PAPER III

ADVANCE EDUCATIONAL PSYCHOLOGY

UNIT I

(Relationship of education and psychology, Contributions of the following schools of psychology to education – Behaviorism, Gestalt,Hermic psychoanalysis, Contribution of Ausubel,Bloom, Gagne.)

Unit Structure:

1.0 Objective

1.1 Introduction

1.2 Relationship of education and psychology

1.3 Contributions of the following schools of psychology to education –

- Behaviorism,
- Gestalt,
- Hermic
- psychoanalysys,

1.4 Contribution of

- Ausubel,
- Bloom,
- Gagne.

1.0 OBJECTIVE

After going through this unit carefully you will be able to:

1. Understand the relationship of education and psychology

2. Understand the contributions of the following schools of psychology to education

- Behaviorism,
- Gestalt,
- Hormic
- psychoanalysys,

3. Understand the Contributions of the following schools of psychology to education

- Ausubel,
- Bloom,
- Gagne.
-

1.1 Introduction

Education in its general sense is a form of learning in which the knowledge, skills, and habits of a group of people are transferred from one generation to the next through teaching, training, or research. Education frequently takes place under the guidance of others, but may also be autodidactic.

In its broad sense, education refers to any act or experience that has a formative effect on the mind, character, or physical ability of an individual…In its technical sense education is the process by which society, through schools, colleges, universities, and other institutions, deliberately transmits its cultural heritage–its accumulated knowledge, values, and skills–from one generation to another."

- GEORGE F.KNELLER

Meaning of Education:

According to some learned people, the word "Education" has been derived from the Latin term "Educatum" which means the act of teaching or training. A group of educationists say that it has come from another Latin word "Educare" which means "to bring up" or "to raise".

According to a few others, the word "Education" has originated from another Latin term "Educere" which means "to lead forth" or "to come out". All these meanings indicate that education seeks to nourish the good qualities in man and draw out the best in every individual. Education seeks to develop the innate inner capacities of man.

By educating an individual we attempt to give him some desirable knowledge, understanding, skills, interests, attitudes and critical 'thinking. That is, he acquires knowledge of history, geography, arithmetic, languages and sciences.

Definitions of Education:

"Education is the creation of a sound mind in a sound body. It develops man's faculty, especially his mind so that he may be able to enjoy the contemplation of supreme truth, goodness and beauty of which perfect happiness essentially consists.

-Aristotle

"Education is the process of living through a continuous reconstruction **of experiences."**

-John Dewey

Meaning of Psychology:

- The word, 'Psychology' is derived from two Greek words, 'Psyche' and 'Logos'. Psyche means 'soul' and 'Logos' means 'science'. Thus psychology was first defined as the 'science of soul".

- According to earlier psychologists, the function of psychology was to study the nature, origin and destiny of the human soul. But soul is something metaphysical. It cannot be seen, observed and touched and we cannot make scientific experiments on soul.

Definition of Psychology:

* In the 18th century, psychology was understood as the 'Science of Mind'.
* William James (1892) defined psychology as the science of mental processes. But the words 'mind 'is also quite ambiguous as there was confusion regarding the nature and functions of mind.
  Modern psychologists defined psychology as the "Science of Consciousness".
* Psychology as the "Science of the Inner World"- James Sully (1884)
* Psychology as the science which studies the "internal experiences.- Wilhelm Wundt (1892)
* Psychology as the "Science of Behaviour"- William McDugall (1905)

* Psychology as the science of behavior - W.B. Pillsbury (1911) and J.B. Watson(1912)

Psychology should, therefore, be defined as a "science of behavior and experiences on human beings" -B.F. Skinner

* According to Crow and Crow, "Psychology is the study of human behaviour and human relationship'.

1.2 Relationship between Education and Psychology:

(1) Psychology and aims of education:

The aims of education can be fixed by taking the help of psychology changes of the child. So the needs, interest, aptitude and attitude are the indicators for planning any activity for education.

(2) Psychology and curriculum:

At the time of curriculum planning and construction, proper care should be taken for the development rate of the child. So they are complementary in the process of education.

(3) Psychology and methods:

A teacher has to give instructions through different methods, which should be linked with psychological problems, needs and development of the child.

(4) Psychology and evaluation:

The total process of evaluation and examination should be linked with psychological principles. Questions should be prepared taking the normal development of the children.

(5) Psychology and discipline:

The problems of discipline can be checked through proper psychological techniques. It also helps to check different behavioral problems of the children.

(6) Psychology and administration:

The process of administration should be based on the psychological techniques. In administration, proper care should be given on the basis of individual differences.

(7) Psychology and teacher:

Teacher should be a master of psychology to deal with a complex educational situation. Teaching is an art and so he should know different techniques of psychology in order to solve different problems of the children.

(8) Psychology and timetable, textbook preparation:

On the basis of psychological process the curriculum workers, teachers, administrators prepare suitable timetable according to the interest, time, suitability, local condition of the learners. Similarly while preparing textbooks he must consider the value of psychological needs, capacities and development of the learner.

Therefore, both psychology and education have close link with each other.. Every teacher should learn the child psychology before teaching.

SELF STUDY QUESTION

- Explain the difference between Education and Psychology.

1.3 CONTRIBUTION OF VARIOUS SCHOOLS OF PSYCHOLOGY:

Contributions of the following schools of psychology to education –

- Behaviorism,
- Gestalt,
- Hormic
- psychoanalysis,

1.3.1 *Behaviourism*

Behaviourism arose as a result of the controversy between structuralism and functionalism. Its chief proponent was **J.B.Watson**. He disagreed with both the structuralism and functionalism. According to Watson, it is useless to study elements of consciousness of effects on the different parts of the body because it does not help in the understanding of human nature.

For him, explanations of **'why'** wee unnecessary; **'how'** was the all important factor

. We can understand human nature by the study of one's physical activities, gestures and behaviour.

The subject-matter of psychology according to behaviourists is human and animal activity, which can be observed and measured in an objective way. The purpose of psychology is to discover ways and means of prediction and control of human and animal behaviour.

Consciousness, if at all it exists, is not the subject for scientific study. The unit of behaviour should be reflexes or stimulus response connections.

One's behaviour is composed of stimulus response bond, which can be successfully analysed by objective and scientific methods.

Therefore the chief method of psychology is observation of behaviour.

Watson was an extreme environmentalist. For him, environment is much more important than heredity in the determination of behaviour.

Contribution to Education

- It has greatly contributed to the psychology of learning and motivation.
- It has given a new methodology of teaching viz., the programmed learning.
- It lays great importance to environment and its influence on the growth and development of the individual.
- It emphasised the role of the school, community and the society in general and the teachers and parents in particular in providing proper environment for the proper development of the children.
- The teachers should provide appropriate situations, wherein the children interact with the other objects in the environment and acquire the various skills, habits, attitudes and values.

1.3.2 ***Gestalt psychology***

The real birth of Gestalt psychology is associated with Wertheimer. Gestalt is German word. It means form, or whole or pattern or configuration.

The Gestalt psychologists contend that behaviour cannot be understood well by analysis. Behaviour or a response is dependent on the whole and not on parts of the stimulus. Most of the work of the Gestalt psychologists was in the field of perception. According to

Gestalt psychologists the study of mental process and motor responses alone are not sufficient to understand behaviour. We have to include perception also, which depends on the environment in which the individual is situated.

They developed the laws of pragnanz or closure, proximity and similarity to explain perception.

- **Law of pragnanz or closure**

The human mind closes small gaps in our perception of object, so that minor defects or irregularities in them are overlooked .

- **Law of proximity**

Circles that are nearer one another form a group in our visual perception. Though all the circles are of the same size they appear to be in three groups on account of proximity as well as distance.

- **Law of similarity**

Objects of like shapes and colour stand out in distinct group in the visual field. Here grouping is done, not on the principle of nearness or distance, but on the similarity or difference in shape.

<u>Contribution to Education</u>

- The whole situation will help the individual to get insight
- Children should not be made to learn alphabets, which constitute a word. They must be taught words and even sentences first. This makes learning easy.
- According to Gestalt psychology, we have the tendency to go from the whole to the parts. If the school learning also proceeds like this things become easy.
- Gestalt psychology has a great relevance to socialization in the field of education We emphasis for example, group activity in the school, in which work is assigned to the whole group. Each student, of course, works separately. The work of each is, however

only a part of the whole assignment. Similarly, whenever there is a discussion, group discussion is the best.

- The whole situation will help the learner to learn quick and efficient.
- It gives emphasis to molar approach in understanding behaviour.
- It gives importance to group behaviour and social learning in education.

1.3.3 Hormic

McDougall was the exponent of this school of thought. According to him, each activity has a purpose behind it and leads towards some development.

Even children try to grow. There is an aim before us even during childhood. Also he stressed that all our **behaviours are purposeful and goal oriented.** We are always inspired by innate feeling of becoming great and perfect.

According to him, **a response is not always because of the occurrence of a stimulus. A response may be because of a motive.** It is not necessary that we feel the desire of eating only when we look at sweets. Desire to eat depends upon hunger. This is the motive, which produces the desire to eat. Different motives result in different responses. It is the instincts that motivate human activity. Each instinct associated with some emotions becomes the centre of all activities. Without them no activity is possible.

Contribution to Education

- Hormic psychology is concerned not only with cognition; it lays great importance on conation also. According to it, knowledge is only a by-product of the conation.

- Thus right education means educating him in terms of his goals of life. Thus Hormic psychology is dynamic.
- As instincts are the propellers of our activities, education should sublimate these instincts that are to use of these instincts for higher purpose, implying social good.
- McDougall lays great emphasis on the role of school in the development of self-regarding sentiment. It lays particular emphasis on the development of will power and character, because the development of will power helps in the development of self-regarding sentiment.
- It is the character in turn, which control the will.
- This school of psychology provides the teacher with an insight, which helps him to adjust child education in the light of the child's innate tendencies, wishes and sentiments.

1.3.4 Psychoanalysis

Psychoanalysis was founded during the late 1800's and early 1900's by the Austrian doctor ***Sigmund Freud***.

Psychoanalysis was based on the theory that behaviour is determined by powerful ***inner forces***, According to Freud and other psychoanalysts, from early childhood people repress (force out of conscious awareness) any desires or needs that are unacceptable to themselves or to society.

The repressed feelings can cause personality disturbances, self-destructive behaviour, or even physical symptoms. Freud said that unconscious conflicts, usually related to ***sex or aggression***, were prime motivators of human behaviour.

He was the first person who includes the unconscious mind in a formal psychological theory. Freud believed that all behaviours -whether normal or abnormal -is influenced by

psychological motives, often unconscious one.*Freud's "Theory of Unconscious Mind*" has a great value to understand the behaviour especially abnormal behaviour.

Self Study Questions:

- .Describe Gestalt contributions to the schools of psychology to education.
- .Discuss Hormic contributions to the schools of psychology to education.
- .Write Psychoanalysis contributions to the schools of psychology to education
- .Describe Behaviourism contributions to the schools of psychology to education

1.4 Contribution of

- Ausubel,
- Bloom,
- Gagne.

1.4.1 David Ausubel

David Ausubel was an American psychologist who did his undergraduate work at the University of Pennsylvania (pre-med and psychology). He graduated from medical school at Middlesex University. Later he earned a Ph.D in Developmental Psychology at Columbia University. He was influenced by the work of Piaget. He served on the faculty at several universities and retired from academic life in 1973 and began his practice in psychiatry. Dr. Ausubel published several textbooks in developmental and educational psychology, and more than 150 journal articles. He was awarded the Thorndike Award for "Distinguished Psychological Contributions to Education" by the American Psychological Association (1976).

Theory

Ausubel, whose theories are particularly relevant for educators, considered neo-behaviorist views inadequate. Although he recognized other forms of learning, his work focused on verbal learning. He dealt with the nature of meaning, and believes the external world acquires meaning only as it is converted into the content of consciousness by the learner.

Meaningful Verbal Learning

Meaning is created through some form of representational equivalence between language (symbols) and mental context. Two processes are involved:

1. Reception, which is employed in meaningful verbal learning, and
2. Discovery, which is involved in concept formation and problem solving.

Ausubel's work has frequently been compared with Bruner's. The two held similar views about the hierarchical nature of knowledge, but Bruner was strongly oriented toward discovery processes, where Ausubel gave more emphasis to the verbal learning methods of speech, reading and writing.

Subsumption Theory

To subsume is to incorporate new material into one's cognitive structures. From Ausubel's perspective, this is the meaning of learning. When information is subsumed into the learner's cognitive structure it is organized hierarchically. 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. This existing structure provides a framework into which the new learning is related, hierarchically, to the previous information or concepts in the individual's cognitive structure.

When one encounters completely new unfamiliar material, then rote learning, as opposed to meaningful learning, takes place. This rote learning may eventually contribute to the construction of a new cognitive structure which can later be used in meaningful learning.

The two types of subsumption are:

1. Correlative subsumption - new material is an extension or elaboration of what is already known.
2. Derivative subsumption - new material or relationships can be derived from the existing structure.

Information can be moved in the hierarchy, or linked to other concepts or information to create new interpretations or meaning. From this type of subsumption, completely new concepts can emerge, and previous concepts can be changed or expanded to include more of the previously existing information. This is "figuring out".

Ausubel is a proponent of didactic, expository teaching methods. From this perspective, expository (verbal) learning approaches encourage rapid learning and retention, whereas discovery learning (Bruner) facilitates transfer to other contexts.

Advanced Organizers

Ausubel contributed much to the theoretical body of cognitive learning theory, but not as much to the practical classroom aspects as Bruner and others. Ausubel's most notable contribution for classroom application was the advance organizer.

The advance organizer is a tool or a mental learning aid to help students `integrate new information with their existing knowledge, leading to "meaningful learning" as opposed to rote memorization. It is a means of preparing the learner's cognitive structure for the learning experience about to take place. It is a device to activate the relevant schema or conceptual patterns so that new information can be more readily `subsumed' into the learner's existing cognitive structures.

Ausubel believed that it was important for teachers to provide a preview of information to be learned. Teachers 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, concepts, vocabulary, to existing mental maps of the content area.

1.4.2 Benjamin Bloom

Benjamin Bloom (1913–1999) spent over 50 years at the University of Chicago where he worked in the department of education.

Bloom's Taxonomy is a classification system developed in 1956 by education psychologist Benjamin Bloom to categorize intellectual skills and behavior important to learning. Bloom identified six cognitive levels: knowledge, comprehension, application, analysis, synthesis, and evaluation, with sophistication growing from basic knowledge-recall skills to the highest level, evaluation.

History of Bloom's Taxonomy

Bloom's Taxonomy was created in 1948 by psychologist Benjamin Bloom and several colleagues. Originally developed as a method of classifying educational goals for student performance evaluation, Bloom's Taxonomy has been revised over the years and is still utilized in education today.

The original intent in creating the taxonomy was to focus on three major domains of learning: cognitive, affective, and psychomotor.

1) Cognitive domain- The cognitive domain covered "the recall or recognition of knowledge and the development of intellectual abilities and skills".
2) Affective domain- the affective domain covered "changes in interest, attitudes, and values, and the development of appreciations and adequate adjustment".
3) Psychomotor domain - the psychomotor domain encompassed "the manipulative or motor-skill area."

Despite the creators' intent to address all three domains, Bloom's Taxonomy applies only to acquiring knowledge in the cognitive domain, which involves intellectual skill development.

The original Bloom's Taxonomy contained six developmental categories: knowledge, comprehension, application, analysis, synthesis, and evaluation.

The first step in the taxonomy focused on knowledge acquisition and at this level, students recall, memorize, list, and repeat information.

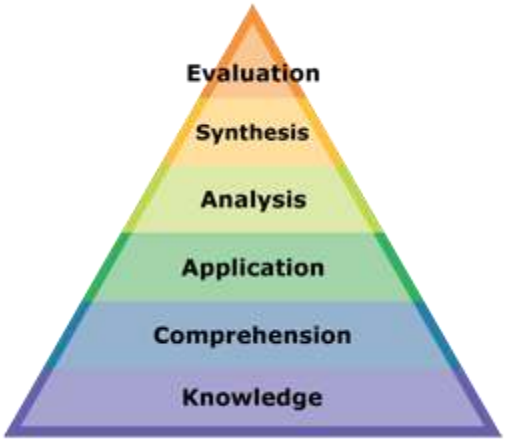
In the second tier, students classify, describe, discuss, identify, and explain information.

Next, students demonstrate, interpret, and write about what they've learned and solve problems.

In the subsequent step, students compare, contrast, distinguish, and examine what they've learned with other information, and they have the opportunity to question and test this knowledge.

Then students argue, defend, support, and evaluate their opinion on this information.

Finally, in the original model of Bloom's Taxonomy, students create a new project, product, or point of view.



Original Bloom's Taxonomy.

In the 1990s, one of Bloom's students, Lorin Anderson, revised the original taxonomy. In the amended version of Bloom's Taxonomy, the names of the major cognitive process categories were changed to indicate action because thinking implies active engagements. Instead of listing knowledge as a part of the taxonomy, the category is divided into different types of knowledge: factual, conceptual, procedural, and metacognitive. This newer taxonomy also moves the evaluation stage down a level and the highest element becomes "creating."

The revised taxonomy.

Bloom's Taxonomy in the Classroom

Bloom's Taxonomy can be used across grade levels and content areas. By using Bloom's Taxonomy in the classroom, teachers can assess students on multiple learning outcomes

that are aligned to local, state, and national standards and objectives. Within each level of the taxonomy, there are various tasks that move students through the thought process. This interactive activity demonstrates how all levels of Bloom's Taxonomy can be achieved with one image.

In order for teachers to develop lesson plans that integrate Bloom's Taxonomy, they write their lessons in the language that focuses on each level. The United States Geological Survey provides a list of verbs for each level of Bloom's Taxonomy for teachers to use when developing lesson plans. (Although the list is designed for environmental science teachers, the examples will work for any discipline.)

1.4.3 Gagne

Robert Mills Gagné (August 21, 1916 – April 28, 2002) was an American educational psychologist best known for his "Conditions of Learning". Gagné pioneered the science of instruction during World War II when he worked with the Army Air Corps training pilots. He went on to develop a series of studies and works that simplified and explained what he and others believed to be 'good instruction.' Gagné was also involved in applying concepts of instructional theory to the design of computer-based training and multimedia-based learning [reference?].

Gagné's work is sometimes summarized as **the Gagné assumption**. The assumption is that different types of learning exist, and that different instructional conditions are most likely to bring about these different types of learning.

Gagné's theory stipulates that there are several types and levels of learning, and each of these types and levels requires instruction that is tailored to meet the needs of the pupil. While Gagne's learning blueprint can cover all aspects of learning, the focus of the theory is on the retention and honing of intellectual skills. The theory has been applied to the design of instruction in all fields, though in its original formulation special attention was given to military training settings.[3]

Five categories of learning

1. Intellectual skills: Create individual competence and ability to respond to stimuli.
2. Cognitive strategies: Capability to learn, think, and remember
3. Verbal information: Rote memorization of names, faces, dates, phone numbers, etc.
4. Motor skills: Capability to learn to drive, ride a bike, draw a straight line, etc.
5. Attitudes: Ingrained bias towards different ideas, people, situation, and may affect how one acts towards these things.

Each category requires different methods in order for the particular skill set to be learned.[4]

Eight ways to learn

1. Signal Learning: A general response to a signal. Like a dog responding to a command.
2. Stimulus-Response Learning: A precise response to a distinct stimulus.
3. Chaining: A chain of two or more stimulus-response connections is acquired.
4. Verbal Association: The learning of chains that are verbal.
5. Discrimination Learning: The ability to make different responses to similar-appearing stimuli.
6. Concept Learning: A common response to a class of stimuli.
7. Rule Learning. Learning a chain of two or more concepts.
8. Problem Solving. A kind of learning that requires "thinking."

Designing instruction

Skills are to be learned at the lowest level and mastered before proceeding. An instructor should use positive reinforcement and repetition, with each new skill building upon previously acquired skills.

Steps of planning instruction

1. Identify the types of learning outcomes: Each outcome may have prerequisite knowledge or skills that must be identified.
2. Identify the internal conditions or processes the learner must have to achieve the outcomes.
3. Identify the external conditions or instruction needed to achieve the outcomes.
4. Specify the learning context.
5. Record the characteristics of the learners.
6. Select the media for instruction.
7. Plan to motivate the learners.
8. Test the instruction with learners in the form of formative evaluation.
9. After the instruction has been used, summative evaluation is used the judge the effectiveness of the instruction. problem solving

Nine steps of instruction

2. Gain attention: Present stimulus to ensure reception of instruction.
3. Tell the learners the learning objective: What will the pupil gain from the instruction?
4. Stimulate recall of prior learning: Ask for recall of existing relevant knowledge.
5. Present the stimulus: Display the content.
6. Provide learning guidance
7. Elicit performance: Learners respond to demonstrate knowledge.
8. Provide feedback: Give informative feedback on the learner's performance.
9. Assess performance: More performance and more feedback, to reinforce information.
10. Enhance retention and transfer to other contexts

Evaluation of instruction

1. Have the objectives been met?

2. Is the new program better than the previous one?
3. What additional effects does the new program include?

The purpose is to supply data on feasibility and efficiency to develop and improve the course.

Evaluation is concerned with the effectiveness of the course or program regarding the student's performance. Based on the student's performance, measures are taken of the kind of student capabilities the program is intended to establish.

When objectively analyzing the condition for learning Gagné says: "Since the purpose of instruction is learning, the central focus for rational derivation of instructional techniques is the human learner. Development of rationally sound instructional procedures must take into account learner characteristics such as initiate capacities, experimental maturity, and current knowledge states. Such factors become parameters of the design of any particular program of instruction

Self Study Questions:

- Explain contribution of David Asubel.
- Describe Bloom's Taxonomy.
- Explain Gagne theory.

References

1.Bhatia, H. R.: Elements of Educational Psychology, Orient Langman Ltd., Bombay, 1990.

2.Chauhan, S. S.: Advance Educational Psychology, Vikas Publishing House, New Delhi, 2000.

3.Chauhan, S. S.: Psychology of Adolescence, Vikas Publishers, New Delhi, 2000.

4. Dandipani, S.: A Textbook of Advanced Educational Psychology. New Delhi: Anmol Publications Pvt. Ltd., 2000.

5. Dash, M.: Educational Psychology. New Delhi: Deep and Deep, 1991.

10.Kundu, C.L. and Tutoo, D.N.: Educational Psychology. New Delhi: Sterling Publishers Pvt. Ltd., 2000.

11.Mathur, S. S.: Shiksha Manovigyan, Lyal Book Depot, Meerut.

14.Srivastava, G. N. P.: Recent Trends in Educational Psychology, Psycho Research Cell,Agra, 2000.

15.Tripathi, S. N.: Pratiba Aur Srijnatmakta, Mcmillan Co., Bombay, 1983.

16. Woodworth, R.S. and Schloberg: Experimental Psychology. New Delhi: Oxford and IBH Publishers, 1971.

17.Bloom, B. S. (1956). Taxonomy of Educational Objectives: The Classification of Educational Goals. Handbook 1; Cognitive Domain. New York: David McKay Co. Inc.: pp. 7-8.

18.Krathwohl, D. R. (2002). "A Revision of Bloom's Taxonomy: An Overview." Theory into Practice, 41 (4): pp. 212-18

19 Aggarwal JC: Essential Of Educational Psychology

20 Chattejee Saroj: Advanced Educational psychology

21 Chauhan SS: Advanced Educational Psychology

22 Dandekar W N: Fundamentals of Experimental Psychology

23 Dandpani S: A text book of Advanced Educational Psychology

24 Edward E Smith: Cognitive Psychology

25 Raison Kenneth; Eller Ben F: Educational Psychology for effective teaching

26. Janda L H & Kllenke H K E: Psychology its study and Uses

27. Lefrancois Guy R: Psychology for teaching

28. Lefrancois Guy R: Theories of Human Learning

29 . Mangal S K: Advanced Educational Psychology

30. Mathur S S: Educational Psychology

31. S K Mangal: Essentials of Educational Psychology

32. S. K Mangal: Advanced Educational Psychology

33. Walia J S: Foundations of Educational Psychology

34 Bloom, B. :Taxonomy of Educational Objectives-Book-2

ADVANCE EDUCATIONAL PSYCHOLOGY

UNIT - II

THEORIES OF LEARNING

UNIT STRUCTURE

1.0 OBJECTIVES

After reading this unit ,you will be able to

1. Explain Pavlov's classical conditioning and skinners operant conditioning
2. understand Bandura's Observational learning
3. know Hull's Reinforcement Theory
4. explain Bruner's Discovery learning
5. Educational implication above learning theories.
6. understand meaning of transfer of learning and its theories.

7. know motivation and learning.

1.1 Introduction:

Learning occupies important place in life .It is through learning that man brings in so much changes in his instincts that it becomes difficult recognized to them. learning therefore provides key to the structure of our personality and behaviour. how learning takes place ? What happen within the person when he learns? these are differnt questions in front of psychologist. As regards of the nature of learning psychologist are still in disagreement wiht one another. psychology has never presented in any one place a complete ,unified, and universally agreed upon account of the nature of learning .Hence several psychologist put forth the different theories of learning .

