attractive visions that they give, they are able to draw followers to themselves.

Team Building and Techniques to Manage Groups

Bruce Tuckman's (1965) team-development model;

Dr Bruce Tuckman published his Forming Storming Norming Performing model in 1965. He added a fifth stage, Adjourning, in the 1970s. The Forming Storming Norming Performing theory is an elegant and helpful explanation of team development and behaviour. Tuckman's model explains that as the team develops maturity and ability, relationships establish, and the leader changes leadership style.

The progression is:
1. **forming**
2. **storming**
3. **norming**
4. **performing**

Here are the features of each phase:

Forming - stage 1

High dependence on leader for guidance and direction. Little agreement on team aims other than received from leader. Individual roles and responsibilities are unclear. Leader must be prepared to answer lots of questions about the team's purpose, objectives and external relationships. Processes are often ignored. Members test tolerance of system and leader. Leader directs.

Storming - stage 2

Decisions don't come easily within group. Team members vie for position as they attempt to establish themselves in relation to other team members and the leader, who might receive challenges from team members. Clarity of purpose increases but plenty of uncertainties persist. Cliques and factions form and there may be power struggles. The team needs to be focused on its goals to avoid becoming distracted by relationships and emotional issues. Compromises may be required to enable progress. Leader coaches.
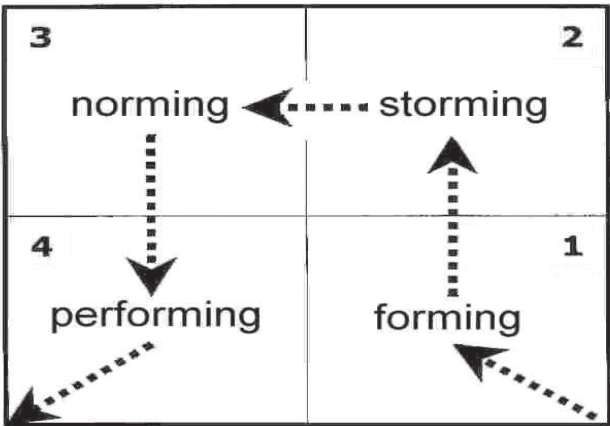
Norming - stage 3

Agreement and consensus is largely forms among team, who respond well to facilitation by leader. Roles and responsibilities are clear and accepted. Big decisions are made by group agreement. Smaller decisions may be delegated to individuals or small teams within group. Commitment and unity is strong. The team may engage in fun and social activities. The team discusses and develops its processes and working style. There is general respect for the leader and some of leadership is more shared by the team. Leader facilitates and enables.

Performing - stage 4

The team is more strategically aware; the team knows clearly why it is doing what it is doing. The team has a shared vision and is able to stand on its own feet with no interference or participation from the leader. There is a focus on over-achieving goals, and the team makes most of the decisions against criteria agreed with the leader. The team has a high degree of autonomy. Disagreements occur but now they are resolved within the team positively and necessary changes to processes and structure are made by the team. The team is able to work towards achieving the goal, and also to attend to relationship, style and process issues along the way. team members look after each other. The team requires delegated tasks and projects from the leader. The team does not need to be instructed or assisted. Team members might ask for assistance from the leader with personal and interpersonal development. Leader delegates and oversees.

The model proceeds as shown in figure 1;

Fig.1 Tuckman's Team development Model

Tuckman's fifth stage – Adjourning:

Bruce Tuckman refined his theory around 1975 and added a fifth stage to the Forming Storming Norming Performing model - he called it Adjourning, which is also referred to as Deforming and Mourning. Adjourning is arguably more of an adjunct to the original four stage model rather than an extension - it views the group from a perspective beyond the purpose of the first four stages. The Adjourning phase is certainly very relevant to the people in the group and their well-being, but not to the main task of managing and developing a team, which is clearly central to the original four stages.

Adjourning - stage 5

Tuckman's fifth stage, adjourning, is the break-up of the group, hopefully when the task is completed successfully, its purpose fulfilled; everyone can move on to new things, feeling good about what's been achieved. From an organizational perspective, recognition of and sensitivity to people's vulnerabilities in Tuckman's fifth stage is helpful, particularly if members of the group have been closely bonded and feel a sense of insecurity or threat from this change.

