SEMESTER II

B.ED 2.3 1ST HALF

Learning and Teaching (1st half)

UNIT 2 & 4

UNIT 2

MOTIVATION

Concept, Nature and types of Motivation

Concept

Motivation is derived from the latin word ‘movere’ which means ‘to move’ or ‘to energise’ or ‘to activate.’

Motivation may be regarded as something which prompts, compels and energises an individual to act or to behave in a particular manner at a particular time for attaining some specific goal or purpose.

It is the act oprocess by which the needs and desires of a person move him towards some action.

H. W. Bernard-

“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.”

Weiner-

Motivation is a phenomena that compels an individual to perform a task and be busy in that task until and unless the goal or objective is achieved.Motivation is related to need and drive.

Needs are general desires or wants. There are biological needs(food, water, rest, sleep etc) and socio psychological needs (independence, security ,love, need to achieve, self actualization etc)

Need gives rise to DRIVE which is aroused awareness, state of heightened tension that sets off reactions in an individual and increases his general activity level. Drives are influenced and guided by incentives, praise, rewards etc.

Motive is thus an inner state of mind or an aroused feeling generated through basic needs and drives which compel an individual to respond by creating tension to act.

Nature of Motivation

- Motivation is an inner state of mind and it gives direction to behaviour.
- Motivation is need based/controlled by drive.
- It is goal directed activity, pursued till the attainment of goal.
- It is a continuous process as human wants are unlimited.
- Motivation and learning is correlated because if there is no motivation then learning will be difficult
- Change in goal may bring changes in the nature and strength of the motive.
- Motive may be considered as a learned response or tendency and also an innate disposition.
- Attainment of a goal helps in the release of tension aroused by a specific motive.

Types of Motivation

Natural or Intrinsic Motivation

-This type of motivation is directly linked with the natural instincts, urges and impulses of the organism.

-The individual who is intrinsically or naturally motivated performs an act because he finds interest within the activity.

-He derives pleasure in learning that thing. Example solving mathematical problem because one derives pleasure by doing it or reading poetry because it gives pleasure

-Such type of motivation has real values in learning as it creates spontaneous attention and interest.

Unnatural or Extrinsic Motivation

-In such Motivation the source of pleasure does not lie within the task.

-The individual does or learns something not for its own sake but as a means of obtaining desired goals or getting external reward.

-For example working for better grade/honour, learning skill to earn a livelihood, receiving praise and blame, rewards and punishment etc.

In comparison to extrinsic motivation, intrinsic motivation as a source of spontaneous inspiration brings better results in teaching learning process.

Theories of Motivation

ACHIEVEMENT MOTIVATION

-This theory was given by Atkinson and McClelland(1953)

-Need to achieve is a basic need like other biological and socio psychological needs.

-In a competitive society or set up the desire to excel over others or achieve a higher level than one's peers is intensified. This leads to a stronger drive or motive to achieve something or everything to beat others in the race and achieve a sense of pride and pleasure in achievement.

-Achievement motive drives an individual to gain mastery of difficult and challenging situations and strive towards excellence. Such behaviour is called Achievement oriented.

-Such people choose their goals wsiely. They don't take up easy task nor a very difficult one.Personal accomplishment is very important to them.

Origin of Achievement motive- It is conditioned by one's early training and experiences. Children learn from parent's lifestyle.

MASLOW'S THEORY OF SELF ACTUALIZATION

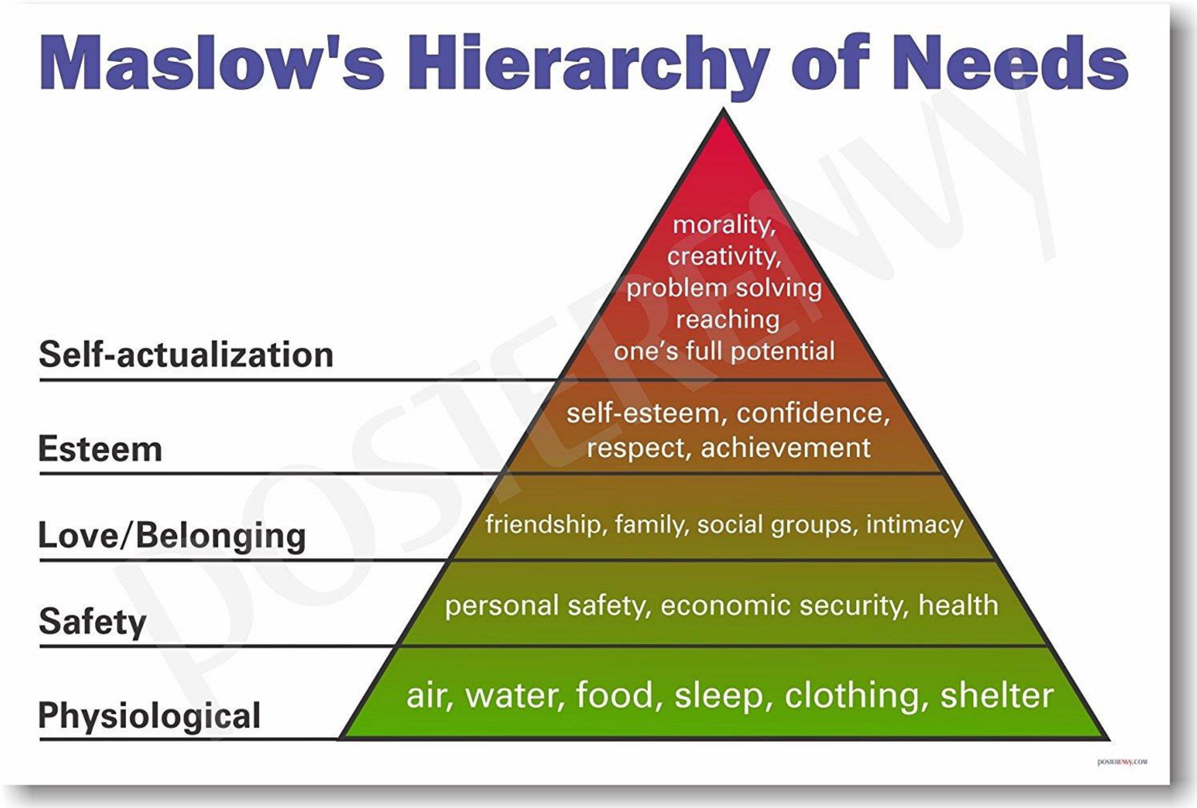
In 1954 Abraham Maslow said that a motivational behaviour may satisfy many needs at the same time, thus implying that an act is multi motivated.