1.2 Pavlov's classical conditioning theory :

While studying the functioning of the digestive system , a Russian psychologist named Ivan Pavlov encountered an unforeseen problem: the dog in his experiment salivated not only upon actually eating but also when they saw the food, noticed the man who usually brought it, or even heard his footsteps. Pavlov began time study this phenomenon, which he called 'conditioning'. To understand the nature of the process of conditioning , Pavlov performed the following experiment .

*Pavlov's Experiment :-

In his experiment, Pavlov kept a dog hungry for a few days and then tied him to the experimental table which was fitted with certain mechanically as far as it was possible to do so. The observer himself remainded hidden from the dog but was able to view the experiment by means of a set if mirrors. Arrangement was made to give food to the dog through an automatic mechanism. He also arranged for a bell to ring every time food was presented to the dog. When the food was put before the dog and the bell was rung, there was automatic secretion of saliva from the mouth of the dog. The activity of presenting the food accompanied with the ringing of the bell was repeated several timed and the amount of saliva secreted was measured.

After several trials the dog was given no food but the bell was rung. In this case also, the amount of saliva secreted was recorded and measured. It was found that even the absence of food (the natural stimulus), the ringing of the bell (an artificial stimulus) caused the dog to secrete the saliva (natural response).

The above experiment thus brings to light four essential elements of the conditioning process. The first elements is a natural stimulus, technically known as unconditioned stimulus (US) i.e.food. It results in a natural response called the unconditioned response (UR). This response constitutes the second element .The third element is the artificial stimulus , i.e. the ringing of the bell which is technically known as a conditioned stimulus (CS). It is substituted for the natural stimulus (food). To begin with, the conditioned stimulus does not evoke the desired response, i.e. the conditioned response (CR). The fourth element is the chain the conditioning process. However, as a result of

conditioning, one learns to produce behaviour in the form of a conditioned response to a conditioned stimulus.

Principles of Classical conditioning :

1. Extinction :- The process of gradual disappearance of the conditioned response or disconnection of the S-R association is called extinction.

2. Spontaneous recovery : - After extinction, when a conditioned response is no longer evident, the behaviour often reappears spontaneously but at a reduced intensity. The phenomenon – the reappearance of apparently extinguished conditioned response after an interval in which the pairing of conditioned stimulus (CS) and unconditioned stimulus (US)has not been repeated is called spontaneous recovery. It shows that , the learning is suppressed rather than forgotten. As the time passes, the suppression may become so strong that there would , ultimately be no further possibility of SR.

3. Stimulus generalisation :- Responding to the stimuli in a generalized way was termed as stimulus generalisation with reference to a particular stage of learning behaviour in which an individual once conditioned to respond to specific stimulus is made to respond in the same way in response to other stimuli of similar nature.

4. Stimulus discrimination :- It is the opposite of stimulus generalization. In sharp contrast to responding in a usual fashion, the subject learn to react different in different situations. Conditioning through the mechanism of stimulus discrimination one learns to react only to a single specific stimulus out of the multiplicity of stimuli and to distinguish and discriminate one from the others among a variety of stimuli present in our environment.

IMPLICATIONS OF CLASSICAL CONDITIONING ;

1. In day to day life,fear, love, hatred towards an object or phenomenon or event is created through conditioning.

2. Most learning is associated with the process of conditioning i.e. stimulus response association and substitution.

3. The phenomenon of stimulus generalization and discrimination goes on throughout our lives.

4. Abnormality in one's behaviour may to a great extent be the result of conditioning.

5. Much of our behaviour in the shape of interests, attitudes, habits, sense of application or criticism, mood & temperaments is fashioned through conditioning.

6. Conditioning helps in learning what is desirable and also unlearning what's undesirable.

SKINNER'S OPERENT CONDITIONING THEORY :

B.P. Skinner conducted a series of experiment with animals. For conducting the experiments with rats, he designed a special apparatus known as a Skinner's Box. It was modified form of the puzzle box used by Thorndike for his experiments with cats. The darkened sound proof box has a grid floor, a system of` light or sound produced at a time of delivery of a pellet of food in the food cup,

a lever and a food cup.It is arranged so that when a rat presses the lever, the feeder mechanism is activated, a light or a special sound is produced and a small pellet of food is released into the food cup. For recording the observations of the experiments, the lever is connected to a recording system which produces a graphical plotting of the number of lever press against the length of time the rat is in the box.

In one of his experiment ,Skinner placed a hungry rat in the above described box. In this experiment , pressure on the bar in a certain way by the rat could result in the production of a click and emergence of a food pellet. The click sound acted as a signal to the rat that if it were to respond by going to the food cup, it would be rewarded. The lever pressing response having been rewarded, the rat repeated it and was again rewarded which further increased the probability of the repetition of the lever pressing response and so it continued. In this way, ultimately the rat learned to press the lever as desired by the experimenter.

With the help of such experiments, Skinner put forward his theory of operant conditioning for learning not only the simple responses like pressing of the lever but also for learning the most difficult and complex series of responses.

MECHANISM OF OPERANT CONDITIONING :

The important thing in the mechanism of operant conditioning is the emitting of a desired response and its proper management through suitable reinforcement. This can be done as follows: -

1**. Shaping** : In situation where the desired responses do not occur at random efforts are directed at eliciting the appropriate responses. This is done by building a chain of responses through a step process called 'Shaping'.

In one of his experiment for shaping the behaviour of a pigeon, to teach it to walk in a figure of eight Skinner watched its activity and gave it a small amount of given the reward for simply turning its head in the right direction, then for making a correct turn and so on, until it had learned to walk a complete figure of eight.

Shaping in this way, may be used as a successful technique for training individuals to learn difficult and complex behaviour and also for introducing desirable modification in their behaviour.

2. **Chaining : '**Chaining' refers to a process in the process in the shaping of behaviour or task is broken down into small steps for its effective learning and subsequent reinforcement.

3.**Discrimination and cueing :**

When you pick up your telephone and hear the dial tone, certain response to the dial tone makes you advance to pushing the buttons, for dailing a number or to stop making use of the telephone. These responses to the dial tone are said to be cues or signals indicating whether operant behaviour will be reinforced and which behaviour will be punished.

The process of discrimination has wide applications in the field of instruction and behaviour modification. However, for helping the student learn to discriminate, due care should be taken to provide proper feedback on the correctness or incorrectness of his responses.

4. **Generalisation :** Generalisation may be understood in term of a learning process where the organism learns to provide similar operant responses, to stimuli similar to but not the same as the training stimulus. In helping the children to learn appropriate generalization due care should be taken by the parent and teacher to reinforce the behaviour of the children only after they demonstrate the ability to generalize correctly.

THE SCHEDULES OF REINFORCEMENT :

1. Continuous reinforcement schedule :

This is an out and out reinforcement schedule where provision is made to reinforce or reward every correct response of the organism during acquisition of learning.

E.g. A student may be rewarded for every correct answer he gives to question or problem put forth by his teacher.

2. Fixed ratio reinforcement schedule :

This schedule is used in some factories and by employers of casual workers or labourers where wages are paid on a piece – work basis i.e. The number of garments sewn or the number of baskets or boxes packed.

3. Variable reinforcement schedule :

When reinforcement is given at varing interval of time or after a varing number of responses, it is called a variable reinforcement schedule. In this case, reinforcement is intermittent or irregular. The most common example of such a schedule in human behaviour is the reinforcement operation schedule of gambling devices. Here rewards are unpredictable and keep the players well motivated through occasional returns.

4. Fixed interval reinforcement schedule :

In this schedule the organism is rewarded for a response made only after a set interval of time. E.g. Every 3 minutes or every 5 minutes.

How many times he has given correct response during this fixed interval of time does not matter, it is only at the expiry of the fixed interval that he is presented with some reinforcement.

IMPLICATION OF THE THEORY OF OPERANT CONDITIONING :

1. A response or behaviour is not necessarily depended upon a specific known stimulus. It is more correct to think that a behaviour or response is depended upon its consequences. Therefore, the learning or training process and environment must be so designed as to create the minimum frustration and the maximum satisfaction in a learner to provide him with proper reinforcement for the desired training or learning.

2. The principle of operant conditioning may be successfully applied in behaviour modification. We have to find something which is rewarding for the individual whose behaviour we wish to modify, wait until the desired behaviour occurs and immediately reward him when it does. Proceeding in this manner, we can induce the individual to learn the desired behaviour.

3. The development of human being personality can be successfully manipulated through operant conditioning. According to Skinner we are what we have been rewarded for being. What we call personality is nothing more than consistent behaviour patterns that summerize our reinforcement history. We learn to speak English for example because we have been rewarded for approximating the sound of the English language in our early home environment.

4. The theory of operant conditioning does not attribute motivation to internal process within the organism. It takes for granted the consequences of that behaviour.

5. Operant conditioning emphasizes the importance of schedule in the process of reinforcement of behaviour. In trying to impart or teach a particular behaviour,therefore, great care should be taken for the proper planning of the schedule of reinforcement.

6. The theory advocated the avoidance of punishment for unlearning the undesirable behaviour and for shaping the desirable behaviour. Punishment proves ineffective in the long run. Operant conditioning experiment suggested appropriate alternative to punishment, in the form of rewarding appropriate behaviour and ignoring inappropriate behaviour, for its gradual extinction.

7. In this most effective application, the theory of operant conditioning has contributed a lot to the development of teaching machines and programmed learning. The theory of operant conditioning has shown that learning proceeds most effectively if;

a) The learning material is so designed that it produces fewer chances for failure and more opportunities for success

1.3 BANDURA'S OBSERVATIONAL LEARNING

A person learns through observation. A students observes others behaviour(elders, teachers, people around him) and learns through the observation . Allbert Bandura appreciates the role of such observation in learning. He is called a social psychologist. The cognitive psychologist –who appreciate the role of observation in learning are termed as social psychologist and termed the theory of learning they propagate is known as the social learning theory.

Introducing his theory Bandura(Lewin – 1978) writes “we do not blindly respond to environmental stimuli rather we pick and choose from many environment options, basing our

decisions on our own insights and experiences. This we do through observational learning or learning through indirect experiences is the base of social learning theory.

Our learning is acquired through watching and listening to other people. The children from the very beginning keenly observe the behaviour of others. Most commonly of the people nearest to them like parents, members of family ,teachers, the older members of society. In turn they try to imitate and do what they observe. The power of observational learning can be confirmed through laboratory experiments as well as through observation in our daily life. Child may also incorporate and imitate the behaviour of the characters he read about in novels, hears about over the radio or sees on T.V. or in movies. The person whose behaviour he observes and often imitates are known as models and observational learning is refffered to as modelling.

Observational learning can thus provide extra dimensions and opportunities for the learners in addition to their learning through self experience and direct involvement with environmental consequences.

Bandura explains the following steps usually involved in learning :

1. Attending and perceiving :- observation of a role model catches the attention of a child.

2. Remembering the behaviour :- The child remembers the actions and styles.

3. Converting the memory into action :- The child imitates the the role model. A behaviour observed and remembered by the learner is analysed in terms it its acceptability to the learner. It is transformed into action only afterwards and thus the observed relevant and accepted aspect of the model's behaviour are imitated by the learner.

4. Reinforcement of the imitated behaviour :- The child tries to change himself into the role of a model. The behaviour of the model imitated by the learner is reinforced for proper adoption and further continuance.

In this way social learning through observation and modelling proves to be an effective means of learning many things concerning one's behaviour. The impact of his observations and nature at his environment , his expression of love, anger, hatred companionship , friendship, understanding being and mixing with the group or being alone, express his mode of observation and behaviour. All this reaction and responses depends upon what has been observed, remembered, imitated and reinforced it in the context of his experiences and models.

1.4. HULL'S REINFORCEMENT THEORY :-

Clark L. Hull (1884-1952) , a teacher in the Universities of Wisconsin and Yale, is credited with putting forth a systematic mathematical and scientific theory of human behaviour based on conditioning and connectionism of the earlier behaviourists.

Hull's theory is known by various names viz Systematic Behaviour Theory, Drive Reduction theory, Mathematico Deductive theory, S-R Theory of Learning. Hull's Theory of learning can be described as under :

Comprehensive and systematic theory :

Hull put forth a comprehensive theory which includes both the principle of substitution and law of effect.Hull alone attempted to give a systematic and explicit nature of learning. He found out hypothetical side of learning. He not only touched the conditions but also the process of learning.

Intervening variables and antecedent variables:

Hull formulated a series of postulates or laws by which he defined intervening variables essential to learning. As suggestive the explicitness and precision with which Hull attempted to define the intervening variables upon which learning is depended, consider his forth postulates :

"Whenever an effector activity and a receptor activity occur in close temporal contiguity, and this is closely and consistently associated with the diminution of a need or with stimulus which has been closely and consistently associated with the diminution of a need, there will result an increment or a tendency for that afferent impulse or later occasions to evoke that reaction. The increments from successive reinforcements summate in a manner which yields a combined habit strength which is a simple positive growth function of the number of reinforcements."

Hull's intervening variables are :-

i) Habit strength ii)Drive iii) Incetive motivation iv)Reactive inhibition v) Conditioned inhibition vi) reaction potential vii) Generalised habit strength viii) Generalised reaction potential ix)Aggregate inhibitory potential x) Oscillation reaction potential

Hull's antecedent variables are :-

i) Drive conditions ii)Intensity of stimulus iii) Number of reinforcements iv)work in responce v) Amount of reward

Hull's postulates :-

1) Physiological equipment :

The organism has a hierachy of a goal oriented responses at the birth is the first postulate. According to the second postulate there is interaction of neutral impulses and their effect on subsequent interactions.

2)Drive and response evocation :

If a response is associated with stimulus trace and the two are associated with decreasing drive produced stimuli, that stimulus trace would have an increasing tendency to evoke the response is the third postulate.

3) Habit formation and reinforcement :-

According to forth postulate, there is reinforcement on every trial, successive reinforcements give a combined habit strength.

4) Factors affecting reaction potential :-

According to 5,6,7,8 th postulates, Reaction potential is the strength of tendency to respond. Factors which influence reaction potential are :

i) Drives : (5^{th} postulate)

The concept of drive is very important in Hull's theory. It has following functions :-

a) It is essential for primary reinforcement and for response.

b)It activates habit strength into reaction potential.

c)It regulates habits by the needs of the organism.

ii) Stimulus intensity : (6^{th} postulate)

Reaction potential depends upon the intensity of the stimulus.

iii) Incentive motivation : (7^{th} postulate)

Reaction potential depends upon the magnitude of the incentive.

iv) Habit strength : (8^{th} postulate)

Reaction potential depends upon habit strength multiplied by drive, incentive motivation and stimulus intensity relationship.

<u>Inhabition of reaction potentials :</u>

There are two kind of inhibitory potentials :

i) Reactive inhibition :

The occurrence of response inhabits reaction potential. This inhabition dissipates with the lapse of time. Aggregate inhibitory potential depends upon the (a) magnitude of work and the (b) number of responses.

ii) Conditioned inhabition :

It means conditioned non- activity depending upon generalised habit strength and generalised reaction potential.

5) Generalised habit strength and generalised reaction potential : (10^{th} postulate)

Habit strength is generalised potential when stimuli are equivalents. Generalised reaction potential depends upon habit strength, drive, incentive motivation and stimulus intensity remaining constant. Generalised potential is greater to interaction of stimuli than to stimuli as such. Reaction potential varies from time to time. This phenomena is known as behavioural oscillation. (postulate 12)

6) Actual response : (postulate 13)

If two or more incompatiable reaction potential exit, response with greater reaction potential would evoked.

7) Inferring reaction potential :-

The shorter the reaction latency, the greater could be the reaction potential. (postulate 14^{th})

Reaction potential depends upon reaction amplitude, relationship is linear. (postulate 15^{th})

Reaction potential is a function of massed unreinforcements.

(postulate 16^{th})

8) Individual differences :- (postulate 17^{th})

There are differences from individual to individual and differences in physiological states within the same individual at different times.

9) Goal gradients :-

Actions which are nearer the goal are learned quickly than the actions which are farther from the goal.

<u>Limitations of Hull's Theory :</u>

1) Restrictive experimental base : Hull's experimental verification with human subjects is limited.

2) Challenged by experimental findings : This theory do not support the assumption that habit strength is a direct function of number reinforcements.

3) Confusion about nature of reinforcement : There is confusion about reinforcement and motivation. It is not clear whether reinforcement is of retroactive nature.

4) Not in accordance with contemporary trend : The comtemporary trend in learning theories is away from it.

Educational significance : -

1) This theory emphasises motivation in learning.

2) This theory states that repetition helps in learning. The greater the number of repetitions, the greater is the needs of children.

3)Hull's theory emphasises individualised education. Hence all the programmes and procedures should be related to the needs of children.

4) Artificial incentives should be used for learning . Progress should be rewarded. It will lead to reinforcement and hence to learning.

1.5 BRUNER'S DISCOVERY LEARNING

Jerome Bruner is credited with originating discovery learning in the 1960s. Discovery learning is a technique of inquiry-based instruction and is considered a constructivist based approach to education. Accordingly to Bruner, Discovery learning takes place in problem solving situations where the learner draws on his own experience and prior knowledge and is a method of instruction through which students interact with their environment by exploring and manipulating objects, wrestling with questions and controversies, or performing experiments.

Major Theme :-

1) Learning is an active process in which learners construct new ideas/concepts based upon their current or past knowledge.
2) Discovery Learning is an inquiry based, constructivist learning theory which takes place in problem solving situations where learner draws on his/her own past experiences and existing knowledge to discover facts and relationships and new truths to be learned.

Main Concepts :-

1) Representation –

In his research on the cognitive development of children (1966), Jerome Bruner proposed three modes of representation:

i) Enactive representation (action-based)
ii) Iconic representation (time-based)
iii) Symbolic representation (language-based)

Modes of representation are the way in which information or knowledge are stored and encoded in memory.

i) Enactive (0 – 1 years): This appears first. This is the mode where information is stored in the form of actions on physical objects. Children know about the world through actions on physical objects and outcomes of these actions. For example, in the form of movement as a muscle memory, a baby might remember the action of shaking a rattle.

ii) Iconic (1 – 6 years): This is where information is stored visually in the form of images (a mental picture in the mind's eye). For some this is conscious; others say they don't experience it. This may explain why, when we are learning a new subject, it is often helpful to have diagram or illustrations to accompany verbal information.

iii) Symbolic (7 years onwards): This develops last. This is where information is stored in the form of a code or symbol, such as language. This is the most adaptable form of representation, for actions and images have a fixed relation to that which they represent.

Symbols are flexible in that they can be manipulated, ordered, classified etc., so the user isn't constrained by actions or images. In the symbolic stage, knowledge is stored primarily as words, mathematical symbols, or in other symbol systems. For e.g., symbols of mathematical operations, greater than less than etc.

2) Spiral Curriculum -

According to Bruner, teaching should always lead to boost cognitive development. Teachers should not teach from the teacher's level of understanding, but they should translate information to be learnt in the format appropriate to learner's current state of understanding.

Bruner has given us following principles based on Spiral Curriculum and Instructions:-

i) Readiness: Instructions should be concerned to the experiences of learner and contexts that make the student willing and able to learn. That means the students should be made ready to acquire the new knowledge on the basis of past experiences.

ii) Spiral Organization: Instructions must be structured to that it can be easily grasped by the students.

iii) Going beyond the information given: Instructions must be designed to facilitate learning and/or fill in the gaps. The teachers should not only give the text knowledge but the new information should be provided by considering the psychology of the child.

iv) Discovery Learning -

Discovery learning refers to obtain knowledge for oneself. Activities should be planned and arranged in such a way that students search, manipulate, explore and investigate. Most discoveries do not happen by chance. Students learn new knowledge relevant to the domain and such general problem solving skills as formulating rules, testing and gathering information.

3) Theory of Instructions –

Bruner has explained Theory of Instructions with the help of four aspects;

i) Pre-disposition to learn: The child should be made ready for learning any subject should be taught as per child's cognitive abilities and social factors an early teacher's and parent's influence must be considered while teaching. Teachers must maintain and direct child's spontaneous exploration.

ii) Structure of knowledge: Bruner emphasized the role of structure in learning. According to him categorization is fundamental process in structure of knowledge. The knowledge will be retained if the learning experiences are presented in ordered and structured pattern.

iii) Effective sequencing: According to Bruner the lesson should be arranged by increasing difficulty. That means 'easy to difficult' maxim should be followed while structuring the content.

iv) Reinforcement: Bruner disliked the system of grades or class ranking. He emphasized that the rewards and punishments should be paced appropriately. The child should be motivated for

learning. Teachers should develop interest among the students for learning i.e. interest is the best stimulus for learning.

4) Categorization –

The following are different kinds of categories ;

i) Identity Categories: Categories include objects cased on their attributes or features. For e.g. adjectives include the words which describe quality or quantity or number of a noun/pronoun.

ii) Equivalent Categories: Equivalence can be determined by affected criteria, which render objects equivalent by emotional reaction, functional criteria, based on related functions or by formal criteria, for example by science, law or cultural growth.
For e.g. Food (vegetables, fruits, dal, etc.) is the member of botanical classification group.

iii) Coding Systems: Codes are given to recognize sensory input. For e.g. VIBGYOR is used for 7 colours of a spectrum.

Educational Implications :-

- Teachers should utilize and bring together concrete, pictorial then symbolic activities to facilitate learning.
- Students should construct their own knowledge.
- Teachers should make use of different teaching ways depending upon students developmental levels.
- According to Bruner language is important for the increased ability to deal with abstract concepts.
- Education should facilitate child's thinking and problem solving skills.
- Students are active learners. So teachers should provide them opportunities for active participation in the teaching learning process.
- Difficult topic should be taught by considering cognitive maturity.
- Information should be structured and presented in a simplified way.
- Avoid rote learning.
- According to Bruner students should be motivated for active learning.

1.6. TRANSFER OF LEARNING AND ITS THEORIES

An important issue in optimizing learning is the extent to which the learning of the thing facilitates the learning of something else. If everything we learned was specific to the situation in which, it was learned, the amount of learning that would have to be crammed into a lifetime would be phenomenal. Fortunately, most learning is readily transferable with some phenomenal. Fortunately, most learning readily transferable with some modification to a number of different situations .but question arises does the study of sanskrit will help to learn other language? for this no definitive yes or No answer. But whatever the answer may be depend upon the operation of psychological process known as transfer of training.

Transfer of learning:

According to crow and crow: "The carryover of habits of thinking feeling or working of knowledge or skills from one learning area to another is usually referred to as Transfer of learning.

Guthrie and powers: "Transfer may be defined as a process of extending and applying behaviour.

Types Of Transfer:

Positive Transfer: When learning of one activity helps in the learning of another activity is called positive transfer. e.g. Knowledge of typing is help full to learn computer typing.

Negative Transfer : When previously learnt activity become obstacle in learning another activity then it is known as negative transfer .pronunciation of mother tongue become obstacle while pronunciation of English language.

Zero Transfer: When learning of one activity neither facilitates nor interfere with the learning of a new work .It is said to be zero transfer. There may be zero transfer in language and mathematics.

TRANSFER OF LEARNING THEORIES:

1. Formal Discipline Theory:

This is the oldest of all the transfer theories .It is also known as faculty theory of transfer because it is based on faculty school of psychology. This theory held that the mid is composed of so many independent faculties like memory , imagination, attention, thinking ,reasoning, and judgement. According to this theory these components of mind might be trained or improve through vigorous exercise like muscles of the mind and muscles of the body. This theory believes that a particular faculty works in every situation. e.g. if a person possess good reasoning ability he can use in any situation .so these faculties of mind must be trained. If the faculty of memory is trained then it work well in all situation, then student can memorised anything such as poetry, rules . mathematical formulae, and date in history.

The term formal implies that it is the form of the activity not its content. if the activity is in the form of imagination then imagination power should be trained then no matter what student is going to imagine..The term discipline implies the real spirit of the theory. we can train each faculties no matter whether student is interested or not. followers of this theory suggest that reasoning and imagination power developed through the study of geometrical proposition and can be used in solving various probles.

some psychologist do not accept formal discipline theory .as improvement in one single activity may not improve the other .and present day curriculum various skill and faculties taught directly.

2. Theory of Identical Element:

This theory was put forth by Thorndike. According to him there is transfer from one situation to another to the extent that the same elements or components are found in different situation. These identical element may be in the form of content or technique. He stated that the study of a particular subject can be helpful in the study of another subject .The knowledge of mathematics is useful in the study of problems in physics because both are interrelated. they have certain common elements or components.

Similarity of content:

The study of sanskrit help in study of Indian languages(Hindi, Tamil, etc.) to the extent that the two languages contain identical components such as vocabulary ,Grammatical construction. There is transfer of knowledge form Algebra to geometry and physics to the extent that some elements like number, symbols ,equation also occurs in physics and geometry.

Similarity of techniques:

When techniques are same ain two situation then transfer of learning takes place rapidly. skill acquired in typing may be use full in computer typing. An individual who has learned proper balance in riding bicycle can apply that skill only that extent ,in his learning to ride a motor cycle. in both the situation technique is similar hence transfer of learning takes place.

3. Theory of Generalization:

This theory was put forth by C.H. Judd (1908). According to him degree of transfer is proportional to degree of generalization. This theory says that transfer occurs when a person learns a principle or an idea in one situation and then is able to apply in another situation. Thus transfer result from the application of general ideas .or skills or habits or attitude .Transfer through generalization is possible only when systematisation and organization of the knowledge and skill takes place. if they are not systematized ,they have little transfer value in other situation. It will depend upon the individual's ability to generalized his experience.