Techniques to manage groups;

1. Be certain that group activities further the course objectives.

Accurate assessment of student learning is possible only with clearly delineated goals. Learning activities must be framed by considerations of the impact they are intended to have on student learning and how well they achieve the desired results. The course objectives should also motivate students to succeed. Students are motivated to learn, according to McMillan and Forsyth, "if their needs are being met, if they see value in what they are learning, and if they believe they are able to succeed with reasonable effort".

2. Explain to students the nature and value of the proposed activities.

It is extremely important to explain why group interactions will further immediate course goals and also lead to other desirable outcomes such as acquiring the teamwork skills needed in the modern work place. More importantly, emerging studies suggest that students learn better when they have opportunities for collaboration.

3. Be certain to give clear instructions.

Group work can be frustrating for both students and faculty if instructions are not clear. Students may waste precious time puzzling over directions. Instructions should clearly delineate the task and/or explain expectations. They should indicate the degree of freedom given to students in structuring the task and assigning group roles. *Clear instructions always include the time involved*. Students cannot manage their time wisely if they cannot plan ahead. Clear instructions also eliminate barriers to learning. Tasks should be structured moderately to make collaboration both easy and desirable.

4. Keep the group size small.

Most teachers experienced with group work advocate groups composed of three to four students. Four, or a quad, is generally considered the ideal because the group is large enough to contain students who will bring diverse opinions, experiences, and learning styles to aid in problem solving. All must carry their fair share of the workload. A quad has the additional advantage of offering easy pair formation within the group.

5. Unless there is a compelling reason to do otherwise, aim for heterogeneous groups.

Felder and Brent explain the importance of heterogeneity in the following way:

The drawbacks of a group with only weak students are obvious, but having only strong students in a group is equally undesirable. First, the strong groups have an unfair advantage over other groups in the class. Second, the team members tend to divide up the homework and communicate only cursorily with one another, omitting the dynamic interactions that lead to most of the proven benefits of cooperative learning. In mixed ability groups, on the other hand, the weaker students gain from seeing how better students study and approach problems, and the strong students gain a deeper understanding of the subject by teaching it to others.

Research on heterogeneous grouping under cooperative conditions also reports important affective gains on the university level: Retention increases; students feel more positively toward the subject matter; students increase their communication and social skills, self-esteem rises, and peer relations become more positive. Group formation ideally furthers the pedagogical basis of the course. Group formation should promote: (1) course goals; (2) sound learning theory; and (3) philosophical convictions.

6. **Keep groups together long enough to establish positive working relationships.**

Permanent learning teams should remain together long enough to pass through the "forming," "storming," "norming" and "performing" phases cited in the group dynamics literature. Students need time to become acquainted, to identify one another's strengths, and to learn to support and coach one another. Thus, most practitioners recommend that groups remain together for the duration of an extended project or a series of ongoing activities.

7. **Allow time for team building.**

Team-building activities should not be frivolous, off-task exercises that send the wrong signal to students. Design early activities to get student working together on meaningful tasks. It is dangerous to assume that students will bring with them the skills needed to function effectively in cooperative groups.

8. **Encourage students to monitor group processing.**

Group processing activities help build team skills, allow students to reflect on their learning process and outcomes, and provide teachers with continuous feedback. Group processing involves such things as leadership, decision making, communication, and conflict resolution. Content is *what* is being discussed, while process is *how* the group is functioning. Both students and teachers need to monitor group and individual progress. After an assignment or activity, for instance, students could respond to questions such as: "Did all members of the group contribute?" "What could be done next time to make the group function better?" "What were the most important things I learned?" or "What contributions did I make?"

9. **Encourage students to practice and reinforce positive social skills.**

Social skills are important although students may not initially see their connection with academic learning. Interpersonal skills go well beyond mere politeness. Students must recognize the importance of cooperative interaction and mutual respect. Faculty should model appropriate social skills, including ways of providing constructive feedback or eliciting more in-depth responses through probing questions. They should also reinforce these social skills by publicly commenting on ways students use them effectively.

10. **Structure activities to promote positive interdependence**

Johnson, Johnson, and Smith (1991) describe positive interdependence in these words:

Cooperation results in participants' striving for mutual benefit so that all members of the group benefit from each other's efforts (your success benefits me and my success benefits you), their recognizing that all group members share a common fate (we sink or swim together) and that one's performance depends mutually on oneself and one's colleagues (we cannot do it without you), and their feeling proud and jointly celebrating when a group member is recognized for achievement (you got an A! that's terrific!).

Through careful planning, positive interdependence can be established by having students, achieve: (a) mutual goals, such as reaching a consensus on specific solutions to problems or arriving at team-generated solutions; (b) mutual rewards, such as individually assigned points counting toward a criterion-referenced final grade, points which only help, but never handicap; (c) structured tasks, such as a report or complex problem with sections mutually developed by all team members; and (d) interdependent roles, such as group members serving alternately as discussion leaders, organizers, recorders, and spokespersons.

11. Promote individual accountability.

No matter how much mutual support, coaching, and encouragement they receive, students must be individually responsible for their own academic achievements. Individual accountability indicates to students who might be "hitchhikers" (students who do not do a fair share of assigned group work) or "over achievers" or "workhorses" (students who assume a disproportionate amount of the workload), that these roles are unacceptable in a cooperative setting.

12. Set up a clear, non-competitive, criterion-referenced grading scheme.

A common misconception suggests that group work automatically entails group grades. Individual accountability precludes this too-often-used practice. Undifferentiated group grades for a single project, particularly when the work is completed out-of-class, invite inequity problems. Too often one student ends up doing the majority of the work. That student often relishes the power associated with this role but resents the lack of input from students who will benefit from the same grade. The students who contribute little receive signals that their efforts are unappreciated or unwanted, and they learn the negative lesson that they can receive a grade they did not earn. Thus, it is essential to establish clear criteria for success. These standards should be high, but they should

theoretically be within the grasp of all students who work cooperatively.

13. **Anticipate problems and don't be afraid to seek constructive help.**

No matter how carefully one plans, some things will invariably go wrong. It is therefore necessary to anticipate problems so that one is mentally prepared to seek help from knowledgeable colleagues and/or professionals.

Thus Building blocks for successful group management include the following:

- Creating a mission, goals, and ground rules
- Identifying stakeholders and their expectations
- Complimentary roles and responsibilities
- Building relationships, trust, and rewarding experiences

The collaborative participation of team's members translates into group behavior in a cyclical pattern as shown below.

Fig 2: Cyclic pattern of group behaviour

The characteristics of effective, successful groups include:

- Clear communication among all members.
- Regular brainstorming session with all members participating.
- Consensus among team members.
- Problem solving done by the group.
- Commitment to the project and the other team members.
- Regular team meetings are effective and inclusive.

- Timely hand off from team members to others to ensure the project keeps moving in the right direction.

- Positive, supportive working relationships among all team members.

Teams that are not working effectively together will display the following characteristics.

- Lack of communication among team members.

- No clear roles and responsibilities for team members.

- Team members "throw work over the wall" to other team members, with lack of concern for timelines or work quality.

- Team members work alone, rarely sharing information and offering assistance.

- Team members blame others for what goes wrong, no one accepts responsibility.

- Team members do not support others on the team.

- Team members are frequently absent thereby causing slippage in the timeline and additional work for their team members.

8.3   LET US SUM UP

In this unit the Behaviourist and Humanist Approaches towards managing classroom behaviour and bringing about Behaviour modification have been explained.

The unit also throws light on the aspects of Group dynamics and the different forms of leadership. The model for team building shows the various stages that need to be followed for effective team formation. It is not enogh to form groups and teams. It is essential to manage groups in order that they perform effectively and produce the desired results and fulfil the slated outcomes.

8.4   UNIT END EXERCISES

1) How are leadership styles classified?

2) Expain the Team development Model.

3) Elucidate the techniques for the effective management of groups.

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