Judd's Experiment:

Judd demonstrated his experiment to explain his theory. He performed his experiment on children and that experiment was to hit the target under water with darts. He divided the class into two groups , one was experimental group and other was control group .The experimental group was given a full theoretical and practical explanation of the law of refraction and the other group was not given any experimental training .It was found that in hitting the target under water experimental group work well compare to control group because experimental group knew the law of refraction .The general conclusion is that the understanding of the theoretical principle of generalising experience contribute greatly in the performance of experimental group.

Educational implication :

- Transfer of learning takes place because of similarity of content and techniques,and because of generalization hence teacher should show similarity in different content and teach how to use it.
- Teacher should provide varied experience to the student .
- Greater transfer from subject matter can be achieved by changing the methods of teaaching. teacher should use appropriate method as per demand of the subject matter.
- Emphisis should be given on correlation is important. previous knowledge may be used in the new task.
- coordination between theoretical knowledge and practical experience should be done in the classroom.

- The teacher should keep in mind that for maximum transfer ,the generalization should be thoroughly mastered and completely understood.
- Teacher should make the use of law of association for providing different type of knowledge.
- Teacher should remember that transfer is not accomplish with equal facility or in equal amounts by all individuals. It depend upon one's ability to generalized his experience and the ability to perceive relationship between two situation.

1.7 MOTIVATION AND LEARNING

Significance of Motives, individual and collective behaviour is guided by some or other motives. These motives play the most effective role in bringing change in the behaviour of an individual and groups. In the education field, behaviour of students is channelized through behaviour. Motives cannot be directly seen. A motive is a construct or mediating variable referring to the drive for particular goal. Objects, goals and targets can be specified in a motive. The child can be hostile towards his elder brother but not toward every other people. Some children are highly motivated to achieve in school and academic subjects but may not in sports. Motive is inferred from behaviour. Individual differences in strength of motive are inferred from the directionality of the indivisual's behaviour and his perseverance in trying to obtain the much desired goal. A motive may be highly salient and, yet it may not lead directly to behaviour that gratifies that motive. Fear or anxiety may inhabit goal directed behaviour inspite of a motive to achieve the goals.

Goods says motivation as, "the process of arousing sustaining and regulating activity." According to Maslow "Motivation is constant, never ending, fluctuating and complex and is an almost universal characteristic of particularly every organic state of affairs." Coleman says " Motives refer to any inner condition of the individual that initiates or directs behaviour towards a specific goal."

According to Morgan, 'Motivation refers to behaviour that is instigated by needs within the individual and is directed toward goals that satisfy these needs.

Bernad,says 'Motivation refers to all those phenomena which are involved in the stimulation of action towards particular objectives where previously there was little or no movement towards those goals.'

The child expects to achieve his goals as a result of the behaviour. In another case, a child becomes anxious to express a motive on the one hand and does not try to grafity his motives as he will be rejected in the process. Many of the motives involves an approach avoidance conflict. This means there will be on the 'one hand a desire to approach a goal and on the other, anxiety associated with the attainment of the goal. When a child desires to disobey his mother openly.

Characteristics of motivated behaviour :

1. Eagerness :- Eagerness is found in the students when they are motivated to do any activity. It means readiness for work.

2. Concentrated attention :- Attention becomes concentrated in motivated behaviour. In the motivated behaviour , the student makes a variety of efforts for achieving the goal.

3. Persistency :- It keeps the activity continuous. When the person is motivated they show persistency in work.

4. Energy mobilization :- When the person is motivated, his energy is mobilized.

5. Goal achievement and reduction of tension : - Motivation helps in the realization of goal. Students feel sense of satisfaction after achieving the goal. They feel restless until the goal is achieved. Their restlessness is removed as soon as the problem is solved.

Motivational techniques used in class room situation :-

Artificial motivations occupy an importatant place in learning. Artificial motivations are not present in the individual but they are a part of the environment. Some of the kinds of artificial motivation are as follows :-

1. Goal, ideal and purposeful attempts :

In order to provide motivation in a given work it is necessary to have a clear, definite, attractive, lively and comprehensive goal, ideal or purpose. The teacher should help the students to be clear about their goals and also to set various goals before them.

2. Reward : It is very important and useful motivation. A reward may be of following types :-

a) Material rewards like books , reading and writing material and other valuable things.

b) social and spiritual rewards like selection for particular post, promotion, praise, degree certificate of honour.

Reward should be positive. The teacher should make use of proper rewards at proper time and in proper manner for better and effective learning.

3. Punishment :- Punishment is a negative motivation but it is required (i) to maintain discipline (ii) to develop fear at primary level (iii) used in combination with reward.

It is a preventive motivation. It may result into a good behaviour in the student. The teachers and the parents should make judicious use of punishment. They sometimes are specially useful if they are used in combination with reward. The results of punishment are not always permanent.

4. Active participation : - Pupils do better when they are active participants in an activity. So , the teacher should develop his lesson with the help of active participation of the students. Students should be provided with opportunity to take part in various functions.

5. Competition :- Competition means desire to excel others. It has been employed as a strong motivation force in learning and generally very effective.

Hence, the teacher should inculcate spirit of competition among students. It can be among individual's as well as among groups.

6. Co- operation :- If we are to educate the coming generation for peace and international understanding . our emphasis should be on co-operation rather than competition. Competition should be used at group level so that when the groups are made there is team spirit within the group.

7. Evaluation : A proper evaluation of school work can become an effective motivation for better learning. Teacher should use variety of tools for evaluation of the students work, performance, activities.

8. Audio – Visual aids :- Audio visual aids like movies, radio,television, laboratory and workshop etc. Are great aids to motivate. So, they should be utilized in school learning.

9. Teacher – pupil relationship :-

Good intimate relationship between teacher and pupils motivate pupils to work. Hence, teacher should have sympathetic and affectionate attitude towards the pupil. He should respect the personality of the child.

Teacher should provide timely feedback regarding progress in different aspects such as academic ,co- curricular etc. the students as well as their parents.

By way of concluding above discussion we mention below some ways of arousing motivation of students in order to enable them to put in their best in the process of learning :

1. Teacher should make the teaching child-centred. He should teach according to capacities, abilities, aptitudes and interests of students.

2. Teacher should help the students to be clear about their goals. Various motives should be directed towards the fulfilment of a major goal.

3. Knowledge of progress should be given to the pupils at suitable time.

4.Teacher should make judicious use of reward and punishment.

5. Various suitable opportunities should be provided for participation in the activities.

6.Ample opportunities for self- expression should be provided to the student.

7. Teacher should try to develop spirit of group competition and co- operation (i.e. working and living together) in the students.

8. Teachers should try his best to improve the system of evaluation. Occasional and frequent test should be arranged.

REFERENCES:

- Dandpani S.(2006) A text book advanced educational psychology: Banglore ,Anmol publication private limited.
- Khan M.A.(2007),Fundamentals of educational psychology, Himalaya publishing House.
- kundu C.L., Tutoo D.N (2004),Educational psychology, New Delhi, sterling publishers private limited.
- Mangal S.K. (2002), Advanced Educational Psychology,New Delhi,prentice-Hall of India private ltd.
- Nanda S.K.,(2008),Philosophical And Sociological Foundations Of Education, Delhi, Doaba Book House.
- Nayak N.K. & Rao V.K. (2004) Educational psychology, New Delhi, APH Publishing Corporation.
- walia J.S. (2002) , Foundation Of Education Psychology , Jalandhar: Paul publishers.

UNIT 3

ADVANCE EDUCATIONAL PSYCHOLOGY

UNIT STRUCTURE

5.0 OBJECTIVES

After reading this unit you will be able to:

PROBLEM SOLVING

- Define problem solving
- Discuss the nature and steps of problem solving
- Understand the strategies for problem solving
- Obstacles in problem solving
- Know implication of problem solving in education

CREATIVITY

- Know about the definition and nature of creativity
- Describe the nature of creative person
- Understand the measures of creativity
- Discuss the development of creative ability

PIAGET'S THEORY OF COGNITIVE DEVELOPMENT

- Explain Piaget's theory of cognitive development and differentiate between the stages of cognitive development.
- Evaluate the Piaget's ideas of cognitive development in infancy.

INDIVIDUAL DIFFERENCES

- Define individual difference
- Discuss the nature and causes of individual difference
- Educational Implication of Individual Differences

5.1 INTRODUCTION

Educational psychology is the study of human learning. The study of learning processes, both cognitive and affective and to understand individual differences in behaviour, personality, and intellect. The field of educational psychology heavily relies on testing, measurement, assessment, evaluation, and training to enhance educational activities and learning processes. This can involve studying instructional processes within the classroom setting.

Cognitive psychology is a branch of psychology is a school of thought in psychology that examines internal mental processes such as problem solving, memory, and language. Problem-solving, creativity, Piaget's theory of cognitive development and individual differences are key topics studied in the field of cognitive psychology.

Problem solving refers to a state of desire for reaching a definite 'goal' from a present condition that either is not directly moving toward the goal, is far from it, or needs more complex logic for finding a missing description of conditions or steps toward the goal. In psychology, problem solving is the concluding part of a larger process that also includes problem finding and problem shaping. And Creativity is a phenomenon whereby something new and valuable is created such as an idea, a joke, an artistic or literary work, a painting or musical composition, a solution, an invention etc. The ideas and concepts so conceived can then manifest themselves in any number of ways, but most often, they become something we can see, hear, smell, touch, or taste.

Educational psychology is the study of how humans learn in educational settings, the effectiveness of educational interventions, the psychology of teaching, and the social psychology of schools as organizations. One of the child psychologists i.e., Piaget's theory of cognitive development is a comprehensive theory about the nature and development of human intelligence, in fact, it deals with the nature of knowledge itself and how humans come gradually to acquire, construct, and use it. To Piaget, cognitive development was a progressive reorganization of mental processes as a result of biological maturation and environmental experience. Accordingly, children construct an understanding of the world around them, and then experience discrepancies between what they already know and what they discover in their environment.

Individual differences are essential whenever we wish to explain how individuals differ in their behaviour. Individual differences in factors such as personality, intelligence, memory, or physical factors such as body size, sex, age, and other factors can be studied and used in understanding this large source of variance. Importantly, individuals can also differ not only in their current state, but in the magnitude or even direction of response to a given stimulus.

5.2 MEANING AND NATURE OF PROBLEM SOLVING

Problem-solving is a mental process that involves discovering, analyzing and solving problems. The ultimate goal of problem-solving is to overcome obstacles and find a solution that best resolves the issue.

The best strategy for solving a problem depends largely on the unique situation. In some cases, people are better off learning everything they can about the issue and then using factual knowledge to come up with a solution. In other instances, creativity and insight are the best options.

Nature of Problem-Solving

- Goal specific
- Deliberate and purposeful
- Attempts at the removal of interference
- Results in novel procedures or novel products

The Steps in Problem-Solving

In order to correctly solve a problem, it is important to follow a series of steps. Many researchers refer to this as the **problem-solving cycle**, which includes developing strategies and organizing knowledge. While this cycle is portrayed sequentially, people rarely follow a rigid series of steps to find a solution. Instead, we often skip steps or even go back through steps multiple times until the desired solution is reached.

1. **Identifying the Problem:** While it may seem like an obvious step, identifying the problem is not always as simple as it sounds. In some cases, people might mistakenly identify the wrong source of a problem, which will make attempts to solve it inefficient or even useless.

2. **Defining the Problem:** After the problem has been identified, it is important to fully define the problem so that it can be solved.

3. **Forming a Strategy:** The next step is to develop a strategy to solve the problem. The approach used will vary depending upon the situation and the individual's unique preferences.

4. **Organizing Information:** Before coming up with a solution, we need to first organize the available information. What do we know about the problem? What do we *not* know? The more information that is available, the better prepared we will be to come up with an accurate solution.

5. **Allocating Resources:** Of course, we don't always have unlimited money, time and other resources to solve a problem. Before you begin to solve a problem, you need to determine how high priority it is. If it is an important problem, it is probably worth allocating more resources to solving it. If, however, it is a fairly unimportant problem, then you do not want to spend too much of your available resources into coming up with a solution.

6. **Monitoring Progress:** Effective problem-solvers tend to monitor their progress as they work towards a solution. If they are not making good progress toward reaching their goal, they will re-evaluate their approach or look for new strategies.

7. **Evaluating the Results:** After a solution has been reached, it is important to evaluate the results to determine if it is the best possible solution to the problem. This evaluation might be immediate, such as checking the results of a math problem to ensure the answer is correct, or it can be delayed, such as evaluating the success of a therapy program after several months of treatment.

Problem-Solving Strategies and Obstacles

In cognitive psychology, the term *problem-solving* refers to the mental process that people go through to discover, analyze and solve problems. This involves all of the steps in the problem process, including the discovery of the problem, the decision to tackle the issue, understanding the problem, researching the available options and taking actions to achieve your goals. Before problem-solving can occur, it is important to first understand the exact nature of the problem itself. If your understanding of the issue if faulty, your attempts to resolve it will also be incorrect or flawed.

There are a number of different mental processes at work during problem-solving. These include:

- Perceptually recognizing a problem
- Representing the problem in memory
- Considering relevant information that applies to the current problem
- Identify different aspects of the problem
- Labelling and describing the problem

Problem-Solving Strategies

- **Algorithms:** An algorithm is a step-by-step procedure that will always produce a correct solution. A mathematical formula is a good example of a problem-solving algorithm. While an algorithm guarantees an accurate answer, it is not always the best approach to problem solving. This strategy is not practical for many situations because it can be so time-consuming. For example, if you were trying to figure out all of the possible number combinations to a lock using an algorithm, it would take a very long time!
- **Heuristics:** A heuristic is a mental rule-of-thumb strategy that may or may not work in certain situations. Unlike algorithms, heuristics do not always guarantee a correct solution. However, using this problem-solving strategy does allow people to simplify complex problems and reduce the total number of possible solutions to a more manageable set.
- **Trial-and-Error:** A trial-and-error approach to problem-solving involves trying a number of different solutions and ruling out those that do not work. This approach can be a good option if you have a very limited number of options available. If there are many different choices, you are better off narrowing down the possible options using another problem-solving technique before attempting trial-and-error.
- **Insight:** In some cases, the solution to a problem can appear as a sudden insight. According to researchers, insight can occur because you realize that the problem is actually similar to something that you have dealt with in the past, but in most cases the underlying mental processes that lead to insight happen outside of awareness.

Problems and Obstacles in Problem-Solving

Of course, problem-solving is not a flawless process. There are a number of different obstacles that can interfere with our ability to solve a problem quickly and efficiently. The following described a number of these mental obstacles, which include functional fixedness, irrelevant information, assumptions and mental set.

- **Functional Fixedness:** This term refers to the tendency to view problems only in their customary manner. Functional fixedness prevents people from fully seeing all of the different options that might be available to find a solution.
- **Irrelevant or Misleading Information:** When you are trying to solve a problem, it is important to distinguish between information that is relevant to the issue and irrelevant data that can lead to faulty solutions. When a problem is very complex, the easier it becomes to focus on misleading or irrelevant information.

- **Assumptions:** When dealing with a problem, people often make assumptions about the constraints and obstacles that prevent certain solutions.
- **Mental Set:** Another common problem-solving obstacle is known as a mental set, which is the tendency people have to only use solutions that have worked in the past rather than looking for alternative ideas. A mental set can often work as a heuristic, making it a useful problem-solving tool. However, mental sets can also lead to inflexibility, making it more difficult to find effective solutions.

Problem Solving and Education

- Applying innovative Teaching Methods in class like, Brainstorming, co-operative & collaborative learning, group discussion or activity etc…
- Provide meaningful and practical problems in different subject areas
- Keep the level of motivations and the difficulty level of the problem moderate
- Provide the variety
- Provide the Practice
- Provide the self expression to generate ideas
- Provide incomplete solution to enhance curiosity
- Provide for healthy competition
- Provide conducive class environment
- Encourage scientific thinking
- Discussing current issues and social problems in the classroom

5.3 MEANING, NATURE AND MEASUREMENT OF CREATIVITY

Meaning

Creativity is the intellectual ability to make creations, inventions, and discoveries that brings novel relations, entities, and/or unexpected solutions into existence [Wang, 2009, 2013]. Creativity is a gifted ability of humans in thinking, inference, problem solving, and product development.

The cognitive foundation of creativity is a new and unusual relation, neurophysiologically represented by a synaptic connection, between two or more objects that generates a novel and meaningful concept, solution, method, explanation, or product.

As a cognitive process, the first-phase of creativity is search-based for discovering a novel relation; while the second-phase of creativity known as justification is inductive and logical.

Definition

''Creativity is the interaction among aptitude, process and environment by which an individual or group produces a perceptible product that is both novel and useful as defined within a social context.''

Plucker, Beghetto, and Dow (2004)

''Over the course of the last decade, however, we seem to have reached a general agreement that creativity involves the production of novel, useful products''

Mumford (2003)

''Creativity is the ability to produce work that is both novel (i.e., original, unexpected) and appropriate (i.e., useful, adaptive concerning task constraints)''

Sternberg and Lubart (1999)

''. . . creativity must entail the following two separate components. First a creative idea or product must be original . . . However, to provide a meaningful criterion; originality must be defined with respect to a particular socio-cultural group. What may be original with respect to one culture may be old news to the members of some other culture . . . Second, the original idea or product must prove adaptive in some sense. The exact nature of this criterion depends on the type of creativity being displayed''

Simonton (1999)

Nature of Creativity

1) Creativity is universal

2) It is innate as well as acquired

3) It produces something new or novel

4) It is adventures and open thinking

5) Creativity is a mean as well as end in itself

6) It carries ego involvement

7) It has a wide scope

8) Creativity and intelligence necessarily does not hand in hand.

9) Creativity rest more on divergent thinking than on convergent thinking.

10) It can't be separated from intelligence

11) It is full of original ideas and thoughts

12) It is more sensitive and ambitious.

13) It can't be measured as IQ.

14) It is an individualistic ability

15) It may or may not be hereditary.

Characteristics of the Creative Adult

1. **Flexibility:** The ability to go beyond tradition, habits, and the obvious. To turn ideas and materials to new, different, and unusual uses.

2. **Fluency:** The ability to think of many ideas; many possible solutions to a problem.

3. **Elaboration:** The ability to work out the details of an idea or solution.

4. **Tolerance of ambiguity:** The ability to hold conflicting ideas and values and to bring about a re-conciliation without undue tension. The values of creative persons, for example, seem to be both aesthetic and theoretical, two value systems which might be considered antithetical. The creative person appears to be interested not only in solutions to problems but also in "elegant" aesthetically satisfying solutions. His goal seems to be both truth and beauty.

5. **Originality:** Divergent rather than convergent thinking, going beyond commonly accepted ideas to unusual forms, ideas, approaches, solutions.

6. **Breadth of interest:** Wide range of interests with much more concern for the "big ideas," broad meanings, and implications rather than for small details and facts for the sake of facts.

7. **Sensitivity:** The ability to sense problems, to see deficiencies and needs in life, the challenge to find solutions and fill these needs. Sensitivity to our own inner life and feelings, thoughts and feelings of others.

8. **Curiosity:** Openness to new ideas and experiences; the capacity to be puzzled; actively experimenting with ideas and the pleasure in seeking and discovering ideas.

9. **Independence:** Thinking things through our own self reliance and forcefulness.

10. **Reflection:** The ability to consider and reconsider, to evaluate our ideas as well as the ideas of others to take time to achieve understanding and. insight, to look ahead and plan, to visualize the complete picture.

11. **Action:** The ability to put ideas in action; to begin, help, shape, with high energy and enthusiasm these ideas.

12. **Concentration and persistence:** The ability to work hard, long, consistently and persistently with extraordinary concentration.

13. **Commitment:** Deep involvement, intense commitment, deep caring, almost of a metaphysical nature.

14. **Expression of total personality**: Expression of both male and female sides of nature, which at times leads to tension in our society. As the creative male shows such supposedly female traits as sensitivity, self-awareness, and breadth of interests or as the female shows such "male" traits as independence, self-reliance and forcefulness.

15. **Sense of humour:** The ability to see and express the humour in the contradictions and ambiguities of life. To maintain balance without losing commitment.

Graham Wallis' model of the Creative process

1. Preparation
2. Incubation
3. Illumination
4. Verification

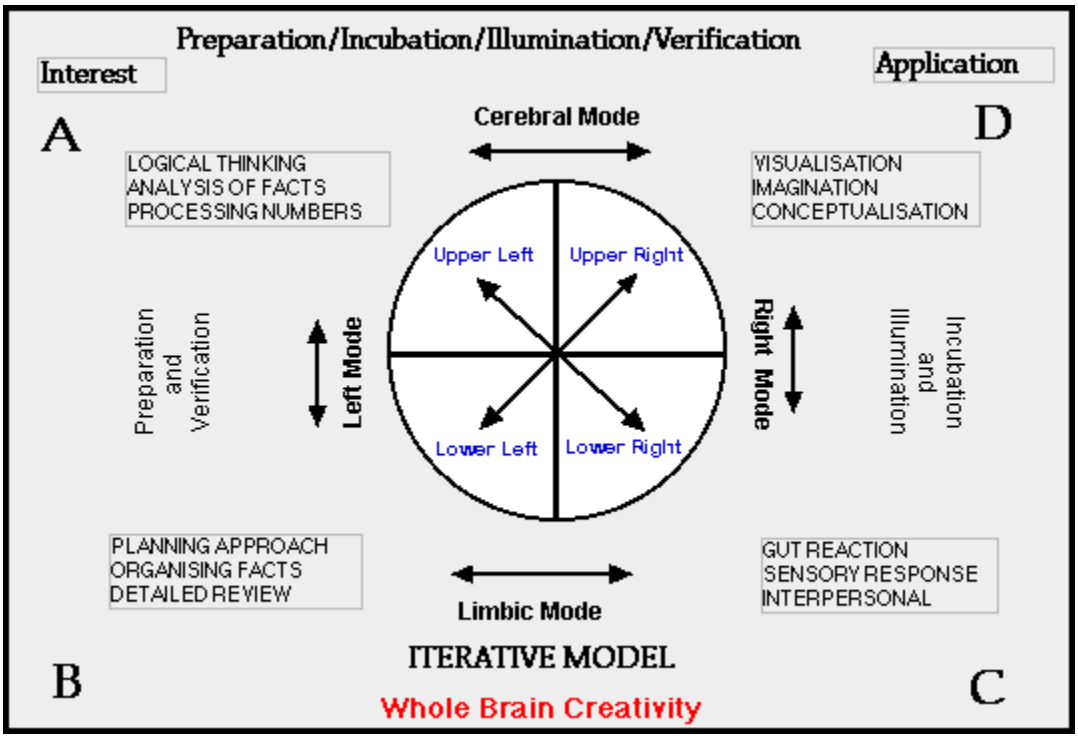
Psychologist Graham Wallis, many years ago, set down a description of what happens as people approach problems with the objective of coming up with creative solutions. He described his four-stage process as follows:

1. In the **preparation** stage, we define the problem, need, or desire, and gather any information the solution or response needs to account for, and set up criteria for verifying the solution's acceptability.

2. In the **incubation** stage, we step back from the problem and let our minds contemplate and work it through. Like preparation, incubation can last minutes, weeks, even years.

3. In the **illumination** stage, ideas arise from the mind to provide the basis of a creative response. These ideas can be pieces of the whole or the whole itself, i.e. seeing the entire concept or entity all at once. Unlike the other stages, illumination is often very brief, involving a tremendous rush of insights within a few minutes or hours.

4. In **verification**, the final stage, one carries out activities to demonstrate whether or not what emerged in illumination satisfies the need and the criteria defined in the preparation stage.



The first and last stages are left brain (Quadrant A and B) activities, whereas the second and third stages belong to the right brain (Quadrant D and C).

This model of the creative process has been placed on to Ned Herrmann's Four Quadrant model of the human brain.

The following approaches can help teachers to promote creativity in the classroom.

- Ensuring that planning incorporates a range of teaching and learning styles.
- Providing regular opportunities for hands-on experimentation, problem solving, discussion and collaborative work.
- Creating opportunities where pupils are encouraged to actively do the work and question what is going on.
- Making use of creative thinking techniques such as Brainstorming, Thinking Hats.
- Sharing the learning intentions with pupils and providing them with opportunities for choosing how they are going to work.
- Encouraging pupils to improvise experiment and think outside the box.
- Actively encouraging pupils to question, make connections, envisaging what might be possible and exploring ideas.
- Asking open-ended questions such as 'What if…?' and 'How might you…?'
- Joining in with activities and modelling creative thinking and behaviour.
- Encouraging pupils to develop criteria that they can use to judge their own work, in particular its originality and value.
- Facilitating open discussion of the problems pupils are facing and how they can solve them.
- Encouraging pupils to share ideas with others and to talk about their progress.
- Using failure or setbacks as opportunities to learn.
- Ensuring that assessment procedures reflect and reward creativity, enterprise and innovation.
- Making effective use of encouragement, praise and positive language.
- Creating opportunities to learn through the imagined experience, giving them a safe context to explore ideas using drama techniques.

Measurement of creativity

- Most empirical work on creativity has employed one of three assessment techniques.
- An objective analysis of products.

- Subjective judgments of products or persons as creative.
- Vast majority-used creativity tests.

Creativity Test (I)

- Personality test-from creativity scales
- Gough's(1957)-California Psychological Inventory
- Cattell & Eber's(1968)-Sixteen Personality Factor Questionnaire
- Gough & Heilbrun's(1965)-Adjective Check List
- Heist & Yonge's(1968)-Omnibus Personality Inventory

Creativity Test(II)

- Biographical inventories-an intuitive basis and rated (high, low or average)
- Alpha Biographical Inventory-includes several hundred items
- The Biographical Inventory- creativity includes 165 items into five categories
- 50-item biographical inventory made from Taylor(1963)

Creativity Test (III)

- Behavioral assessment-similar as traditional intelligence tests.
- Model for many creativity tests-Guilford's structure -of-intellect theory
- Torrance Tests of Creative Thinking (TTCT) = Minnesota Tests of Creative Thinking

Torrance Test of Creativity Thinking

- Oral, written, or drawn responses
- It can be scored separately by category
- Teachers given the tests in a group to children
- Four criterion components : fluency, flexibility, elaboration, originality
- Three categories : nonverbal tests, verbal tests using nonverbal stimuli, verbal tests using verbal stimuli

Other Creativity Tests

- Wallach & Kogan tests include five subscales： Instances, Alternate Uses, Similarities, Pattern Meaning, Line Meaning
- Ghiselin, et. al.- Creative Process Checklist-designed to assess states of attention and affect in scientists at the moment of invention

5.4 DEVELOPMENT OF CREATIVE ABILITY

FUNDAMENTAL CONCEPTS

Creative ability is defined as the ability to freely present oneself, without inhibitions, limitations or anxiety. It also relates to one's preparedness to function at the maximum level of competence, free from self-consciousness. This ability develops over a person's lifetime and is contextual. A person's creative ability can only develop within the limits of the person's maximum creative potential given the optimal circumstances. This is referred to as one's creative capacity. Creative capacity is influenced by a number of factors such as intelligence, mental health, and opportunities within the environment, personality and security. Therefore, creative capacity differs from one individual to the next based on these factors. Reaching creative capacity is seldom, there is always room for growth. However, growth does not occur automatically, but requires exertion of creative effort at the boundary of the person's creative ability in order to extend that creative ability. This exertion is referred to as maximal effort.

The theory of Creative Ability relates that there are three interdependent aspects that are required for growth in creative ability, namely; ***creative response, creative participation and creative act.***

1. **Creative response** - positive attitude towards opportunity at hand and anticipation of pleasure despite anxieties about capability or outcome. This precedes creative participation.
2. **Creative participation** - process of active participation in daily activities that challenges the person's abilities.
3. **Creative act** - the tangible or intangible end product of the creative response and creative participation.

DEVELOPMENT OF CREATIVE ABILITY

The development of creative ability provides description of how occupational performance develops from existence to the highest level of societal contribution along a continuum. The

continuum signifies the optimal level of occupational performance, but only a few people reach that level due to limitations. The current level of creative ability reflects the creative capacity available for everyday use in occupational performance.

Development continues throughout a life in sequential steps that cannot be omitted and growth usually takes place in spurts that are often followed by periods where people remain in the comfort zone during consolidation. The relationship between the development of creative ability and the environment is dynamic. The environment can provide challenges and opportunities for creative growth, but when new opportunities and circumstances are presented, stress may occur and the person may regress. Therefore, the development of creative ability depends on the person's readiness to grow creatively and the right opportunity presented by the environment. The process of creative ability development may be limited or interrupted by factors within the human system that fail to support occupational behaviour. These factors include disability, trauma and illness. External environmental factors could also limit or disrupt development.

CHARACTERISTICS OF CREATIVE ABILITY

There are three main characteristics of creative ability:

1. **Sequential development** - growth or recovery of creative ability follows a constant sequential pattern and a level or phase cannot be omitted.
2. **Motivation governs action** - motivation is a precursor of action and the components of both are inseparable. The levels of action and motivation relate in a sequential manner.
3. **Creative ability is dynamic** - it varies from one individual to another and in relation to situational demands. The flow between the levels is gentle.

5.5 PIAGET'S THEORY OF COGNITIVE DEVELOPMENT

Jean Piaget's prominent work is his theory on the four stages of cognitive development. He was one of the most influential researchers in the area of developmental psychology in the 20th century whose primary interest was in biological influences on how we come to know, and the developmental stages we move through as we acquire this ability.

Piaget (1973) believed that the child plays an active role in the growth of intelligence and learns by doing. He regarded the child as a philosopher who perceives the world only as he has experienced it. Therefore, most of Piaget's inspiration in cognitive and intellectual development came from observations of children. In fact, Piaget observed and studied his own three children through each stage of their cognitive development.

The theory of cognitive development focuses on mental processes such as perceiving, remembering, believing, and reasoning. Reasoning is the essence of intelligence, and reasoning is what Piaget studied in order to discover “how we come to know”. Piaget believed that cognitive development is cumulative; that is, understanding a new experience grows out of a previous learning experience.

Description of Piaget’s Theory on the Stages of Cognitive Development

Piaget (1973) developed a systematic study of cognitive development in children. His work included a theory on cognitive development, detailed observational studies of cognition in children, and a series of tests to reveal differing cognitive abilities.

Through his work, Piaget (1973) showed that children think in considerably different ways than adults do. This did not mean that children thought at a less intelligent degree, or at a slower pace, they just thought differently when compared to adults. Piaget’s work showed that children are born with a very basic genetically inherited mental structure that evolves and is the foundation for all subsequent learning and knowledge. He saw cognitive development as a progressive reorganization of mental processes resulting from maturation and experience.

Piaget (1973) believed children will construct an understanding of the world around them, and will then experience discrepancies between what they already know and what they discover in their environment.

There are three elements to Piaget’s Cognitive Development Theory:

1. Schema
2. The Three processes that enable the transition from one stage to another
3. The four stages of cognitive development

Schema

A schema is the basic building block of intelligent behaviour, a form of organizing information that a person uses to interpret the things he or she sees, hears, smell, and touches. A schema can be thought of as a unit of knowledge, relating to one aspect of the world including objects, actions, and abstract (theoretical) concepts. We use schemas to understand and to respond to situations. We store them and apply them when needed.

A child is considered to be in a state of equilibrium or in a state of cognitive balance when she or he is capable of explaining what he or she is perceiving (schema) at the time. The infants have organized sensory-motor patterns. In addition to sucking, chewing, they try to reach out for an object, hold them, drop them, etc. These are simple skills, but they direct the ways in

which the infant explore their environment. These schemas determine how infants gain more information of the world.

The Three Processes:

The three processes that enable the transition from one cognitive stage to another are assimilation, accommodation and equilibration. Educators generally view these processes as an explanation of cognitive learning processes, not just those that lead to major shifts in cognitive ability.

Together, assimilation and accommodation are processes of adjustment to changes in the environment and are defined as adaptation, the continuous process of using the environment to learn. And, according to Piaget, adaptation is the most important principle of human functioning.

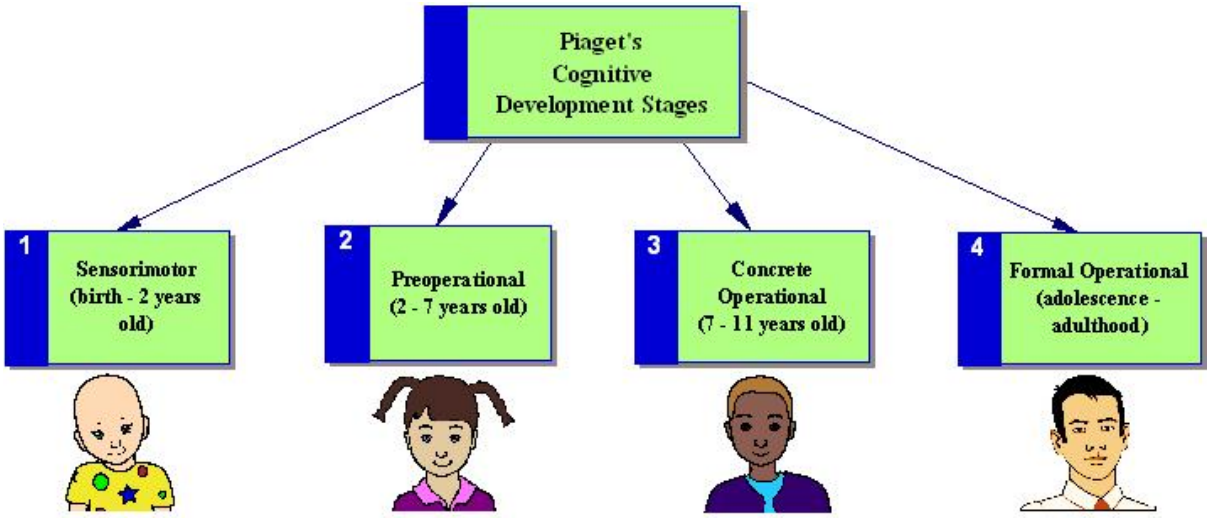
Piaget argued that assimilation and accommodation are two important principles underlying cognitive development.

Assimilation: Refers to assimilating new information into an existing schema. They understand new experience in the present structure of cognitive development. They use current cognitive system to make sense of the stimulus. For example, the children have a schema of how to hold new object and mouth it. So, if it sees a new object say a new toy, the child will grab it and try to chew it.

Accommodation: As opposed to assimilation, accommodation refers to the schema changes for the new object. The thinking or understanding changes as a result of confronting a new stimulus is accommodation. The kids starting distinguishing between the objects they can mouth and do not chew everything.

Equilibrium: It is an ideal state of balance required for making sense of the world. The accommodation and assimilation takes place in order to maintain the state of equilibrium. Equilibrium maintained by making sense of world in terms of existing schemas is assimilation. When assimilation cannot explain the world then the equilibrium is maintained by the process of accommodation. A state of mind is brought to a level of congruence with the external world.

To explain his theory, Piaget used the concept of stages to describe development as a sequence of the four following stages:



1. Sensory-Motor Stage
2. Preoperational stage
3. Stage of Concrete Operations
4. Stage of Formal Operations

Piaget (1973) describes the four stages as follows:

Sensory-Motor Stage: Ages Birth through Two

The *Sensory-Motor Stage* extends from birth until approximately the age of two. During this stage senses, reflexes, and motor abilities develop rapidly. Intelligence is first displayed when reflex movements become more refined, such as when an infant will reach for a preferred toy, and will suck on a nipple and not a pacifier when hungry. Understanding of the world involves only perceptions and objects with which the infant has directly experienced. Actions discovered first by accident are repeated and applied to new situations to obtain the same results.

Toward the end of the sensory-motor stage, the ability to form primitive mental images develops as the infant acquires object permanence. Until then, an infant doesn't realize that objects can exist apart from him or herself.

Preoperational Stage: Ages Two through Seven

The child in the preoperational stage is not yet able to think logically. With the acquisition of language, the child is able to represent the world through mental images and symbols, but in this stage, these symbols depend on his own perception and his intuition. The preoperational child is completely egocentric. Although he is beginning to take greater interest in objects and people around him, he sees them from only one point of view: his own. This stage may be the age of curiosity; preschoolers are always questioning and investigating new things. Since they

know the world only from their limited experience, they make up explanations when they don't have one.

It is during the preoperational stage that children's' thought differs the most from adult thoughts.

Stage of Concrete Operations: Ages Seven through Eleven

The stage of concrete operations begins when the child is able to perform mental operations. Piaget defines a mental operation as an interiorized action, an action performed in the mind. Mental operations permit the child to think about physical actions that he or she previously performed. The preoperational child could count from one to ten, but the actual understanding that one stands for one object only appears in the stage of concrete operations.

The primary characteristic of concrete operational thought is its reversibility. The child can mentally reverse the direction of his or her thought. A child knows that something that he can add, he can also subtract. He or she can trace her route to school and then follow it back home, or picture where she has left a toy without a haphazard exploration of the entire house. A child at this stage is able to do simple mathematical operations. Operations are labelled "concrete" because they apply only to those objects that are physically present.

Conservation is the major acquisition of the concrete operational stage. Piaget defines conservation as the ability to see that objects or quantities remain the same despite a change in their physical appearance. Children learn to conserve such quantities as number, substance (mass), area, weight, and volume; though they may not achieve all concepts at the same time.

Stage of Formal Operations: Ages Eleven through Sixteen

The child in the concrete operational stage deals with the present, the here and now; the child who can use formal operational thought can think about the future, the abstract, the hypothetical.

Piaget's final stage coincides with the beginning of adolescence, and marks the start of abstract thought and deductive reasoning. Thought is more flexible, rational, and systematic. The individual can now conceive all the possible ways they can solve a problem, and can approach a problem from several points of view.

The adolescent can think about thoughts and "operate on operations, not just concrete objects. He or she can think about such abstract concepts as space and time. The adolescent develops an inner value system and a sense of moral judgment. He or she now has the necessary "mental tools" for living his life.

Summarize of this theory that these stages unfold over time, and all children will pass through them all in order to achieve an adult level of intellectual functioning. The later stages evolve from and are built on earlier ones. They point out that the sequence of stages is fixed and unchangeable and children cannot skip a stage. They all proceed through the stages in the same order, even though they may progress through them at different rates.

At each stage, the child will acquire more complex motor skills and cognitive abilities. Although different behaviours characterize different stages, the transition between stages is gradual, and a child moves between stages so subtly that he may not be aware of new perspectives gained. However, at each stage there are definite accompanying developmental changes in the areas of play, language, morality, space, time, and number.

Educational Implication:

1. Difficulty Level according to age

e.g., World history at not at childhood should be taught

2. Helpful in farming curriculum according to age mental ability of pupil.

3. Mental level should be taken into consideration as explanation according to age ability to groups and understand.

4. Important of Physical and social environment to create good education atmosphere.

5. Teacher is aware of pupil age ability and thought process.

6. N1o abstract concept in childhood may be in adolescence (11-15yrs.)

7. No complex ideas in childhood.

8. More activity based

9. More important to motivation teacher must not provide spoon feeding give chance to discover.

10. Theory emphasis assimilation, accommodation and equilibrium teacher should try developing that process.

5.6 MEANING, NATURE, CAUSES AND EDUCATIONAL IMPLICATION OF INDIVIDUAL DIFFERENCES

Concept of Individual Differences

The differences among individuals that distinguish or separate them from one another and make one as a unique individual, may be termed as individual differences.

Individual differences may be generally grouped in to two broad categories

• 1. Physical or physiological differences

• 2. Psychological differences

Following are some of the specific types of individual differences

1. Physical differences

2. Motor ability differences

3. Mental differences

4. Achievement differences

5. Emotional differences

6. Differences in interests and aptitudes

7. Differences in attitudes, beliefs and opinions

8. Learning differences

9. Differences in social and moral development.

Definitions

Individual differences stand for “the variations or deviations among individuals in regard to a single characteristic or a number of characteristics.”

Individual differences stand for “those differences which in their totality distinguish one individual from another.”

Carter V Good “Dictionary of Education"

Today we think of individual differences as including any measurable aspects or the total personality.

Skinner

Some areas of Individual Difference

• Interest

• Aptitude and

• Attitude

- **Interest**

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

Crow and Crow (1973)

Interest is that enduring mental system which sustains contains and continues the activity called attention. **(1946 B.N. Jha)**

It is the central force that drives the whole machinery of the teaching learning process.

Interests' characteristics

1. Our interests are very much linked with our wants, motives, drives and basic needs.

2. Interests are not permanent and fixed.

3. Interest changes as a result of maturation, learning and other internal as well as external factors and conditions.

4. It is a great motivating force.

Teachers' role

Teachers should realize that there exists great variation among individuals in relation to specific tastes and interests and should motivate them properly.

- **Aptitude**

- An aptitude is a combination of characteristics
  Indicative of an individual's capacity to acquire (with training)
- some specific knowledge, Skill or a set of organized responses,
- such as the ability to speak a language,
- To become a musician, to do mechanical work.

Measurement of Aptitude

- Aptitude tests have been devised to measure the aptitudes of individuals in various fields of activities.

Specialized Aptitude tests

- Mechanical aptitude tests
- Musical aptitude tests
- Art judgment tests

- Professional aptitude tests
- Scholastic aptitude tests

Professional aptitude tests

- Teaching aptitude
- Clerical aptitude
- Medicine
- Engineering
- Law
- Salesmanship
- Research

❖ **Attitude**

- Attitudes are learned dispositions to respond in a favorable or unfavorable manner to a particular person, behavior belief or thing.

Eagly and Chaiken

- An attitude is a readiness to respond in such a way that behaviour is given a certain direction

Travers (1973)

- An attitude is a predisposition or readiness to respond in a pre-determined manner to relevant stimuli.

Whilttaker (1970)

Characteristics of Attitude

1. Attitudes have a subject-object relationship
2. Attitudes are learned
3. Attitudes are relatively enduring states of readiness
4. Attitudes have motivational – affective characteristics
5. It ranges from strongly positive to strongly negative.

Role of teacher

1. Teacher should realize the importance of attitude formation in students to make them respond properly.

2. Teacher should develop in them the attitude which he meant to develop in learners.

3. Provide indirect experiences to learners so that proper attitudes will be developed in them.

4. Organize Group activities in such a way that desirable attitudes can be developed in the learners by means of association.

5. Bring essential changes in the methods of instruction so as to make learners have positive attitude towards the subject.

Difference between Interest, Aptitude and Attitude

• Interest may refer to the motivating force that impels us to attend a person, a thing or an activity

• Aptitude is an individual's capacity to acquire (with training) some specific knowledge, Skill or a set of organized responses.

• Attitude is a readiness to respond in such a way that behaviour is given a certain direction.

• Interest may refer to the motivating force that impels us to attend a person, a thing or an activity

• Aptitude is an individual's capacity to acquire (with training) some specific knowledge, Skill or a set of organized responses.

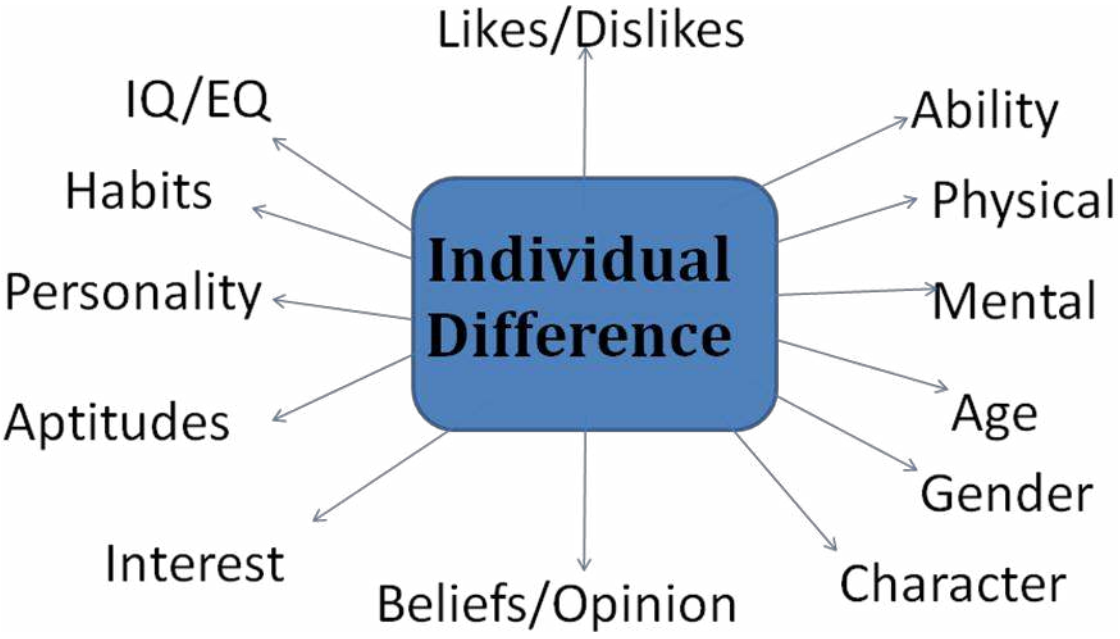
• Attitude is a readiness to respond in such a way that behaviour is given a certain direction.

• Interest can be the cause of an activity and the result of participation in the activity.

• A person interested in a particular activity may or may not have aptitude for that.

• Attitudes are learned.

Dimensions of Individual Differences



Causes of Individual Differences

- Heredity

Heredity is mainly a convenient term for the genetic relations between successive generations.

J.A.Thompsons

"Heredity covers all factors that are present in the individual when he begins life before birth mother's womb."

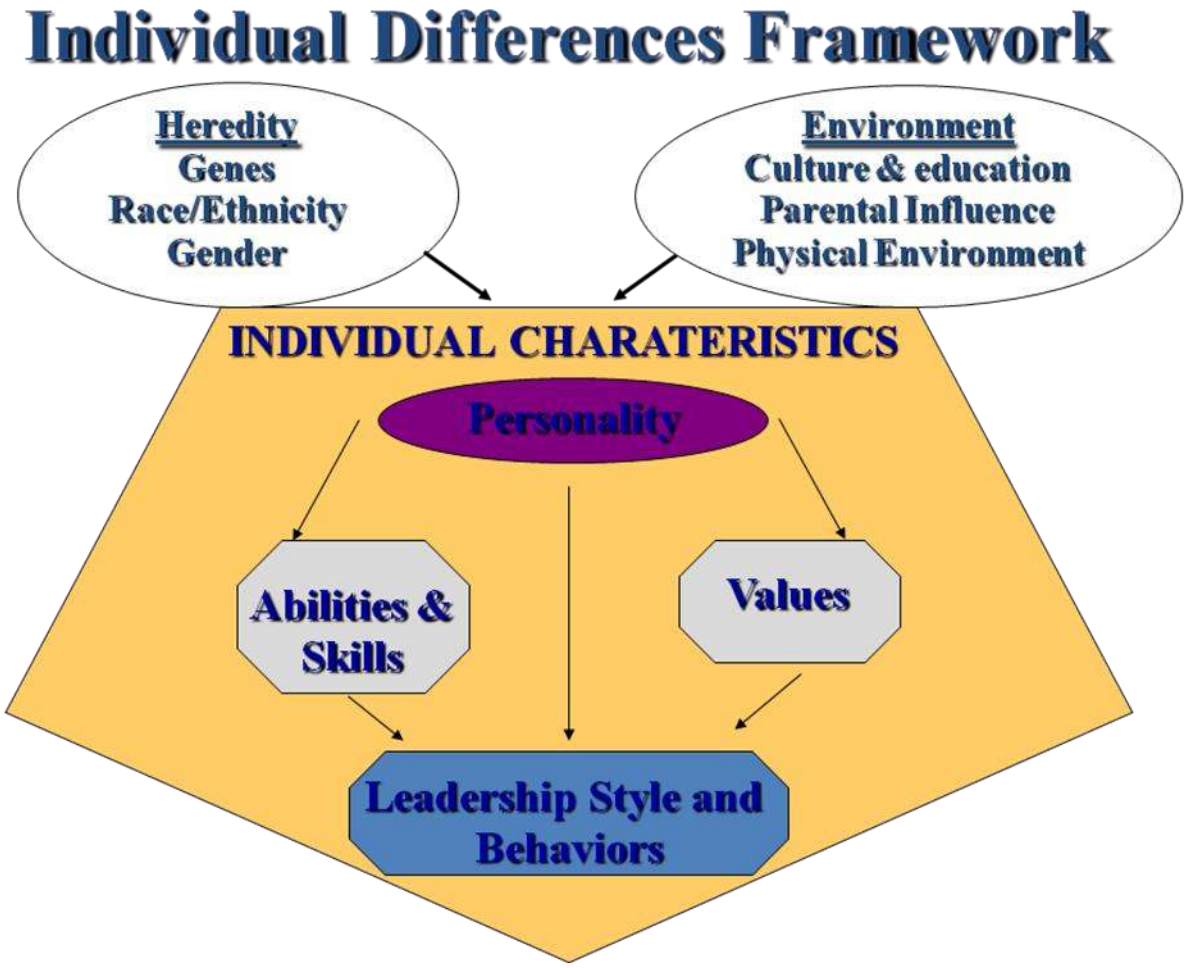
Woodsworth

- Social Heredity/Environment since he begins his life.

Woodsworth and Marquis

"Environment covers all outside factors that have acted on the individual since he begins his life."

Borning and Lang Field



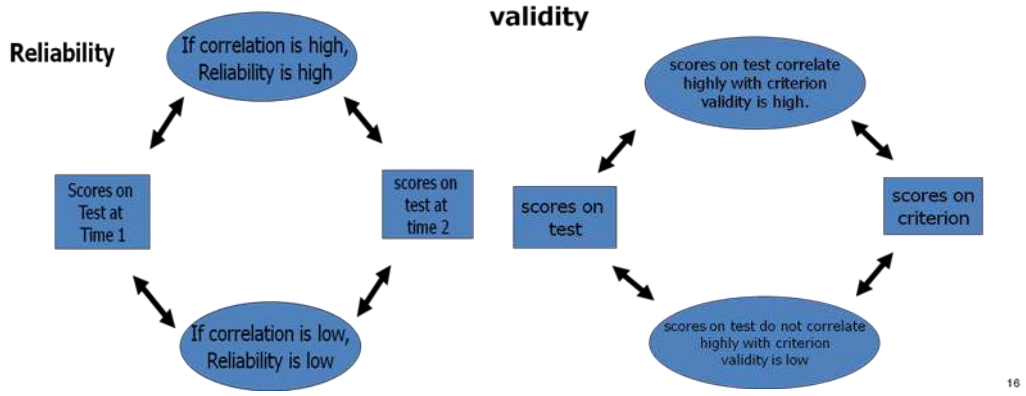
Measuring Individuals Differences Some Basic Methods

1. Objective and Projective tests.

- Objective tests: Questionnaires and inventories designed to measure various aspects of personality.

- Projective tests: Methods for measuring personality in which individuals respond to ambiguous stimuli. Their responses provide insights into their personality traits.

2. Reliability and validity: Essential requirements:



Educational Implication/Role of the Teacher

Knowledge of Individual difference may help the teachers in following way:

- **In classroom situation**

→ In problem child

→ Grouping according to ability

→ Finding out the likes/dislikes

→ Interest, aptitude of the students

→ To motivate child according to his ability (proper vocational guidance can be provided)

- **Methods of teaching**

→ Individualized learning plan

→ Diagnostic Testing and Remedial Teaching

- **Discipline**
- **Evaluation**

5.7 SUMMARY

Cognitive psychology is the branch of psychology that studies mental processes including how people think, perceive, remember, and learn. As part of the larger field of cognitive science, this branch of psychology is related to other disciplines including neuroscience, philosophy, and linguistics.

Educational psychology is the study of how humans learn in educational settings, the effectiveness of educational interventions, the psychology of teaching, and the social psychology of schools as organizations. Cognitive psychology is the branch of psychology which deals with the mental processes of perceiving, remembering, reasoning, problem

solving, creativity, Piaget's theory of cognitive development and individual differences. Human behaviour is explained by interpreting the mental processes which underlie it. This Module investigates some of the cognitive processes used in attempting to understand the world around us, such as thought, language, attention, perception and memory. Each Unit will explore knowledge as to how the mind processes information and is then able to use it in making sense of the environment.

In this Module the sub topic of problem-solving mental process that involves discovering, analyzing and solving problems. The ultimate goal of problem-solving is to overcome obstacles and find a solution that best resolves the issue. The best strategy for solving a problem depends largely on the unique situation. In some cases, people are better off learning everything they can about the issue and then using factual knowledge to come up with a solution. In other instances, creativity and insight are the best options.

In this Module the sub topic of creativity its meaning , its process, how to fostering creativity to child and some measurement technique. The cognitive processes that generate creative outcomes do not differ from everyday thinking (Buchanan 2001). What differs is the context in which the creative ideas arise: The context both motivates and determines the value and usefulness of the ideas. Two key cognitive processes are involved in creative problem solving:

♦ Combinatorial – producing novel combinations out of familiar ideas/things through generating and testing.

♦ Transformational – using analogical reasoning and metaphors to transfer concepts from one domain to another. Creativity also relies heavily on a sound knowledge base.

In this Module the sub topic of piaget's theory of cognitive development is well-known within the fields of psychology and education, but it has also been the subject of considerable criticism. While presented in a series of progressive stages, even Piaget believed that development does not always follow such a smooth and predictable path. In spite of the criticism, the theory has had a considerable impact on our understanding of child development. Piaget's observation that kids actually think differently than adults helped usher in a new era of research on the mental development of children.

The final subtopic in this Module is concerned with Psychology often makes generalisations about people. Depending upon our point of view this can be seen as a great strength of psychology or a weakness or probably both. It is important that we recognise that there are as many differences between people as there are similarities. The main assumption of the

individual differences perspective is that to understand the complexity of human behaviour and experiences it necessary to study the differences between people rather than those things that we all have in common.

CHECK YOUR PROGRESS

1) Write the steps of problem solving with suitable example.
2) Write the meaning and nature of problem solving.
3) Suggest strategies for effective problem solving.
4) What is creativity? Explain its Process with illustration.
5) Discuss the strategies to develop creativity among students.
6) Explain the stages of cognitive development theory.
7) Explain the Piaget's cognitive development theory with educational implication.
8) Explain the concept of individual difference.
9) Explain the nature of Individual Differences. What are the causes of Individual Differences? Considering the Individual Differences, what can a teacher do to make his teaching effective in his class?

REFERENCES:

Mangal S.K. : (1999) Advanced Educational Psychology. Prentice Hall of India, New Delhi

Chauhan s.s.: (1999) Advanced Educational Psychology. Vikas Publishing House, New Delhi

Dr. Mathur S.S.: (2000) Educational Psychology. Vinod Pustak Mandir, Agra

Walia J.S.: (1999) Foundation of Educational Psychology. Paul Publishers, Jalandhar

Websites

http://members.optusnet.com.au/charles57/Creative/Brain/wallis.htm

onlinelibrary.wiley.com/doi/10.1002/9781444343120.ch1/summary

psychology.about.com/od/.../l/bl-piaget-stages.htm

http://www.holah.co.uk/core-studies/individualdifferences/

www.learning-theories.com/piagets-stage-theory-of-cognitive-development. html

www.kent.ac.uk/careers/sk/problem-solving-skills.htm

www.artofproblemsolving.com/

www.psychologytoday.com/basics/creativity

www.merriam-webster.com/dictionary/creativity

UNIT 4

ADVANCE EDUCATIONAL PSYCHOLOGY

UNIT STRUCTURE

5.0 OBJECTIVES

To enable the students understand about:

1. Theories of teaching, learning intelligence and personality.
2. Define intelligence and list the different types of intelligences psychologists study.
3. Summarize the characteristics of a scientifically valid intelligence test.
4. Type and trait theories of personality, the measurement and adjustment of personality.
5. Types of defence mechanism
6. Concept of Mental Health and Mental Hygiene
7. Criteria of mentally healthy person
8. How to deal with stress, its management and strategies.

5.1 INTRODUCTION

The word, 'Psychology' is derived from two Greek words, 'Psyche' and 'Logos'. Psyche means 'soul' and 'Logos' means 'science'. Thus psychology was first defined as the 'science of soul". Educational psychology is that branch of psychology in which the findings of psychology are applied in the field of education. It is the scientific study of human behaviour in educational setting.

According to Charles. E. Skinner, "Educational psychology deals with the behaviour of human beings in educational situations". Education by all means is an attempt to mould and shape the behaviour of the pupil. It aims to produce desirable changes in him for the all-round development of his personality. Thus, Educational Psychology concerned primarily with understanding the processes of teaching and learning that take place within formal environments and developing ways of improving those methods. It covers important topics like intelligence theories; personality theories, motivation; cognitive, emotional, and moral development, adjustment, defence mechanism and stress etc. In psychology of the Learner – who is being taught or educated, his aim of education is all-round development of personality of the individual. To achieve this knowledge of personality, level of intelligence, aptitude, attitude, interest etc. of the learners are essential. Educational psychology provides the principles, theories and techniques to know and assess various aspects of learners.

The Learners subject-matter of educational psychology is knitted around the learner. Therefore, the need of knowing the learner and the techniques of knowing him well. The topics

include – the innate abilities and capacities of the individuals, individual differences and their measurements, the overt, covert, conscious as well as unconscious behaviour of the learner, the characteristics of his creativity, mental health and management of stress. The field of educational psychology heavily relies on testing, measurement, assessment, evaluation, and training to enhance educational activities and learning processes. This can involve studying instructional processes within the classroom setting. After knowing the learner and deciding what learning experiences are to be provided, Educational Psychology moves on to the laws, principles and theories of learning. Other items in the learning process are thinking and reasoning, problem solving, adjustment, ways and means of effective learning etc. The teacher is a potent force is any scheme of teaching and learning process. It discusses the role of the teacher. It emphasizes the need of 'knowing thyself' for a teacher to play his role properly in the process of education. His conflicts, motivation, anxiety, adjustment, level of aspiration etc. It throws light on the essential personality traits, interests, aptitudes, the characteristics of effective teaching etc so as to inspire him for becoming a successful teacher. Educational psychology deals with the Nature and Development of the Personality of an individual. Personality development also implies a well-adjusted personality. It studies Individual Difference: Every individual differs from every other individual. It is one of the fundamental facts of human nature which have been brought to light by educational psychology. This one fact has revolutionalised the concept and process of education. It studies the nature Intelligence and its Measurement. This is of utmost importance for a teacher.

5.2 MEANING, NATURE OF INTELLIGENCE

Meaning

Intelligence as the global capacity to think rationally, acts purposefully, and deals effectively with the environment.

Although there is disagreement about the nature and definition of intelligence, experts generally agree on the following:

- Abstract thinking, problem solving and the capacity to acquire new knowledge are important elements of intelligence, which are typically assessed in intelligence tests.
- Creativity, achievement motivation, and goal-directed behaviour are other important aspects of intelligence that are not assessed by intelligence tests.

- Adapting to one's environment is a significant factor in intelligence, but of those who agreed with this statement said intelligence test do not measure it.

Definition

"Intelligence means to apply one's knowledge to noble situation or adjustment to noble situations."

ALFRED

"Intelligence is a flexibility of mind to meet the new situations."

MUNN

"Intelligence (in all cultures) is the ability to learn from experience, solve problems, and use our knowledge to adapt to new situations."

L. L. Thurstone, a critic of Spearman, analyzed his subjects NOT on a single scale of general intelligence, but on seven clusters of *primary mental abilities,* including: Word Fluency, Verbal Comprehension, Spatial Ability, Perceptual Speed, Numerical Ability, Inductive Reasoning and Memory.

"Gardner proposes *eight types* of intelligences and speculates about a ninth one — *existential intelligence.* Existential intelligence is the ability to think about the question of life, death and existence."

GARDNER'S EIGHT INTELLIGENCES

Aptitude	Exemplar
1. Linguistic	T. S. Eliot, poet
2. Logical-mathematical	Albert Einstein, scientist
3. Musical	Igor Stravinsky, composer
4. Spatial	Pablo Picasso, artist
5. Bodily-kinesthetic	Martha Graham, dancer
6. Intrapersonal (self)	Sigmund Freud, psychiatrist
7. Interpersonal (other people)	Mahatma Gandhi, leader
8. Naturalist	Charles Darwin, naturalist

Characteristics

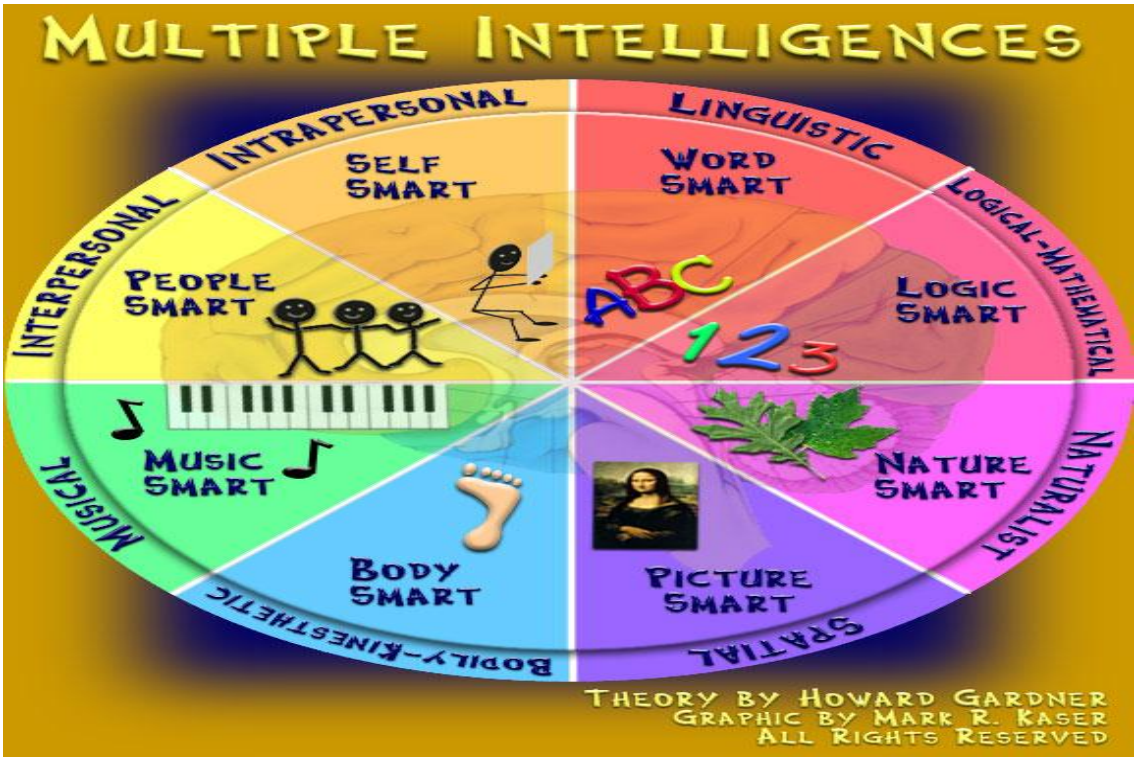
1) It is an ability of abstract thinking
2) It is a capacity to adjust in new situation.
3) It is a general mental adaptability.
4) It is an ability to relate diverse situation.
5) It is an ability to learn from experiences.
6) It is an ability to solve problems.
7) It is an inborn capacity to perceive the right thing at the right place and maintain definite direction.
8) It is a power of self–criticism or auto-criticism.
9) It is an ability of verbal and numbers reasoning
10) It is a perceptual ability or capacity or insight

5.3 THEORIES OF INTELLIGENCE

Many of us are familiar with three general categories in which people learn: visual learners, auditory learners, and kinesthetic learners. Beyond these three general categories, many theories of and approaches toward human potential have been developed. Among them is the theory of multiple intelligences, developed by Howard Gardner, Ph.D., Professor of Education at Harvard University. Gardner's early work in psychology and later in human cognition and human potential led to the development of the initial six intelligences. Today there are nine intelligences and the possibility of others may eventually expand the list. These intelligences (or competencies) relate to a person's unique aptitude set of capabilities and ways they might prefer to demonstrate intellectual abilities.

According to Gardner,

- 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.



Howard Gardner claims that all human beings have multiple intelligences. These multiple intelligences can be nurtured and strengthened, or ignored and weakened. He believes each individual has nine intelligences:

1 **Verbal-Linguistic Intelligence** -- well-developed verbal skills and sensitivity to the sounds, meanings and rhythms of words

e.g., Journalist, Writer, Lawyer, Media consultant

2 **Mathematical-Logical Intelligence** -- ability to think conceptually and abstractly, and capacity to discern logical or numerical patterns

e.g., Scientist, Engineers, Mathematicians, Statisticians, Accountant

3 **Musical Intelligence** -- ability to produce and appreciate rhythm, pitch and timber

e.g., Musician, Singers, DJ'S , Music Producer

4 **Visual-Spatial Intelligence** -- capacity to think in images and pictures, to visualize accurately and abstractly

e.g., Artist , Designers, Architects, Photographers, Sculptors

5 **Bodily-Kinesthetic Intelligence** -- ability to control one's body movements and to handle objects skillfully

E.g., Dancers, Typists, Actors

6 **Interpersonal Intelligence** -- capacity to detect and respond appropriately to the moods, motivations and desires of others.

e.g., Doctors, Lawyers, Teachers, Therapist, Psychologists

7 **Intrapersonal Intelligence** -- capacity to be self-aware and in tune with inner feelings, values, beliefs and thinking processes

e.g., Swami Vivekanand, Lokmanya Tilak, Mother Teresa

8 **Naturalist Intelligence** -- ability to recognize and categorize plants, animals and other objects in nature

e.g., Environmentalist, Gardner

9 **Spiritual** / **Existential Intelligence** -- sensitivity and capacity to tackle deep questions about human existence, such as the meaning of life, why do we die, and how did we get here.

e.g., Religious Person

10 **Moral Intelligence** – Ethics, Humanity and Value of life

e.g., Leaders, Teachers

In summary, integrate educational theories, teaching strategies, and other pedagogic tools in meaningful and useful ways to better address the needs of students. Gardner himself asserts that educators should not follow one specific theory or educational innovation when designing

instruction but instead employ customized goals and values appropriate to their teaching and student needs. Addressing the multiple intelligences and potential of students can help instructors personalize their instruction and methods of assessment.

EMOTIONAL INTELLIGENCE (EQ) THEORY

Emotional Intelligence is a relatively recent behavioural model, rising to prominence with Daniel Goleman's 1995 Book called 'Emotional Intelligence'. The early Emotional Intelligence theory was originally developed during the 1970s and 80s by the work and writings of psychologists Howard Gardner (Harvard), Peter Salovey (Yale) and John 'Jack' Mayer (New Hampshire). Emotional Intelligence is increasingly relevant to organizational development and developing people, because the EQ principles provide a new way to understand and assess people's behaviours, management styles, attitudes, interpersonal skills, and potential.

The EQ concept argues that IQ, or conventional intelligence, is too narrow; that there are wider areas of emotional intelligence that dictate and enable how successful we are. Success requires more than IQ (Intelligence Quotient), which has tended to be the traditional measure of intelligence, ignoring essential behavioural and character elements. We've all met people who are academically brilliant and yet are socially and inter-personally inept. And we know that despite possessing a high IQ rating, success does not automatically follow.

Different approaches and theoretical models have been developed for emotional intelligence.

EMOTIONAL INTELLIGENCE - TWO ASPECTS

This is the essential premise of EQ: to be successful requires the effective awareness, control and management of one's own emotions, and those of other people. EQ embraces two aspects of intelligence:

- **Understanding yourself, your goals, intentions, responses, behaviour and all.**
- **Understanding others, and their feelings.**

EMOTIONAL INTELLIGENCE - THE FIVE DOMAINS

Goleman identified the five 'domains' of EQ as:

1. **Self Awareness**: Knowing your emotions.
2. **Self Regulation**: Managing your own emotions.
3. **Motivation**: Motivating yourself.

} Personal Competence

4. **Empathy**: Recognising and understanding other people's emotions.

5. **Social Skill**: Managing relationships. Social Competence

PERSONAL COMPETENCE

Self - Awareness

Emotional awareness : Recognizing one's emotions and their effects. People with this competence:

- Know which emotions they are feeling and why
- Realize the links between their feelings and what they think, do, and say
- Recognize how their feelings affect their performance
- Have a guiding awareness of their values and goals

Accurate self-assessment: Knowing one's strengths and limits. People with this competence are:

- Aware of their strengths and weaknesses
- Reflective, learning from experience
- Open to candid feedback, new perspectives, continuous learning, and self- development
- Able to show a sense of humor and perspective about themselves

Self-confidence: Sureness about one's self-worth and capabilities. People with this competence:

- Present themselves with self-assurance; have "presence"
- Can voice views that are unpopular and go out on a limb for what is right
- Are decisive, able to make sound decisions despite uncertainties and pressures

Self - Regulation

Self-control: Managing disruptive emotions and impulses. People with this competence:

- Manage their impulsive feelings and distressing emotions well
- Stay composed, positive, and unflappable even in trying moments
- Think clearly and stay focused under pressure

Trustworthiness: Maintaining standards of honesty and integrity. People with this competence:

- Act ethically and are above reproach
- Build trust through their reliability and authenticity
- Admit their own mistakes and confront unethical actions in others
- Take tough, principled stands even if they are unpopular

Conscientiousness: Taking responsibility for personal performance. People with this competence:

- Meet commitments and keep promises
- Hold themselves accountable for meeting their objectives
- Are organized and careful in their work

Adaptability: Flexibility in handling change. People with this competence:

- Smoothly handle multiple demands, shifting priorities, and rapid change
- Adapt their responses and tactics to fit fluid circumstances
- Are flexible in how they see events

Innovativeness: Being comfortable with and open to novel ideas and new information. People with this competence:

- Seek out fresh ideas from a wide variety of sources
- Entertain original solutions to problems
- Generate new ideas
- Take fresh perspectives and risks in their thinking

Motivation

***Achievement drive*:** Striving to improve or meet a standard of excellence. People with this competence:

- Are results-oriented, with a high drive to meet their objectives and standards
- Set challenging goals and take calculated risks
- Pursue information to reduce uncertainty and find ways to do better
- Learn how to improve their performance

Commitment*:* Aligning with the goals of the group or organization. People with this competence:

- Readily make personal or group sacrifices to meet a larger

Optimism: Persistence in pursuing goals despite obstacles and setbacks. People with this competence:

- Persist in seeking goals despite obstacles and setbacks
- Operate from hope of success rather than fear of failure
- See setbacks as due to manageable circumstance rather than a personal flaw

SOCIAL COMPETENCE

Social Awareness

Empathy: Sensing others' feelings and perspective, and taking an active interest in their concerns. People with this competence:

- Are attentive to emotional cues and listen well
- Show sensitivity and understand others' perspectives
- Help out based on understanding other people's needs and feelings

Service orientation: Anticipating, recognizing, and meeting customers' needs. People with this competence:

- Understand customers' needs and match them to services or products
- Seek ways to increase customers' satisfaction and loyalty
- Gladly offer appropriate assistance
- Grasp a customer's perspective, acting as a trusted advisor

Developing others: Sensing what others need in order to develop, and bolstering their abilities. People with this competence:

- Acknowledge and reward people's strengths, accomplishments, and development
- Offer useful feedback and identify people's needs for development
- Mentor, give timely coaching, and offer assignments that challenge and grow a person's skills.

Leveraging diversity: Cultivating opportunities through diverse people. People with this competence:

- Respect and relate well to people from varied backgrounds
- Understand diverse worldviews and are sensitive to group differences

- See diversity as opportunity, creating an environment where diverse people can thrive
- Challenge bias and intolerance

Political awareness: Reading a group's emotional currents and power relationships. People with this competence:

- Accurately read key power relationships
- Detect crucial social networks
- Understand the forces that shape views and actions of clients, customers, or competitors
- Accurately read situations and organizational and external realities

SOCIAL SKILLS

Influence: Wielding effective tactics for persuasion. People with this competence:

- Are skilled at persuasion
- Fine-tune presentations to appeal to the listener
- Use complex strategies like indirect influence to build consensus and support
- Orchestrate dramatic events to effectively make a point

Communication : Sending clear and convincing messages. People with this competence:

- Are effective in give-and-take, registering emotional cues in attuning their message
- Deal with difficult issues straightforwardly
- Listen well, seek mutual understanding, and welcome sharing of information fully
- Foster open communication and stay receptive to bad news as well as good

Leadership: Inspiring and guiding groups and people. People with this competence:

Articulate and arouse enthusiasm for a shared vision and mission

- Step forward to lead as needed, regardless of position
- Guide the performance of others while holding them accountable
- Lead by example

Change catalyst: Initiating or managing change. People with this competence:

- Recogni

Team capabilities: Creating group synergy in pursuing collective goals. People with this competence:

- Model team qualities like respect, helpfulness, and cooperation
- Draw all members into active and enthusiastic participation
- Build team identity, esprit de corps, and commitment

Guidelines for Promoting Emotional Intelligence in the school paving the way

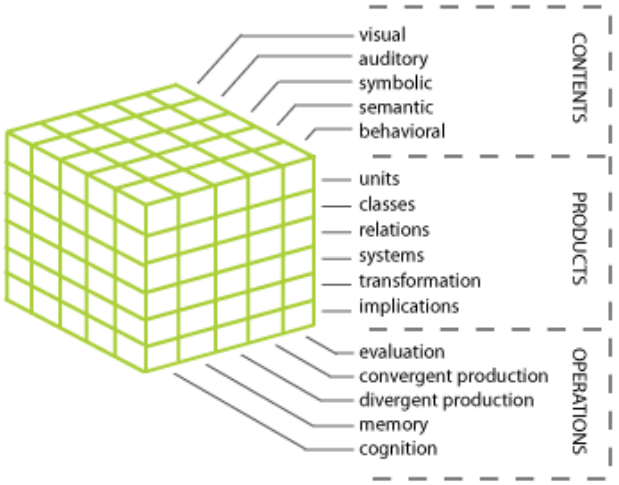
- assessing the individual needs
- assess the schools needs
- delivering assessments with care
- maximising learning choice
- encouraging participation
- linking goals and personal values
- adjusting individual expectations
- assessing readiness and motivation for EQ development
- foster relationships between EQ trainers/teachers and learners
- self-directed change and learning
- setting goals
- breaking goals down into achievable steps
- providing opportunities for practice
- give feedback
- using experiential methods
- build in support
- use models and examples
- encourage insight and self-awareness
- encourage application of new learning in our work
- develop organizational culture that supports learning

GUILFORD'S STRUCTURE OF THE INTELLECT (SOI)

In Guilford's Structure of Intellect (SOI) theory, intelligence is viewed as comprising operations, contents, and products. There are 5 kinds of operations (cognition, memory, divergent production, convergent production, evaluation), 6 kinds of products (units, classes, relations, systems, transformations, and implications), and 5 kinds of contents (visual, auditory, symbolic, semantic, behavioural). Since each of these dimensions is independent, there are theoretically 150 different components of intelligence.

Guilford researched and developed a wide variety of psychometric tests to measure the specific abilities predicted by SOI theory. These tests provide an operational definition of the many abilities proposed by the theory. Furthermore, factor analysis was used to determine which tests appeared to measure the same or different abilities.

Parenthetically, it is interesting to note that a major impetus for Guilford's theory was his interest in creativity (Guilford, 1950). The divergent production operation identifies a number of different types of creative abilities.



Principles

1. Reasoning and problem-solving skills (convergent and divergent operations) can be subdivided into 30 distinct abilities (6 products x 5 contents).

2. Memory operations can be subdivided into 30 different skills (6 products x 5 contents).
3. Decision-making skills (evaluation operations) can be subdivided into 30 distinct abilities (6 products x 5 contents).
4. Language-related skills (cognitive operations) can be subdivided into 30 distinct abilities (6 products x 5 contents).

His "Structure of Intellect" model organized these various abilities along three dimensions: **CONTENT**, **PRODUCT**, and **PROCESS**. He sought to develop tests for each combination of the possibilities on these three dimensions, expecting that a person could be high on some of these abilities while being low on others. In *The nature of human intelligence* (1967) and *Way beyond the IQ* (1977), he lays out the results of his efforts and the modified model which evolved from his research.

By **CONTENT** he meant that different people seemed to pay more attention to and think more effectively about different kinds of information, such as:

- **Visual** information directly from the senses or from imaging
- **Auditory** information directly from the senses or from images
- **Symbolic** items such as words and symbols which generally convey some meaning
- **Semantic** meanings often, but not always, associated with words
- **Behavioural** information about the mental states and behaviour of observed individuals. This type of content was added to the model based on abilities that emerged from his testing. Daniel Goleman (1995) has popularized this as “social intelligence”.

An artist might excel at processing visual information, but be poor at processing words, numbers and other symbolic content. A researcher, who excels at processing symbolic content such as words and numbers and semantic meaning, might be very poor at processing behavioural data and thus relate poorly with people.

The **PRODUCTS** dimension relates to the kinds of information we process from the content types:

- A **unit** refers to the ability to perceive units in a content area. This might be symbolic units such as words, visual units such as shapes, or behavioural units such as facial expressions.

- **Classes** refer to the ability to organize units into meaningful groups and to sort units into the right groups.
- **Relations** pertain to the ability to sense the relationships between pairs of units.
- **Systems** consist of the relationships among more than two units.
- **Transformations** are the ability to understand changes in information, such as rotation of visual figures, or jokes and puns in the semantic area.
- **An implication refers** to expectation. Given a certain set of information, one might expect certain other information to be true.

With the two dimensions of **CONTENT** and **PRODUCT** we can sort out all the kinds of information people can think about. People can talk about the implications of a symbolic series, the relation- ship of two sounds, or behavioural transformations such as changes in emotions.

The **OPERATIONS** dimension describes what the brain does with and to these types of information:

- **Cognition** has to do with the ability to perceive the various items. For example, the cognition of semantic units has to do with one's ability to recognize words, i.e. one's vocabulary. Cognition of Behavioural Transfor- mations would be the ability to perceive changes in the expressions of an individual.
- **Memory** has to do with the ability to store and retrieve various kinds of information. People differ in their abilities to remember not only from other people, but also among various kinds of information. Some people who are poor at remembering faces (behavioural units) may be excellent at remembering puns (semantic transformations).
- **Divergent production** has to do with the ability to access memory. It refers to the ability to find large numbers of things which fit certain simple criteria. For example, the ability to divergently produce visual units includes the ability to list a great many images which include a circle. Divergence in behavioural transformations would include the ability to revise stories about people. Diver- gence in Symbolic Implications would include the ability to list various equations which can be deduced from given equations.

- **Convergent Production** is the search of memory for the single answer to a question or situation. This area includes most areas of logic type problem solving. It differs from divergence in the constraint of one right answer. It seems likely that performance on convergent tasks is actually the result of divergent production and evaluation, but it is an often tested for skill, and the one most often associated with IQ..
- **Evaluation** is the ability to make judgments about the various kinds of information, judgments such as which items are identical in some way, which items are better, and what qualities are shared by various items.

These three factors combine to identify **5 X 5 X 6 = 150** different skill areas. It is important to remember that this model was developed to explore the relations among the various categories. In Guilford's language, it could be said that they simply concentrated on the cognition of a class of behavioural contents.

Educational Implication

- Guilford believes that the students are not simply a stimulus responses mechanism. He resembles a computer who acquires scores and uses information. This view point stimulates many new ideas for the classroom practice.
- Special aspects of intellectual activity are involved in the different specialization process both academic and professional. We therefore need a prior knowledge about the specific ability of each student to place him in the right line of specialization.
- SOI model and analysis of the individual under its guidance can just pin point the individual abilities to provide us a secure base on which his future learning is to be based.
- The SOI model by talking about mental operations guides teacher to concentrates on thinking. i.e., knowing, comprehending and discovery
- With regards to memory operation, teacher can train the students in the skills of retaining and recalling the contents of thoughts.
- The operation of convergent products production advocated by Guilford helps the teachers and students to have a focused search of general information.

- The last operation of evaluation which is the area of critical thinking. This process involves comparing and judging the information. Teacher trained in this process can help the students to take a decision as to the appropriateness of any act and modify it if necessary.

5.4 MEASUREMENT OF INTELLIGENCE

Psychologists define intelligence testing as a method for assessing an individual's mental aptitudes and comparing them with others using numerical scores.

Alfred Binet and his colleague Therefore Simon practiced a more modern form of intelligence testing by developing questions that would predict children's future progress in the school system.

In the US, Lewis Terman adapted Binet's test for American school children and named the test the Stanford-Binet Test. The following is the formula of Intelligence Quotient (IQ), introduced by William Stern:

$$IQ = \frac{\text{mental age}}{\text{chronological age}} \text{ X } 100$$

Aptitude and Achievement Tests

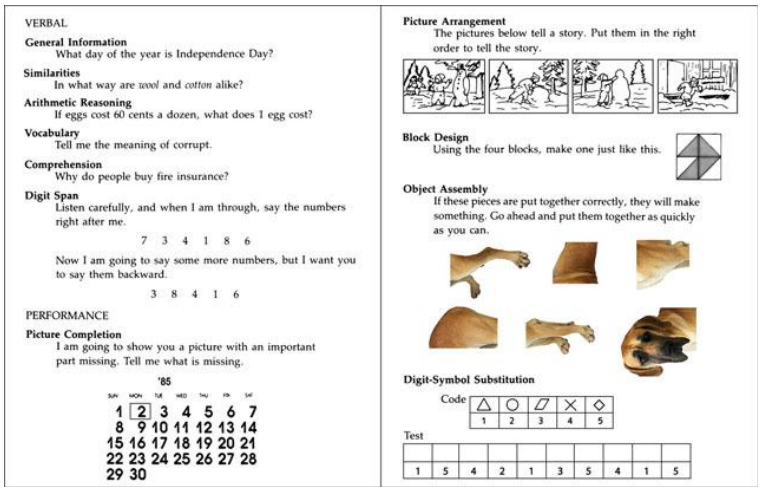
Aptitude tests (most IQ tests) are intended to *predict* your ability to learn a new skill and achievement tests are intended to *reflect* what you have already learned.

David Wechsler

David Wechsler developed the Wechsler Adult Intelligence Scale (WAIS) and later the Wechsler Intelligence Scale for Children (WISC), an intelligence test for preschoolers.

WAIS

WAIS measures overall intelligence and 11 other aspects related to intelligence that are designed to assess clinical and educational problems.



VERBAL

General Information
What day of the year is Independence Day?

Similarities
In what way are *wool* and *cotton* alike?

Arithmetic Reasoning
If eggs cost 60 cents a dozen, what does 1 egg cost?

Vocabulary
Tell me the meaning of corrupt.

Comprehension
Why do people buy fire insurance?

Digit Span
Listen carefully, and when I am through, say the numbers right after me.

7 3 4 1 8 6

Now I am going to say some more numbers, but I want you to say them backward.

3 8 4 1 6

PERFORMANCE

Picture Completion
I am going to show you a picture with an important part missing. Tell me what is missing.

'85

SUN	MON	TUE	WED	THU	FRI	SAT
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

Picture Arrangement
The pictures below tell a story. Put them in the right order to tell the story.

Block Design
Using the four blocks, make one just like this.

Object Assembly
If these pieces are put together correctly, they will make something. Go ahead and put them together as quickly as you can.

Digit-Symbol Substitution

Code	△	○	▱	×	◇
	1	2	3	4	5

Test

1	5	4	2	1	3	5	4	1	5

5.5 MEANING AND NATURE OF PERSONALITY

Meaning

The study of personality is based on the essential insight that all people are similar in some ways, yet different in others. There have been many different definitions of personality proposed. However, many contemporary psychologists agree on the following definition:

Personality is that pattern of characteristic thoughts, feelings, and behaviours that distinguishes one person from another and that persists over time and situations

Personality is the dynamic organization within the individual of that psychophysical system that determines his unique adjustments to his environment

ALLPORT

Nature of Personality

We all use the term ‘personality’ in day-to-day life. In psychology personality is thought as a person’s unique and relatively stable behaviour pattern which remains consistent across situations and over a period of time.

The term personality has been defined in diverse ways. Allport in 1937 gave a very popular definition of personality which is still referred to by scholars. According to him *"personality is the dynamic organization within the individual of those psychophysical systems that determine his unique adjustment to his environment".* Psychologists have approached personality from different perspectives. Each of these perspectives explains some aspects of personality. Now let us study in brief about some of these perspectives:

I) **The trait perspective** tries to describe personality in terms of various traits. Some times the traits are grouped into clusters. These clusters are called "types". For instance introversion and extraversion are two types of personality traits.

II) **The psychodynamic perspective** calls attention to the unconscious needs and Conflicts as well as the influence of earlier stages of development on our lives. Sigmund Freud, a noted psychologist, provided the core concepts for this perspective.

III) **The socio-cultural perspective** highlights the importance of the social and cultural environment. In view of this theory, our personality and behaviour patterns are acquired through interaction with others and adoption of social and cultural norms.

IV) **The humanistic perspective** emphasizes the enormous potential for freedom and growth present in each one of us. It is a view which is optimistic and emphasizes-on positive aspects of life and potentialities.

V) Personality = Temperament + Character

Temperament refers to our nature — our inborn characteristics, our 'factory settings', how we are wired. Even at birth one can see individual variations on the human theme. Some infants, for example, are naturally timid while others are naturally bold.

VI) Character refers to our acquired (or nurtured) characteristics, our 'custom settings', how we have learned to deal with life since we were born. Our character is also the sum of our virtues

and vices. A person of good character, for example, has high integrity; a person of bad character does not. It helps to be a good judge of character.

It has been said that temperament is something we share with other animals, while character is, perhaps, uniquely human.

Characteristics of Personality

1. It is unique
2. It exhibits self consciousness
3. It includes everything about a person
4. Sometimes it is subjected to disintegration and disorganization
5. It is product of heredity and environment
6. Learning and acquisition of experiences contribute to growth and development of personality
7. It can be described and measured
8. It is a psychological Concept

Approaches to the study of personality

- Type approach
- Trait approach
- Psycho analytic approach
- Humanistic approach

5.6 TYPE THEORIES OF PERSONALITY

Personality type refers to the psychological classification of different types of individuals. Personality types are sometimes distinguished from personality traits, with the latter embodying a smaller grouping of behavioural tendencies. Types are sometimes said to involve *qualitative* differences between people, whereas traits

might be construed as *quantitative* differences. According to type theories, for example, introverts and extraverts are two fundamentally different categories of people. According to trait theories, introversion and extraversion are part of a continuous dimension, with many people in the middle. Psychologists of type theories:

- Hippocrates
- Kretschmer
- Sheldon and
- Jung

HIPPOCRATES

- The human body consists of four types of humors or fluids. They are;
- Blood
- Yellow bile
- Phlegm (mucus) and
- Black bile

The predominance of any one of the fluids in one's body gives him unique temperamental characteristics leading to a particular type of personality.

Dominant fluid – Blood	
Personality type	Sanguine (cheerful)
Temperamental Characteristics	Light hearted
	Optimistic
	Happy
	Hopeful and
	Accommodating
Dominant fluid - Yellow Bile	
Personality type	Choleric (bad tempered)

Temperamental Characteristics	**I**rritable
	Angry
	Passionate
	Strong
	Active imagination

Dominant fluid - Phlegm (mucus)	
Personality type	Phlegmatic (Calm)
Temperamental Characteristics	Cold
	Calm
	Slow or Sluggish
	Indifferent

Dominant fluid - Black bile	
Personality type	Melancholic
Temperamental Characteristics	Bad tempered
	Dejected, Sad
	Depressed, Pessimistic

	Deplorable (shocking)
	Self involved

KRETSCHMER

He classified human beings in to three biological types based on the physical structure and allotted definite personality characteristics

KRETSCHMER'S CLASSIFICATION

Personality types	Personality characteristics
• Pyknic (Having fat bodies) • Athletic (Balanced body) • Lepto somatic (Lean and thin)	• Sociable, Jolly, Easy going, Good natured. • Energetic, Optimistic and Adjustable. • Unsociable, Reserved, Shy, Sensitive, and Pessimistic.

SHELDON

- Sheldon classified human beings in to three as

-Endomorphic

-Mesomorphic and

-Ectomorphic.

- He gave somatic description and personality characteristics of these types

Endomorphic type (SHELDON'S CLASSIFICATION)

Somatic description	Personality characteristics
• Persons having highly developed viscera but weak somatic structure (similar to pyknic in Kretschmer) • Balanced development of viscera and somatic structure (athletic) • Weak somatic structure and undeveloped viscera (lepto somatic)	• Easy going, sociable and Affectionate. • Craving for muscular activity, self assertive, Loves risk and adventure • Pessimistic, Unsociable and Reserved. .

CARL GUSTAV JUNG

- Jung divided all human beings basically in to two types **Introvert** and **Extrovert**
- He used the concept **libido** in his system
- He equated it with life urge or life energy responsible for every type of human activity including sex gratification.
- For Jung libido is the life itself
- It can turn an individual in to a writer, scientist, artist, mathematician as needed by him in his struggle for self actualization.

- Libido may flow both ways- inward and outward. This flow decides the type of personality in which the individual belong.

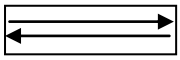
❖ **Introvert**

- The person whom the libido or life energy flows inward are called introvert.
- Introverts seek manifestation of their life through inner activities, i.e., by going inward and searching things from within themselves.
- E.g., philosophers, scientists, writers etc
- Introverts are busy with their own thoughts
- They are not bothered about the physical stimulation and realities of their environment.

❖ **Extrovert**

- Person whom life energy i.e., libido flows outward are called extrovert.
- They seek manifestation of their life through activities related to the outer world
- They are successful in adjusting to the realities of their environment
- They are socially active
- They are more interested in leaving a good impression on others
- Their behaviour is influenced by physical stimulation.
- E.g., politician, social workers, lawyers, insurance agents, salesmen etc.

- A person need not be exclusively introvert or extrovert.
- Both the tendencies are ordinarily present in the personality of an individual and one of them is found to be more dominant and making the individual a particular type.
- A person may shift from one orientation to the other.

Introvert  **Extrovert**

- Sometimes a person may appear to be a particular type but actually he may not be so.
- Jung associated a person's introvert and extrovert orientations with four main behavioural functions.

-Thinking

-Feeling

-Sensation and

-Intuition

5.7 TRAIT THEORIES OF PERSONALITY

- Traits are the basic units of one's personality
- Traits can be discovered through observing one's behaviour in a variety of situations.

GORDON. W. ALLPORT

- The first theorist who adopted the trait approach for the description of highly individualized personalities
- Traits are the basic units of personality

- Each of us develops traits in the course of our development
- **Allport** distinguished three types of traits namely;

  -Cardinal traits

  -Central traits and

  -Secondary traits

Cardinal traits

- Cardinal traits are the primary traits so dominant in one's personal disposition that they colour every aspect of one' behaviour and attributes.
- Just one or two cardinal traits are found in individuals.
- Cardinal traits overrule other traits and drift the whole personality along with them
- E.g., humorousness, doubtfulness, rashness, indiffference etc.
- Cardinal traits are important for description of one's personality

Central traits

- Central traits are those few characteristics which can be ordinarily used to describe a person.
- E.g., honesty, kindness, submissiveness openness, dominance etc.
- Only five to ten central traits are needed to understand one's personality.

- **Cardinal traits** combined with a few **central traits** form the core of characteristic traits responsible for giving uniqueness to one's personality

Secondary traits

- Secondary traits appear in only relatively small range of situations
- They are nor as dominant as cardinal traits and central traits.
- The traits which are not so generalized and consistent may also found in people. These are categorized as common traits.
- Allport and his colleague Odbert (1936) analyzed about 18,000 terms from dictionary to describe traits and
- Finally identified a total of 4541 psychological traits for describing human behaviour.
- Allport stressed the importance of the following concepts in describing one's personality. They are;
- Functional autonomy
- Individualized approach in the study of personality
- Discontinuous nature of the development of personality
- **Functional Autonomy**
- This refers to the attainment of autonomy on (the functioning of) a behaviour irrespective of its need or purpose for which it was practiced.

- This suggests that the functioning or practicing of a behaviour which once served a purpose may attain autonomy at a later stage.
- A behaviour once satisfied some specific need may later serve only for itself.
- E.g., walking to control cholesterol becomes a practice later even after it is controlled.
- Sleeping, to control tension on physician's advice, becomes a habit even after it is controlled.

Individualized approach in the study of personality

- Allport favoured individualized approach known as 'ideographic approach' in the study of human personality instead of studying identifying the general principles of human behaviour.
- He emphasized uniqueness of the individual

Discontinuous nature of the development of personality

- Personality is not a continuation from childhood to adulthood.
- It is a discrete and discontinuous development
- The past can not decide the functions of the present.

Criticism

- The division of traits in to cardinal, central and secondary traits is confusing
- Present can not be delinked from one's past

- It does not give specific considerations to the study of the pattern of growth and development.

RAYMOND. B CATTELL

- Basically Cattell's work involves the identification of basic dimensions of personality and developing instruments to measure these dimensions.
- It gives importance to both heredity and environment in the growth and development of personality.
- He considered Motivational variables like urges Sentiments , attitude states and Roles relevant to the situation.
- It is one of the advanced theory based on trait appproach
- He is a Brittish born American researcher
- He compiled 17,000 traits in 1946
- Then he reduced it to 171 words by eliminating similar terms and antonyms.
- Then he reduced it to 35 specific groups due to relationship between them and called them surface traits
- Again after elimination in terms of interrelation he identified the sixteen basic dimensions which he called Source traits.
- These sixteen basic source traits were named as **factors**
- Cattell regarded these factors as building blocks of personality
- One's personality can be described and measured in terms of these characteristic traits.

Cattell's sixteen factors of personality (16PF)									
	1	2	3	4	5	6	7	8	
reserved									outgoing
less intelligent									more intelligent
affected by feelings									emotionally stable
submissive									dominant
serious									happy-go-lucky
expedient									conscientious
timid									venturesome
tough-minded									sensitive
trusting									suspicious
practical									imaginative
forthright									shrewd
self-assured									apprehensive
conservative									experimenting
group dependent									self-sufficient
uncontrolled									controlled
relaxed									tense

- He defined a trait as a structure of the personality inferred from behaviour in different situations.
- He described four types of traits:

-Common traits

-Unique traits

-Surface traits and

-Source traits

Common traits

- The traits found widely distributed in general population like honesty, aggression and cooperation.

Unique traits

- Traits unique to a person such as temperamental traits and emotional reactions

Surface traits

- These can be recognised by manifestations of behaviour like curiosity, dependability and tactfulness.

Source traits

- These are the underlying structures or sources that determine behaviour such as dominance, submission, emotionality, etc.
- Cattell used this 16 factors for the measurement of personality by devising a **personality inventory** known as **Cattell's Sixteen Personality Factors Inventory (16PF)** consisting of suitable multiple choice questions

Criticism

- Excessive emphasis on overt behaviour
- It projects static picture of human functioning
- It did not use the factor analytic approach to identify higher order factors

5.8 MEASUREMENT OF PERSONALITY

- The actual measurement of personality in terms of objectivity, reliability and validity is not possible.
- Hence use of the term 'measurement' cannot be justified.

- What is actually done is assessment of personality

❖ **Some of the Techniques of assessment of personality are**

- Questionnaire
- Projective techniques
- Interviews (Clinical and Psycho analytical)
- **Questionnaire**
- It is a device to collect information from the subject himself about his personality characteristics.
- It consists of a series of questions.
- The subjects have to respond to the questions in the space provided for it as 'yes', 'no' or 'cannot say'
- These are evaluated and used for personality assessment.

Sl. No.	Items	Yes	No	Can not say
1	Do you enjoy being alone?			
2	Do you enjoy seeing others succeed?			
3	Do you enjoy at a joke on yourself?			
4	Do you get along with your relatives?			

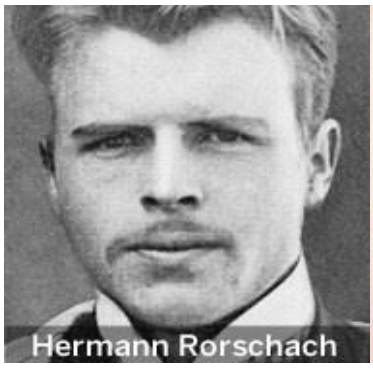
- **Projective techniques**
- It refers to the techniques used to reveal (to project) the inner world of repressed feelings, wishes, hopes, fears and ambitions of an individual by going deep in to his unconscious.

- It is called Projective techniques because it projects the inner world of unconscious.
- In projective techniques indefinite and unstructured stimuli are presented to the subjects and asked them to structure those stimuli or explain them.
- While structuring or explaining the stimuli the subjects project the repressed feelings, wishes, hopes, fears and ambitions from the unconscious.

❖ **Some common Projective Techniques**

- The Rorschach Inkblot Test
- Thematic apperception Test
- Children's Apperception Test
- Word Association Test
- Sentence Completion Test

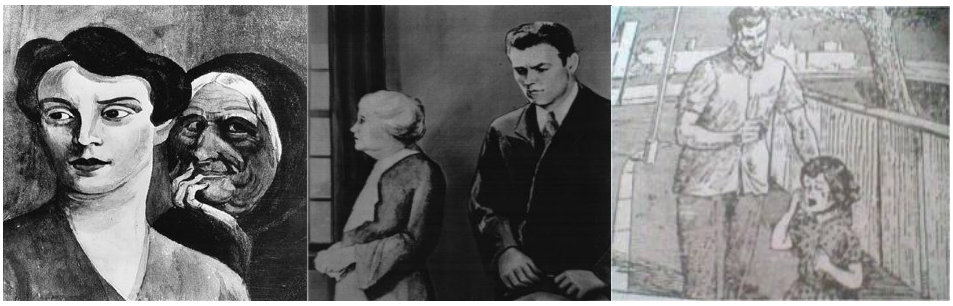
❖ **The Rorschach Inkblot Test**



- It was developed by Harmann Rorschach, a Swiss psychiatrist.
- It consists of ten cards containing inkblots.
- Five of them are in black and white and five of them are multi coloured.
- These are unstructured and do not have any specific meaning.

- It can be administered on subjects and responses can be scored and interpreted

❖ **Thematic Apperception Test**



- It was first introduced by Henry Murray (1943) to measure the need for achievement.
- Later it was developed for the assessment of personality with the help of C.D.Morgan.
- It consists of thirty vague and indefinite pictures portraying human beings in a variety of actual life situations.
- Ten are meant for males, ten for females and ten are common to both sexes.
- The test is administered in two sessions using ten pictures in each session.
- The pictures are presented one at a time.
- The subject has to make up a story for each of the pictures within a fixed period of time.

The following aspects are to be considered while the subject is making up the story.

- 1. What is going on in the picture?
- 2. What has lead to this scene?
- 3. What would likely happen in such a situation?

❖ **Children's Apperception Test**

- Thematic apperception Test is not suitable for children

- So Dr. Leopold Bellak developed this test for childeren between three and ten years old.
- It consists of ten cards having pictures of animals. These are meant for both sexes.
- Children are asked to make up stories as a game.

❖ **Word Association Test**

- It includes a number of selected words
- The examiner speaks a series of words, one word at a time
- The subject should immediately say the first word that comes to his mind
- There is no right or wrong answers.
- Uttering of unusual words, if any and behaviour manifestations are considered for evaluation.

❖ **Sentence Completion Test**

- It consists of a list of incomplete sentences, generally open ended.
- These require completion by the subject in one or more words.
- The subject has to go through the list of words and answer as quickly as possible
- Item Examples:
- I am worried over…….
- My hope is ……..
- I feel proud when ……..
- My hero is ……

❖ **Indian adaptations of personality tests**

- Indian adaptations of senior apperception test developed by Uma Chaudhary

- Indian adaptations of thematic apperception test by Uma Chaudhary
- Indian adaptations of children's apperception test by Uma Chaudhary
- A pragmatic view of Rorschach inkblot technique by B.L Dubey.
- Sentence Completion test by L.N Dubey and Archana Dubey
- Mosaic test of personality by B.B Chatterjee

5.9 ADJUSTMENT

Meaning

The term adjustment refers to the extent to which an individual's personality functions effectively in the world of people. It refers to the harmonious relationship between the person and the environment. In other words, it is the relationship that comes among the organisms, the environment and the personality. A well adjusted personality is well prepared to play the roles which are expected of the status assigned to him within given environment. His needs will be satisfied in accordance with the social needs. Psychologists have interpreted adjustment from two important points of view.

- **Adjustment as an achievement**

Adjustment as an achievement means how effectively an individual could perform his duties in different circumstances. Business, military education and other social activities need efficient and well adjusted men for the progress and wellbeing of the nation. If we interpret adjustment as achievement then we will have to set the criteria to judge the quality of adjustment.

- **Adjustment as process**

Adjustment as a process is of major importance for psychologists, teachers and parents. To analyze the process we should study the development of an individual longitudinally from his birth onwards. The child, at the time of his birth is absolutely dependent on others for the satisfaction of his needs, but gradually with age he learns to control his needs. His adjustment largely depends on his interaction with the external environment in which he lives. When the child is born, the world for him is a big buzzing, blooming confusion. He cannot differentiate among the various

objects of his environment but as he matures he comes to learn to articulate the details of his environment through the process of sensation, perception, and conception.

Definition

Adjustment is the process by which living organism maintains a balance between its need and the circumstances that influence the satisfaction of these needs.

L.S. SHAFFER

Concept of adjustment

Adjustment is the relationship which comes to be established between the individual and the environment. Every individual plays certain position in his social relations. He is trained to play his role in such a way that his maximum needs will be fulfilled. So, he should play his role properly and get maximum satisfaction. If he does not play his role according to standards and training Home Environment received his needs may not be fulfilled and he may get frustrated.

Types of adjustment

• **Normal Adjustment**: When a relationship between an individual and his environment is according to established norms then that relationship is considered as normal adjustment. A child who obey his parents, who is not unduly stubborn; who studies regularly and has neat habit is considered adjusted.

• **Abnormal adjustment**: Abnormal Adjustment means problem behaviour or popular speaking maladjustment. Maladjustment takes place when the relationship between an individual and his environment is not according to established standards or norms. A delinquent child adjusts with his environment but he is a maladjusted child because he is violating certain moral codes.

Characteristics of adjustment mechanism

Adjustment mechanism is almost used by all people. They are ideas which are inferred from the behaviour of the individuals. All mechanisms are used to protect or enhance the persons self esteemed against dangers. They increase satisfaction and help in the process of adjustment if used within limit.

The danger is always within the person. He fears his own motives. The fear and danger are manifested in adjustment mechanism. The overall effect of adjustment mechanism is to cripple the individual's functioning and development through falsifying some aspects of his impulses so that he is deprived of accurate self knowledge as a basis for action.

Adjustment mechanism

An adjustment mechanism may be defined as "any habitual method of overcoming blocks, reaching goals, satisfying motives, relieving frustrations and maintains equilibrium". Adjustment mechanism is a device by which an individual reduces his tensions or anxiety in order to adjust himself properly with the environment. It helps him to regain his mental health. To solve his problems or to meet conflicting situations a child's uses certain self adjustive, self defensive approaches which may protect him from his frustrate situations. These are called defense mechanism. For e.g. A child is trained to sleep throughout the night without asking for milk. A child who plays his role successfully gets love and emotional security from his mother and he adjusts well to his home environment. On the other hand, if the child does not sleep properly and carries on his infantile role, he may get scolding and spanking from his mother. He may not be looked after properly and his mother's attitude may become indifferent and formal about him. Naturally the child may feel frustration. For e.g. Once the child learns that while he is sleeping, his mother does not remain with him, his first reaction may be of frustration, then he may accommodate and later on, he may assimilate in the situation so completely that he may accept it ads life and he may not mind his mothers going out of his room while he is awake. The conscious and the rational method are known as direct method and unconscious method is known as indirect method.

Areas of adjustment

1) Health adjustment

2) Emotional adjustment

3) Social adjustment

4) Home adjustment

5) School adjustment

6) Occupational adjustment

Characteristics of well adjusted person

1) Awareness of one's own strengths and limitations

2) Respecting one's self and the others

3) An adequate level of aspiration

4) Satisfaction of basic needs

5) Does not possess critical or fault finding attitude

6) Flexibility of his behaviour

7) Capable of struggling with odd circumstances

8) A realistic perception of the world

9) Feeling at home with his surroundings

10) An adequate philosophy of life.

How to help Children in better adjusted individuals

1) Balanced growth and development

2) Satisfaction of basic needs

3) Awareness of strength and weaknesses

4) Setting a proper level of aspiration

5) Developing tension tolerance

6) Harmony with the demands of society and culture

Maladjustments

Meaning

It represents a condition or state in which one feels that his needs are not fulfilled and/or will not be fulfilled and he has been a failure in establishing harmony with his self and the environment

The maladjusted person may exhibit serious behavioural and adjustment problems causing harm to the wellbeing of himself and others. One remains adjusted when his physical and psychological needs are satisfied. When his needs are not satisfied he may become maladjusted.

Causes of Maladjustment

It can be classified into two

1. Personal
2. Environmental

<u>Personal causes</u>

Hereditary factors

- Defective mental makeup
- Structure of body
- Colour of skin
- Constitutional defects

Physiological and physical factors

- Poor health
- Lack of vitality
- Physical deformity
- Chronic diseases
- Bodily defects

Nature of the individual

- Unrealistic aims and goals
- Lack of social maturity
- Lack of emotional maturity
- Frustrations and desperations
- Improper setting of level of aspiration
- Unresolved conflicts and contradictory desires

Environmental causes

- Improper behaviour of parents and elders towards the child
- Uncongenial and defective home environment
- Defective social and cultural setup of the environment
- Uncongenial and defective school environment

Role of Teacher in adjustment and maladjustment

- Ensure balanced growth and development
- Provide opportunities for satisfaction of basic needs
- Make them aware of their strength and weakness
- Inspire them to set a goal in life
- Develop tolerance to face tensed situations
- Help them to realize the importance of satisfying the demands of society and culture
- Provide healthy environment
- Offer guidance and counseling as and when needed

6.0. TYPES OF DEFENCE MECHANISM

Ways people deal with stresses in their lives. Used to try to solve problems, hide counterbalance or feelings or actions. Defense mechanisms do not usually get rid of the problem, and are often negative or not a very effective way to deal with stress.

Positive Defenses

- **Direct Attack:** Recognize the heart of the problem
    - Work to solve the problem
    - The goals must be realistic

e.g., "If I look at this realistically, I can set my goals and overcome this problem"

- **Sublimation:** redirecting bad or unacceptable behaviour/emotions into positive behaviour.

- We sublimate the desire to fight into the ritualistic activities of formal competition.

e.g., When I'm angry, I box at the gym.

Negative Defenses

- **Compensation** - covering a weakness by overachieving in another area.
    - May be negative or positive

e.g., "OK, maybe I'll never be able to pass the class, but I'll have fun and that teacher will be sorry"

- **Daydreaming** - escaping from an unpleasant situation by using your imagination.

- Living in a fantasy world

e.g., "I love animals so much, so even if I fail biology I can still be a veterinarian"

- **Denial** - failure to accept reality.

- "This is not happening. It can't happen to me."

- **Displacement** - the transfer of negative emotions from one person or thing to an unrelated person or thing.

e.g., “I did so poorly on my SAT, I’ll just go home and kick my dog.”

- **Projection** - Blame other people or things for your failure

- Use a scapegoat

e.g., “It’s my math teacher’s fault I failed the test”

- **Rationalization** - justifying when you behave irrationally.

e.g., “If I had wanted to try hard, I could have done it too.”

e.g., “If I had better teachers, I would have gotten higher grades.”

MORE MECHANISMS!

- **Regression** - using childlike ways for expressing emotions.

e.g.,Crying, name calling, throwing things, swearing.

- **Repression** - subconsciously blocking out unpleasant memories

e.g., “I can remember everything up to the accident, but nothing after that.”

- **Reaction formation** - expressing emotions that are the exact opposite of what you feel.

    - Conceal anger/hate with kindness.

    - Teasing/bothering someone you like.

e.g., “Someone frightens you so you act super nice”

e.g., “Someone frightens you so you snub them”

- **Conversion**- Transfer the energy of a desire you can’t express into a physical complaint or symptom (headache, stomach aches)

e.g., “I think I have the flu… I can’t take my test today.”

- **Idealization** – Valuing something more than it is worth.

- Yourself (conceited) “I am so wonderful. Everyone has to like me.”
- Others or possession (money, house, car)

e.g., “I need that new Coach purse! It will complete me!!!”

- **Giving Up** – No situation = No problem

e.g., “It doesn’t matter. I don’t care”

- **Substitution:** replacing an unattainable goal with an attainable goal to relieve disappointment.

e.g., “I am not good at football so I will try the swim team.”

6.1 MENTAL HEALTH AND MENTAL HYGIENE

MENTAL HEALTH

Meaning

- Mental health is the full and harmonious functioning of the wholesome personality.

J.A. Hadfield (1953)

- Mental health is the ability which helps to seek adjustment in the difficult situations of our life.

Cutts and moslay (1941)

Nature of mental health (characteristics)

1. Perfect mental health is not a reality.
2. Mental health is a dynamic concept.
3. Mental health can’t be achieved without physical health
4. Mental health and efficiency is not the same thing.
5. Mental health and social ability is not the same thing.
6. Mental health differs from ethical standards

Characteristics of a mentally healthy person

1. Adaptable and resilient mind
2. Conscious control of life
3. Cheerful and optimistic outlook
4. Emotional balance
5. Normal sex-consciousness
6. Free from prejudice
7. calm
8. Definite philosophy of life
9. Capacity to think independently
10. Realistic imagination
11. Insight into one's own conduct
12. Enthusiastic and reasonable

Factors determining mental health

❖ **Home factors**

- Mental health of parents
- Mental health of siblings
- Mental health of other members in the family
- Parents' education
- Economic, social, religious and cultural status of family
- Discipline –protection or rejection
- No. of children
- Order of birth

- Value placed on the sex of the child
- Step parents
- Type of family- Nuclear or joint family
- Parents' ambitions
- Relationship among members at home
- Relationship of family members with neighbours

❖ **School factors**

- Curriculum, Technology of teaching
- Co-curricular activities
- Discipline at school
- Teachers' mental health
- General tone of the school
- Physical environment

❖ **Social factors**

- Neighborhood
- Cultural environment
- Political environment
- Religious environment
- Social environment
- Mass media environment

Mental health hazards in school

1. Lack of friendliness
2. Undue stress on scholastic and other competitions

3. Defective system of evaluation

4. Fear of failure resulting in tension

5. Excess of homework

6. Heavy curriculum and failure of the child to cope with it.

Symptoms of a mentally ill child

- **Physical symptoms**

- Drumming with fingers
- Facial twitching
- Nail biting
- Restlessness
- Scratching head, Rocketing feet, stammering
- Vomiting etc.,

- **Behavioural deviations**

- Aggression
- Bullying
- Hyper activity
- Lying
- Negativism, Poor school achievement
- Sex disturbances

- **Emotional symptoms**

- Persistent anxiety
- Intense conflicts and tension
- Fear, hatred

- Inferiority complex
- Extreme timidity
- Temper tantrum and excessive worry.
- Irritability
- Depressed outlook
- Pessimistic outlook
- Abnormal interest in sex
- Easily embarrassed in presence of others
- Undeveloped habits and wills
- Bad temper
- Undue anxiety
- Moodiness
- Lack of courage
- Impatience
- Full of prejudice
- Feeling of insecurity
- Feeling of inferiority

Role of teacher and school to promote mental health in children

1. Organize physical exercise in school

2. Provide situation for meditation

3. Keep school environment healthy

4. Periodical medical examination

5. Using sound methods of teaching

6. Organize co-curricular activities

7. Ensure freedom for self discipline

8. Develop proper aspiration in children

9. Check unhealthy competition

10. Offer proper sex education

11. Offer educational, vocational and personal guidance.

12. Impart moral education

13. Teacher should

a. Be emotionally stable

b. Be patient

c. Be consistent in behaviour

d. Have democratic attitude

e. Keep word

f. Be just and impartial

g. Respect the individuality of children

h. Develop close relationship with children

MENTAL HYGIENE

Meaning

Mental hygiene is that branch of hygiene which deals with mental health of the individuals.

- Mental hygiene is a science that deals with human welfare and pervades all fields of human relationship.

Crow and Crow (1951)

- Mental hygiene may be defined as the prevention of mental illness, preservation of mental health and the cure of mental illness.

Crow and Crow (1969)

Aims of Mental Hygiene

"The ultimate aim of mental hygiene is to assist every individual in the attainment of fuller, happier, more harmonious and more effective existence"

Shaffer and Shoben

1. Prevention of mental disorders by understanding the relationship between personality development and life experience.

2. Preservation of mental health of both the individual and the group.

3. Discovery and utilization of therapeutic measures to cure mental illness.

Objectives of Mental Hygiene

- Prevention of mental disorders

1. Listing of various causes of maladjustment.

2. Furnish knowledge of drives, needs, motives, causes of motives, frustration, tension etc.

3. Suggest ways and means of achieving emotional and social adjustment.

4. Suggest solution for inner conflicts and frustrations

- **Preservation of mental health**

1. Developing total potentialities of the individual

2. Attaining emotional maturity and stability.

3. Achieving personal and social security and adequacy.

4. Developing healthy human relationships and interactions

5. Helping the individual in acquiring sound body and normal mental health.

❖ **Discovery and utilization of therapeutic measures to cure mental illness**

1. Furnish necessary knowledge regarding types of mental illness and disorders and diseases.

2. Suggesting various forms of therapy for the treatment.

3. Suggesting means for the rehabilitation and readjustment of the maladjusted.

6.2 STRESS MANAGEMENT

Meaning

Stress as a physical, mental, or emotional response to events that causes bodily or mental tension. Simply put, stress is any outside force or event that has an effect on our body or mind. Stress is the body's automatic response to any physical or mental demand placed on it. Adrenaline is a chemical naturally produced in our body as a response to stress. Fight or Flight response is illicit.

Signs of Stress

➢ **Physical**

- Headache
- Back Pain
- Fatigue
- Aches and Pains
- Weight gain/loss
- Unexpected hair loss
- Heart palpitations
- High blood pressure

➢ **Mental**

- Difficulty Concentrating
- Increased Errors
- Poor Decision Making

➢ **Emotional**

- Mood swings
- Anxiety
- Can lead to depression
- Can also lead to unhealthy coping strategies (i.e. alcohol, drugs, etc)

Myths of Stress

- All stress is bad
- Stress will not hurt you
- What stresses you out also stresses me out
- No symptoms, no stress
- Only major symptoms of stress are harmful

Managing Stress

- **Stress Relief Strategies**

Relaxation

- Breathing: practice deep breathing
- Progressive muscle relaxation
- Guided Imagery
- Meditation
- Tapes, CDs etc.: Either something structured (commercial) or soothing music
- Choose and schedule it in

Cognitive (Thoughts)

- Pay attention to what you say to yourself
- Identify negative thinking and irrational beliefs
- Negative thinking leads to stress and anxiety
- Teach thought-stopping techniques

- Teach affirmation

Spirituality

- Church, etc
- Help others
- Spend quiet time every day
- Be thankful
- Think positively
- Put your faith to work!

"I am at peace in the midst of chaos or madness. No person, place or thing has the power to upset me."**.**

Eating

- Cut down on sugar, caffeine, processed foods
- Eat nutritiously: all food groups, especially fresh fruits and veggies
- Eat a little every couple of hours or so
- Eat slowly

Time Management

- Get organized
- Get structured
- Set short term goals
- Set long term goals
- Use a planner:
- daily schedule and “To Do” list

Counseling

-talk therapy

-life coaching

- **Other Helpful tips**

- Live with an Attitude of Gratitude Be Grateful for what you have.
- Changing perceptions and expectations
- Break jobs/tasks into manageable parts
- Set reasonable/realistic goals
- Avoid procrastination
- Set boundaries
- Don’t compromise your values/beliefs
- Schedule “me” time
- Laugh Often
- Try a New Thing
- Cry
- Get Enough Sleep
- Exercise and Fresh Air
- Build a Support System – Friends, Family and Co-Workers
- SAY “NO” OCCASSIONALY
- Let go of perfectionism
- Learn to be flexible
- Relax your standards
- Focus less on pleasing others and more on pleasing yourself
- Stay away from negative people

- Surround yourself with upbeat, flexible and fun people.

Benefits of Stress Management

- Physical health gets better

  -more energy and stamina

- Emotions stabilized

  -positive attitude

  -hopeful/happier

- Ability to focus improved

  -able to learn and achieve

- Relax
- Our brain fires electrical waves at 14 or more cycles a second.
- These are *beta* waves and are great for getting tasks done, but not for learning new things.
- Taking a few minutes to relax deeply slows your brain waves down.
- These slower waves are *alpha* waves.
- They occur at between 7 and 14 cycles a second
- Studies show *alpha* waves improve learning.

6.3 SUMMARY

The study of educational psychology involves theory, practice and measurement. Focusing upon applying the principles of psychology and research to the practice of teaching, the ultimate goal is the understanding and improvement of instruction with all round development of child. Prospective teachers and other professionals in training who will interact with students need to understand how students learn and how that learning varies and is affected by each student's context, culture, and

development. This course focuses on the effective application of psychological concepts and mechanism of adjustment, management of stress, type and trait theory of personality, intelligence and perspectives which enhance learning environments.

CHECK YOUR PROGRESS

Answer the Following questions:

1) Explain the emotional intelligence theory and its educational implication.
2) Explain the theory of multiple intelligence theory with suitable examples.
3) Write the meaning and characteristics of intelligence?
4) Explain the model of SOI.
5) State the characteristics of personality.
6) Discuss the type approach of personality.
7) Discuss the trait approach of personality.
8) Discuss the Hippocrates's classification of personality.
9) Discuss the Sheldon's classification of personality.
10) Discuss Jung's classification of personality.
11) State the trait's of Catell's theory.
12) Distinguish between Emotional Quotient (EQ) and Intelligence Quotient (IQ).
13) Discuss the factors contributing towards positive health and well-being.
14) What is Intelligence? What are the types of Intelligence? What programs will you organize for developing the Emotional Intelligence of Students?
15) Explain four activities that can be organised for Personality Development of Students.
16) What are the causes of Maladjustment?

Write the following short notes:

1) Mental Age
2) Intelligence Quotient (IQ)
3) Emotional Intelligence
4) History of Intelligence Testing
5) Concept of adjustment

6) Strategies of stress management

7) Personality

REFERENCES:

Mangal S.K. : (1999) Advanced Educational Psychology. Prentice Hall of India, New Delhi

Chauhan s.s.: (1999) Advanced Educational Psychology. Vikas Publishing House, New Delhi

Dr. Mathur S.S.: (2000) Educational Psychology. Vinod Pustak Mandir, Agra

Walia J.S.: (1999) Foundation of Educational Psychology. Paul Publishers, Jalandhar

Websites

general-psychology.weebly.com/how-do-we-measure-intelligence.html

www.indiana.edu/~p1013447/outlines/asgn5af.pdf

hiqnews.megafoundation.org/Definition_of_IQ1.html

en.wikipedia.org/wiki/Personality

webspace.ship.edu/cgboer/perscontents.html

www.helpguide.org/mental/stress_management_relief_coping.htm

www.mindtools.com/pages/main/newMN_TCS.htm

PAPER - III

ADVANCE EDUCATIONAL PSYCHOLOGY

UNIT - V

Psychology And Education Of Children With Special Needs.

UNIT STRUCTURE

1.0 OBJECTIVES

After reading this unit ,you will be able to

8. Explain concept of Learning Disability, Giftedness, visually and auditory impaired, emotional disturbed children ,Intellectually impaired and orthopedically handicapped children .
9. Understand types of Sensory Impairment, and Learning Disable children
10. Discuss the characteristics of Learning Disability, Giftedness, visually and auditory impaired, emotional disturbed children ,Intellectually impaired and orthopedically handicapped children .
11. Explain causes of Learning Disability, Giftedness, visually and auditory impaired, emotional disturbed children ,Intellectually impaired and orthopedically handicapped children .
12. know the educational provision for Learning Disability, Giftedness, visually and auditory impaired, emotional disturbed children ,Intellectually impaired and orthopedically handicapped children .

1.1 INTRODUCTION

Children ,who are the backbone of our country. future of our country need to be nourished well. In formal set up they must be feel secured to exchange and share their knowledge with others. Keeping in mind the basic principles of psychology that is individual differences. Education should also take a note of the demand of such varied personalities.

Some children are having special needs in formal education, special need children can be classified as gifted ,learning disabled, visual and hearing impaired, intellectually impaired, emotionally disturbed as well as orthopedically handicapped. These children can take through education in different set ups catering to their needs .These students have different set of personality traits. Based on their psychology it's a urgent need to provide all forms of education to them. But before providing education ,system must understand the nature of their special needs .

1.2 LEARNING DISABILITY

Learning disability is a term used to denote a Neurological handicap that interferes with a person's ability to receive process, store and retrieve interferes. Learning Disability creates a gap between a person's ability & performance caused by an alternation in the way the information is processed Individuals with Learning Disability are generally of average or above average intelligence.

Learning Disability can affect one's ability to read, write, speak or compute math. It is believed that learning Disability never goes away but can be compensates for As Learning Disability is hidden handicap cannot be recognized, accepted or considered serious Early diagnosis and appropriate intervention and support are critical for the individual with Learning Disability. Attention deficits and hyperactivity are sometimes coupled with learning disability, but not always.

Learning Disability is a neurological condition that is beyond the control of the different. There are degrees of learning Disability

1. Mild
2. Moderate
3. Severe

   Learning disabilities affect the child from a variety of angles like esteem and self confidence Learning disability 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 show poor adjustment to environmental changes and excessive variation in mood and responsiveness.

   The three major types of Learning Disability are

1. Dyslexia

2. Dysgraphia
3. Dyscalculia

DYSLEXIA :-

A person has trouble in understanding written words, sentences or paragraphs.

Common signs of dyslexia./ Following are some of the observable behaviors for identification:-

- Difficulty in recognizing Alphabets language and Organization difficulties. Delayed spoken language is often an indicator of dyslexia.
- Difficulty in reading words stuttering and lisping are common skips line while reading
- Resistance to read in the classroom difficulties in scanning lines and discrimination of letters
- Spatial difficulties leading to reversal of letters (W/M, b/d) & words (saw/was) reversal in reading sentences as well Difficulty in scanning from left to right.
- Reading word by word. Does not build letters S-U-N not SUN. Unable to follow verbal direction.
- Speeding out words :- Make mistakes in spellings, especially omits letters in words:- or changes their place e.g “felt ‘ as left Difficulty in motor coordination.
- Difficulty in articulating sounds visual memory difficulties in recalling sequence of letters in words i.e. in spelling.
- Incomplete written assignments Difficulties in visual & motor figure ground-resulting in illegible handwriting.
- Lack of motivation in studies Mispronunciation adding or substituting words.
- Unable to read well through oral answers difficulty with pronouncing words 9may reverse words)
- Difficulty in interpretation & resembling visual image. They display both oral reading & comprehension problems.
- Reasoning :- difficulty in organizing and integrating thoughts organization skills;- difficulty in organizing all facts of leaking.
- Does not perform well in examination though clever distractible
- Spoken language:- delays, disorders or discrepancies in listening and speaking Difficulty in understanding and remembering oral message.

Education of students with disability:-

- Need to adopt suitable teaching strategies to support their learning.
- Use computers for drill and practice
- Teacher is not suppose to criticize the student unnecessarily.
- Corrective feedback is most important at this stage.

- Need to use short sentences and a simple vocabulary
- Provide opportunities for success in a supportive atmosphere to help build self esteem.
- Provide language lab
- Provide reinforcement of appropriate skills
- Recognize the students with learning disabilities can greatly benefit from the gift of time to grow and mature.
- Make use of self-correcting materials, which provide immediate feedback

Each learning disabled child undergoes:-

  - Neurological examinations
  - IQ Test
  - Achievement Scores
  - Reading tests
  - Visual motor Gestalt tests
  - Draw a man Test
  - Gross Motor Test
  - Fine Motor Test
  - Hyper Kinesis
  - Reading problems
  - Ontological findings (hearing sounds)
  - Bio-Chemical screening
  - Teacher observations
  - Availability of instruments
  - Achievement index
- Teachers should plan learning experiences in such a way that child can perform successfully.
- Teachers should give focus on basic perceptual associations that the child is familiar.
- Teacher should teach reading and writing simultaneously to enhance language comprehension through Visual Auditory ,Tactile Perception .
- To provide complete language experience teacher should teach whole word instead of isolated letters.
- Dyslexic students have to be taught reading and spelling in a scientific manner with every step distinctly clarified and presented in comprehensible manner.
- Dyslexics should be thought in a structured, logical step by step way and work in stages through simple one syllable words to complex multi syllable words.
- The Association between single letter name, sound and shapes should be taught first and then gradually the complete range of spelling patterns and finally sentences can be taught

- The teacher should be thorough in the structure of language and how language develops students should be introduced by dictation to sentence formation in its simple form
- The teaching drills should be based on a multisensory technique, i.e. all around approach.
- Ask child to repeat sentences while dictating also helps to improve memory for sentences. & then gradually more sophisticated sentences.

DYSGRAPHIA:-

A person finds it hard to form letters or writes within a defined space. Dysgraphic is a neurological based writing disability in which a person has difficulty in expressing thoughts on paper and with writing associated with unreadable penmanship and problems in gripping and manipulating a pencil. These students usually encounter different types of written language.

1. **Problems and common signs of Dysgraphia:-**
    - Illegible handwriting
    - Cramped pencil grip
    - Difficulty in keeping letters on the line.
    - Inconsistent in the way letters and words look
    - Difficulty in expressing ideas on paper
    - Writing is slow
    - Avoidance of tasks involving writing
    - Inability to properly form a letter
    - Poor spacing between two words
    - Crowding of letters within words
    - Inability to understand the relative sizes of letters.

Strategies for helping the child with Dysgraphia:-

- Need to observe whether the child uses the right positioning.
- The way of holding pen or pencil.
- Handwriting skills must be stressed like students must be able to draw horizontal line (left to write) & vertical line from top too bottom. He must be able too draw circle student should be able to copy letters and words.

- Teacher should provide devise games for students to practice various cursive strokes for eg. Making waves curly hair stringing beads
- Place a heavy bracelet on the wrist of a child who has difficulty keeping his wrist in the proper position on the desk.

- Teacher should use dot to dot letters to informally assess readiness for cursive e writing then gradually fade out the dots and tell students to complete letter independently.
- Use verbal cues in teaching cursive writing.
- Teachers should pay attention on writing letters
  - Teach basic strokes for most letters sequentially
  - Teach letters with easier strokes first
  - 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 stokes in making specific letters.
  - Make arrow clues to indicate the direction of the stroke.

DYSCALCULIA

Dyscalculia is the type of learning disability resulting in difficulty in learning numerical & mathematical ideas and concepts

Signs of Dyscalculia:-

- Inability to work with numbers or symbols.
- Difficulty with common path processes such as addition subtraction, multiplication.
- Inconsistency in understanding & application of mathematics rules
- Inability to handle money transactions in day to day living.
- Difficulty with math concepts such as sequence of Numbers & sequencing of rules required mathematical problems.
- Poor retention and retrieval of math concept
- Poor sense of direction and time e.g. difficult with reading maps, telling time etc.
- Facing trouble keeping track of scores and players during card and board games.
- Difficulty in applying rules in sports.

Difficulties in Mathematics Students face

- Difficulties in solving word problems due to problems in language, lack of analysis and reasoning
- Confusion in recognizing shapes may course difficulty in recognizing numbers.
- Difficulty in making measurements of time distance etc.
- Difficulty in mastering abstract quantitative concepts and trouble in size discrimination.
- Classification category objects into set is a very important concept for maths these difficulties can lead to counting
- Lack of understanding of one to one correspondence cause problems which may lead to failure in understanding ordinal numbers.

- Memory deficits could aggravate problems on signs tables, numbers etc.
- Finding difficulty in computation skills
- Confusion in placing value can lead to difficulties in simple operations.

Education of students with dyscalculia

- Teacher should identify the problem area in mathematics is the 1st step to help the child
- Promote understanding of the terms longer and shorter by drawing lines.
- Use number line to develops vocabulary such as before, after, between, larger, than smaller, than etc
- Use multi sensory approach for concretizing the concepts.
- After assuring the clearance of concept, repeats drill and revision exercises are essential which are for better retention
- Gradually increase the difficulty levels of the concept.
- Make use of stories or real life experience just to involve children in the class.
- Teacher should use his creativity for handing such students
- Teaching pre-concepts of mathematics are very important.
- Print operational signs on flash card let him practice every day.
- To understand fractions teacher should be aware that fractions make sense only when viewed in relations to a whole number and students should be cleared with concepts like denominator and numerator.
- Materials and experiences should be provide to the children to make basic facts.
- Charts could be drawn to illustrate the relation of fractional parts to the whole.
- Gradually introduce assignments requiring to work with fraction without visual clues.
- Use the measurements in simple perceives to reinforce fractional components.

Both special education and integration are recommended for Learning disability children but the focus is more on the mainstreaming.

Question for self study

1. Explain the concept of learning disability? what are different types of learning disability?
2. Explain meaning of dysgraphia? What are the characteristics of dysgraphia?
3. Define dyscalculia? What are its characteristics?
4. what do you mean by dyslexia? Explain its characteristics.
5. what are the educational provisions for learning disability?

1.3 HIGH INTELLECTUAL CAPABILITY (GIFTEDNESS)

Concept:

Gifted child ia an exceptional child .Gifted are an asset to any society. Children having high intellectual level ,special abilities and talents are called as "gifted ".Gifted are those ,who are gifted according to some scale of mental measurement .Gifted are those children whose cognitive abilities place them in the upper 3 to 5 % of the population. The gifted has an IQ of 140 or above. The gifted children have superior cognitive ability, creativeness in thinking and production and superior talent in special areas. The gifted child is above the average ,in personality traits, scholastic achievements, play information and versatility of interest. The gifted are outstanding in excellence of preparation and vocational achievements.

According to Guilford(1950)

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 ,they could be the future problem solvers ,innovators and evaluators of the culture if adequate educational experience are provided .

Above definition highlights on cognitive domain as well as creative characters along with their needs to be fulfilled. Guilford identified 120 different intellectual ability.

A talented or gifted child is one who shows consistency remarkable performance in any worthwhile line of endeavour.

from the above definition giftedness refers to not only intellectual talents but also talent in music, arts, dramas, literary work etc.

According to Tannenbaun (1983)

The term giftedness denotes their potential for becoming critically exemplary producers of ideas in sphere of activity that enhance the moral ,physical, emotional, social, intellectual or aesthetic life of humanity. This definition simplifies giftedness which leads o humanity and excellence in every walk of life.

The high intellectual students are much more able than the average children. It is therefore very necessary that they are provided with desirable opportunities for their progress The kothari commission made few observations regarding the planning of education of the gifted children. They express concern that facilities for the training of the gifted are not available in our country and should therefore planned for. This requires the understanding of gifted and their characteristics and identification process.

CHARACTERSTICS OF GIFTED CHILDREN

a) Physical characteristics

- They are larger at Birth
- general health is superior
- Good in weight, Height ,eye sight and speech
- Good in physique and growth
- Learn to walk and talk earlier

b) Intellectual characteristics.

- Interested in abstract and difficult subject.
- Educationally advanced for their age
- Creative as possessing originality ,unusual ideas and develop ideas
- Better ability to construct, organize ,analyze, memorize, synthesize, reasoning.
- Shows flexibility in their mental thought process
- Quick and clear expression.
- Memory is sharp and long lasting
- The rate of learning is fast
- language development is refined and elaborate.
- Broad span of attention and high problem solving ability.
- Rich vocabulary and good in communication ability
- Ability to generalize quickly from principles.

c) Emotional characteristics

- Ability to explains feelings and emotion
- Well adjusted in school and home.
- Display positive self - concept
- Emotionally stable and greater ego strength
- More devoted to the pursuit of perfection without experiencing tension.
- Gifted children are restless and Impulsive.

d) Social characteristics

- Gifted are rapidly accepted by others in their social behaviour.
- Good socio - metric Index.
- participate in large number of activities
- Like companions who are slightly older than them.
- Gifted are socially prove to be more mature and popular as they are more honest ,kind, cheerful liberal and responsible.
- They are often interested in activities at home ,school and societies and love to be assigned tasks.
- Mix freely with the peer group as well as elders.

d) School characteristics

- They retain what they learn much without drill.
- Eager to know minute details of every thing .
- Rapid learning resulting in academic advancement .
- They take active part in various co-curricular activities.
- prefer games which requires reasoning and judgment.
- They are sincere and dutiful.

IDENTIFICATION OF GIFTED CHILDRENS

Gifted children's can be identified by following ways

- Gifted children can be identified by general intelligence test, which will serve as useful tool.
- Standardized achievements test are valuable instruments for identifying the gifted.
- Teachers should identify the characteristics to locate the gifted children.
- By giving informal tests and games.
- By recording the academic record through report card will provide valuable information on giftedness.
- Aptitude tests are helpful in identifying the gifted ,as the gifted excel in art ,drama and music.
- By observing the students in various settings and take into consideration the opinions and report of parents, friends and teachers.
- Behavioural clues and scores on creativity tests will help to locate the gifted children.

EDUCATION OF GIFTED CHILDREN:

For promotion and to satisfy the need of gifted children

- Curriculum should be modified.
- Teacher should assist the students to develop their independent study habits.
- by using technology information system should be strengthen.
- one of the recommendation for educating gifted is called "grade acceleration".It may involve early entrance to the K.G. ,consideration of two year course into one year,rapid promotion should be given.
- Enrichment program should be provided to the students .special programs and activities to cover the topic in depth and detail.
- Encouragement of special interest are highly essential
- Able teacher are required, who are high in intelligence ,well informed, and should acquainted with the psychology of the bright.
- Lots of encouragement should be given to make supplementary reading and writing.

- While educating gifted children ,conceptual thinking, analytic perception ,employing analysis and synthesis etc .must be kept in mind.

Question for self study:

1. **what do you mean by Gifted children? Explain its characteristics with suitable examples.**
2. **"Gifted children's are the back bone of the nation". Explain this statement with the help of characteristics gifted children.**
3. **How will you organize education for gifted children.**

1.4 SENSORY IMPAIRMENT - VISUAL AND AUDITORY

Visual Impairment:

Visual efficiency means how the visual information is processed ,analyzed, and interpreted in the brain. It's all connected with brain. so vision plays important role in every aspect of life i.e. physical, social, as well as educational. Visual impairment is a condition in which a student vision is deficient to such a degree that it significantly affects his school functioning. Visual ability of the eye to see distant objects clearly is assessed using the snellen chart developed by dutch doctor, Herbert visual impaired is defined in terms of Visual --------- , field of vision and visual efficiency.

The blind people have central visual ---------- The totally blind are born without any seeing capacity. If the visual field is severely limited that person may be called as blind. Low vision is defined in terms of clarity reduction. Partial sightedness is defined in terms of distance from the snellen chart. From the angle of education ,blind students are those visually impaired children who use brail and partially seeing are those who use print called print impaired ,causes of visually impairment can be genetic and environmental

a) Classification of visually impairment :

Visually impaired children can be classified according to the following categories as per Government of India circular visual impairment categories as follow.

CATEGORY	BETTER EYE	WORSE EYE	% OF IMPAIRMENT
I	6/9 - 6/18	6.24 TO 6.36	20 %
II	6/18 - 6/36	6/60 to Nil	40 %
III	6/60 - 4/60 OR Field vision 110-20	3/60 to Nil	75 %

IV	3/60 To 1/60 OR Field Vision 100	F.C. at 1 Ft. to Nil	100 %
One eyed person	6/6	F.C. at 1 Ft ti Nil	30 %

b)Types of visually impairment:

- can read only large print
- partially sighted
- cannot read at all (Blindness)
- Required magnifying glasses to read.
- Restricted field of vision(Amount of side to side space that can be seen at one time.

After locating the exact visual impairment ,the identification of visually impaired children become essential, with some behavioural symptoms identification will be easy one .

c) Identification of Visual Impairment:

With the help of following behavioural symptoms we can identify the visual impairment

- Student who having watery eyes, blinks frequently and squint eyes.
- Rubs eyes frequently and excessively
- Become in attentive during reading session.
- always complaints of headaches.
- Hold objects including the book close to their eyes.
- Moves head forward and backward while looking at distant object.
- Cover one eye and tilt the head forward.
- Loose his pace while reading or writing.
- Eye -Hand co-ordination is not proper
- Asks other student for help when taking notes from blackboard.
- Takes false step while walking.

d) Educational provisions for Visual Impairment:

- If teacher observed the student on the basis of behavioural symptoms teacher should refer that student to the primary health centre for eye check-up.
- To facilitate student teacher should give detailed time schedule of radio broad cast.
- Teacher should read loudly and write in bold on the blackboard while teaching in the classroom

- Allow visual impaired student to sit in the front rows so that they can read the blackboard easily.
- Freedom should be given to them to glance out of the window now and then while reading from the blackboard.
- Library should provide them the books with bold letters ,to cater the needs of the some children.
- Residential school are very essential for blind children.
- Audio mediums must be provided to such students to encourage more learning through audio cassettes and audio tape recorder cum radio.
- we can approach to the 1) State institute of educational technology 2)state council of education research and training,3) The central institute of educational technology for audio cassettes for in different curricular areas.
- Lots of visual training should be given as to reduce the reading load on the students with visual problem.
- The district rehabilitation centre and hospitals maybe approached for hand lens, magnifying glasses, etc. For student whose impairment is beyond the spectacle lens.
- For additional experience to such students specially prepared educational model must be given to them.
- Teacher should adopt principles like Additional simulation, unified instruction, self activity and concreteness while dealing with blind to gain good results.
- Parent ,teacher and friend must show much affection and adjustiveness toward visual impaired as well as care should be taken that these children should not feel inferior in anyway.

Auditory Impairment:

Hearing is the main sensory gate through which speech and verbal communication develop. Hearing influences learning and other aspects of maturation. If child doesn't hear perfectly then there are problems with speaking. So early detection of hearing impairment is important for the child's over all development. If any person have defect in hearing it leads to the problem in perception.

Impairment in hearing capacity is defined in terms of degree of hearing loss .Total inability to hear is deafness. Those whose sense of hearing is defective but who manage with or without hearing aids are called ------- of hearing.

Quigley and krestschmer(1982):-

"A deaf child or adult is one who sustained a profound (91 db. or greater)primarily sensorineural hearing impairment prelingually".

UNESCO (1985) :

To be considered as deaf are those children whose spontaneous speech and language development have been very much retarded or is completely absent due to their severe hearing impairment .Hearing impairment combined with a lack of training or technical amplification , In countries with adequate resources for diagnosis , training and provision of hearing aids, some children with hearing impairment would not be included in the above mentioned group, whereas they would be regarded as functionally deaf in countries lacking these resources. From above definition we can say that these auditory impaired are difficulty in perceiving speech and environmental sounds.

The level of auditory impairment is measured by audiometers in terms of decibels (db).

- Middle loss - Within the range of 20-30 db
- Marginal - 30-40 db.
- Moderate - 40-60 db
- severe - 60-75 db
- profound loss - Above 75 db

a) Characteristics Of Auditory Impaired:

- This child is abnormally slow in its linguistic development.
- Develop sense of inferiority.
- They show abnormal behaviour like getting irritated ,throw tantrums by resisting with tensions.
- Faces problems regarding personal and social development .As they experience language problem, language becomes a barrier for communication that affects socialization.
- These children's are more dependent on others.
- They find difficult to adjust with the environment and society.

b) Salient observational points of behaviour of auditory Impaired :

- Always hesitate to participate in group discussion.
- Turn head on one side to hear better.
- Scratches ear frequently.
- Display restless ,inattention and speech difficulty.
- While listening to the teacher watches his/ her face carefully. Focus specially on speakers lip .
- Frequently request teachers to repeat directions and questions. Inconsistency in following directions.
- Does not respond when called.

c) causes of Auditory loss :

- Hereditary: 11 to 60 % of sensory neural hearing impairments have a genetic and hereditary cause.

- Rubella **:** A German measles virus affects on an unborn child during first three months of pregnancy.
- Infectious diseases : - like mumps, influenza to the mother affects the infant's hearing. Other diseases of the mother like diabetes, kidney, affect the baby's hearing capacity. Disease like meningitis, typhoid, mumps, whooping cough infection nasal cavities also cause auditory capacity.
- Drugs : Overdose of strong drugs like quinine, L.S.P. and streptomycin are associated with auditory capacity.
- Malnutrition : Causes hearing impairment.
- Lack of oxygen, use ,use of forceps in delivery ,instrumental delivery, premature delivery followed immediately by jaundice do cause hearing problem.
- Ear discharge is more prominent among the causes ,

d) Educational provisions for auditory Impaired :

- In case of students, who are using auditory aids, they should be persuaded to use the aids all the time in the school as well as at home.
- Students with auditory impairment should be asked to sit nearthe teacher for improved listening.
- Speak slowly and distinctly as well as clearly. Teacher should avoid moving while speaking.
- Lip reading also proves helpful. while reading, lips should be visible to the students so that they are able to supplement listening by lip reading as well.
- Peers may be encouraged to interact with these students and help them in learning.
- Three dimensional models of teaching aids can be of great help in general teaching points.
- Speech defects arising out of hearing problems can be corrected through speech training ,using reinforced drill and practice.
- medical help can be suggested if speech disorder is due to organic defect in the speech mechanism
- perception of various speech sounds is possible through auditory training .Though this child distinguishes one voice from another. This training provides the understanding of the principles of hearing rehabilitation , lip reading, speech development,

Question for self study :

1. **What is mean by sensory impairment ? Explain types of sensory impairment.**
2. **Define concept of visually impaired child . Explain the characteristics of them.**
3. **Define concept of auditory impaired child . Explain the characteristics of them.**
4. **How will you identify auditory impaired children?**

5. **How will you identify sensory impaired children?**
6. **Define auditory impaired child. as a teacher how will you support these children.**

1.5 EMOTIONAL DISTURBANCE

There are different views from teachers and parents regarding emotionally disturbed children, Emotionally disturbed refers to the behaviour disorders that cannot be explained by intellectual ,health related factors , but also associated with unsatisfactory interpersonal relationship ,inappropriate feelings, depression and is not acceptable to others. Emotional disturbance is not distributed evenly in all age groups ,sex , social class group. These problems are maximum during early puberty. Nearly 1.5 % of population in the 0-21 age group suffer from emotionally disturbance .

Emotionally disturbed behaviour was considered synonymous with misbehaviour or deviancy. Emotional disturbance is viewed create in terms of environmental variables which create maladaptive emotional reactions. When the child's sociometric relationship declines, he becomes emotionally disturbed.

The American psychiatric Association defined " It is a type of psychiatric disturbances without clearly defined physical cause or without structural damage to the brain.

a) Characteristics Of Emotionally Disturbed:

- Destructive to own and others belongings
- does not complete the required task

b) Identification of Emotionally Disturbed:

Emotionally Disturbed children can be identified on the basis of following points .

- Emotionally Disturbed children's are hyperactive in nature
- They show nervous reaction
- They are inactive, jealous ,egocentric and poorly socialized.
- Self assertive

by observing these traits we can identify the emotionally disturbed Children.

c) Causes of Emotionally Disturbed:

- Psychoanalytic causes :
  - Anxiety as a source of emotional disturbance.
  - Distrust of adult
  - Frustration of libidinal desires
  - Rejection from parent and punishment
  - Insecurity will also cause of emotionally disturbance

- Environmental causes:
  - maternal malnutrition.
  - Anoxia
  - Head injury
  - Mental illness like schizophrenia.
- School Related causes
  - Uninteresting material and assignments
  - Insensitivity by the school to the individual.

d) Types of Emotionally Disturbed:

- Autism
- psychosis
- childhood schizophrenia.
- personality disorder
- psycho physiological disturbance.

d) Education of the Emotionally Disturbed children:

- psychotherapeutic technique i.e. Emotional catharsis can be used.
- The rogerian method of non -directive counseling can be become fruitful.
- Inference through counter conditioning ,reconditioning, desensitization can be helpful for such students.
- These student should be given selected readings on social learning.
- Group dynamic technique will be useful for such students considering seating arrangements, position of teacher and pupils can be encouraged to have desired interaction.
- Sympathetic communication by the teacher will also become helpful.
- Teacher should keep relationship task centered.
- Involve these students in one or other type of work.
- Role playing can be a good technique for release of emotional problems.
- By emphasizing psycho educational approach teacher should develop positive self image, Unique perception about environment and mental and physical development can be encouraged.
- Affective skill can be developed with social skill approach.
- Child can be taught how to develop self instruction to increase attention, reflection, social and academic skill.
- Educational program should be planned at school for emotional disturb children.

Question for self study:

1. Explain the concept of emotionally disturbed child. How will you identify the emotionally disturb child?
2. Explain the concept of emotionally disturbed child. How will you tackle with this children?
3. What are the causes of emotionally disturbance

1.6 INTELLECTUAL IMPAIRMENT

Mental retardation implies impairment in intelligence from early life and inadequate mental development throughout the growing period. Studies have shown 75 % of the intellectual impairment have no physical disability. They have sensory defects ,language disorders and neuro muscular impairment. various terms we are using for such students like backward, slow learner, mentally retarded ,intellectually impairment.

According to Herber, intellectual impairment refers to sub average general intellectual functioning which originates during the developmental period, and it is associated l impairments in adaptive behaviour. These children are referred as mildly, moderate severely and profoundly intellectual impairment .The mildly and moderate are trainable by specially designed educational program.

a) Characteristics of Intellectually impaired students.

- They show poor pace in learning and displays poor academic achievement .
- Avoid active participation in class room activities.
- Shows too much dependence on concrete examples. Forgets what he/she has learn after a short time.
- Difficulty in doing things for himself .
- Problems in following what he has been told.
- Seeks more repetition and practice as compared to the other student.
- Always displays fear of failure.

b) Education of Intellectually impaired students.

- These students needs training in communication skills.
- Simple questions may be asked to give them a feeling of success.
- Immediate feedback and reward should be the worth word for such students.
- Need to provide concrete experience to such students
- more repetition and practice should be given as compared to the other student.
- Need to plan learning activities in a way that ,these students participate along with their peers.
- The curriculum can be transacted through simple and interesting learning experiences.

- Activities have been varied in order to sustain their attention, as they have short span of attention.

Question for self study :

1. **explain the concept of intellectually impaired child. Explain its characteristics.**

1.6 ORTHOPEDICALLY HANDICAPPED

Orthopedically handicapped children include all children with defects in size and structure of bones and joints with deviation in muscles strength ,co-ordination or control.

orthopedic problems are related to muscles and joints of the body which affect mobility of limbs and extremities. students with such problem may find difficulty in attempting those learning activities which needs physical movement .Though they possess learning capability similarity to other children, they may have some specific problem in learning. e.g. Student with rigidity in the finger muscles may have writing problems.

The legal definition of the term orthopedically handicapped is severe ,orthopaedic impairment that adversely affects a child's educational performance.

a) Orthopedically handicapped can be caused by -

- Rh - incompatibility
- intoxication
- disease e.g. Bone tuberculosis, poliomyelitis
- congenital anomaly e.g. Absence of somebody organs, club foot .
- Amputations , fractures or burns that causes contractures
- prolonged labour, accidents.
- Defects include birth injury, nutrition deficiency, viral infections.

From an educational point of view crippling and neurological impairments would include all children with non sensory physical impairments. The crippled child are known as orthopedically handicappe.

According to extent of severity they are categorized as follow.

- Mild < 40 %
- Moderate - 40 % and above.
- severe 70 % and above
- Profound - 100 %.

b) Identification for Orthopedically handicapped :

we can find one or other disorders in the children of orthopedically handicapped.

- Amputed limbs
- poor motor control and co-ordination.
- shaky movements.
- Frequent pain in joints
- Jerking movements in walking.
- Difficulty in picking holding and putting in some place.
- Difficulty in sitting ,standing and walking.
- Walk awkwardly or with limp.
- Fall frequently.

c) Education for Orthopedically handicapped :

- Student with rigidity in limb movement need a lot of practice. So this impairment needs to be taken in to consideration while grading their paper.
- If student feeling difficulty in writing ,provide extra time.
- In case of severe problem, the student can be referred to district rehabilitation center ,or primary health center.
- Based on problem, suitable seating arrangements should be made in the classroom .e.g. students with wheelchairs should be provided a seat on the right front space in the classroom, so that the movement of other students will not be blocked.
- Recreational needs of these students are ignored in the school as they are orthopedic. so teacher should ensure that they should not be ignored in giving opportunities to participate in physical and recreational activities.
- Teacher should accept handicapped child as it is. Teacher should possess kindness, personal friendliness, warmth, patience honest liking and give respect to these students.
- Teacher should assist him/her to prevent the psychological crippling which is more dangerous than the physical handicapped.
- Extracurricular activities like excursion, trip and art like singings, storytelling etc. should arranged in school which will latter develop social contacts.
- Special teacher ,who know the psychology of these students ,techniques to handle such student should be appointed in school.
- Every state should provide special equipments for the orthopedically handicapped children.

Question for self study :

1. Explain the concept of Orthopedically Handicapped children. What are the causes of it.
2. For development of Orthopedically Handicapped children as teacher hoe will you provide education for them.

Conclusion :

Being in 21st century knowing the psychology of students and having the knowledge of individual difference, Education should meet the demands of children with special needs. Integration of education, special education, Inclusive education, Mainstreaming in core schooling are the key ways to assist them. The strong will ,early identification ,proper educational provisions will boost the energies of such children and they will prove as an asset to our society. Understanding and representing their strength and weakness , These children will overcome and lead a beautiful life in this global era.

Refernces.

- Dandpani S.(2006) A text book advanced educational psychology: Banglore ,Anmol publication private limited.
- kar chintamani ,(1998) Exceptional children - their psychology and education New Delhi Sterling publishers private limited.
- Khan M.A.(2007),Fundamentals of educational psychology, Himalaya publishing House.
- kulshreshtha S.P.(2009) : Educational psychology, Agra Agarwal publication.
- kundu C.L., Tutoo D.N (2004),Educational psychology, New Delhi, sterling publishers private limited.
- Kakkar S.B.(2004) Educational psychology, New Delhi, prent.ice hall of India ,pv.t limited.
- Mathur S.S.(2007),Fundamentals of educational psychology, Himalaya publishing House.
- Nayak N.K. & Rao V.K. (2004) Educational psychology, New Delhi, APH Publishing Corporation.
- Panda K.C.(1997),Education of exceptional children, Banglore Vikas publishing House private limited.
- Walia J.C.( ) Foundation of psychology