He said that human needs are arranged in a hierarchy

Appearance of one needs depends on the satisfaction of others. They are closely related and arranged from the lowest to highestdevelopment of the personality.

Self-actualization-In *Motivation and Personality* (1954), Abraham Maslow states, "*What a man can be, he must be*". Maslow's quote refers to self-actualization, which is the highest level or stage in his model of human motivation: the 'Hierarchy of Needs'. According to the hierarchy of needs, self-actualization represents the highest-order motivations, which drive us to realize our true potential and achieve our 'ideal self'.

Self-actualization needs are also referred to as our 'being' needs; these include personal and creative self-growth, which are achieved through the fulfilment of our full potential.He contested that self-actualized individuals possess a number of characteristics that enable them to, first, satisfy the four initial categories of needs and, second, to balance their own free will and demands of the society (how our actions will effect the society and how we will appear to society). Self actualized individuals have realistic approach towards life, problem solving capacity,spontaneous and creative.



WEINER'S THEORY (Bernard Weiner 1974)

Attribution Theory is a theory about how people explain things. A synonym for "attribution" is "explanation". The theory works like this. When we offer explanations about why things happened, we can give one of two types. One, we can make an external attribution. Two, we can make internal attribution. An external attribution assigns causality to an outside agent or force eg.blaming a friend for some trouble. Internal attribution will be blaming oneself for assisting the friend in some wrongdoing.

Attribution theory is concerned with how individuals interpret events and how this relates to their thinking and behaviour. Attribution theory assumes that people try to determine why people do what they do, i.e., attribute causes to behaviour. A person seeking to understand why another person did something may attribute one or more causes to that behaviour.

A three-stage process underlies an attribution: (1) the person must perceive or observe the behaviour, (2) then the person must believe that the behaviour was intentionally performed, and (3) then the person must determine/ attribute the behaviour to internal or external causes.

Weiner focused his attribution theory on achievement (Weiner, 1974). He identified (i) ability, (ii) effort, (iii) task difficulty, and (iv) luck as the most important factors affecting attributions for achievement.Ability and effort are internal factors while task difficulty and luck are external factors.

Weiner's theory has been widely applied in education, law, clinical psychology, and the mental health domain. There is a strong relationship between self-concept and achievement.

Weiner (1980) states: "Causal attributions determine affective reactions to success and failure. For example, one does not experience pride in success, or feelings of competence, when receiving an ‘A’ from a teacher who gives only that grade, or when defeating a tennis player who always loses...On the other hand, an ‘A’ from a teacher who gives few high grades or a victory over a highly rated tennis player following a great deal of practice generates great positive affect."

According to attribution theory, high achievers will be ready for doing tasks related to success because they believe success is due to high ability and effort which they are confident of. Failure for them is due to bad luck i.e not their fault. Thus failure does not effect their self esteem but success builds pride and confidence.

Low achievers avoid success related tasks because they doubt their ability and assume success is related to luck and other factors. So even when low achievers are successful they don’t feel a sense of pride as they feel they are not responsible for success.

HERZBERG’S THEORY

The two-factor theory (also known as Herzberg's motivation-hygiene theory and dual-factor theory) states that there are certain factors in the workplace that cause job satisfaction, while a separate set of factors cause dissatisfaction. It was developed by psychologist Frederick Herzberg, who theorized that job satisfaction and job dissatisfaction act independently of each other.

This theory suggests that to improve job satisfaction the administrators must attend to both set of characteristics i.e Hygiene factors and Motivators.

Hygiene factors- status, job security, salary, work conditions, paid insurance, vacations. These are extrinsic to the work itself and includes aspects such as company policies, supervisory factors, salary.

Motivators- challenging work, responsibility, involvement in decision making, sense of importance. These are intrinsic conditions of job itself such as achievement, recognition, personal growth.

-People will strive to achieve hygiene needs because they are unhappy without them, but once satisfied the effect soon wears off- satisfaction is temporar. So people are not ‘motivated’’ by addressing hygiene needs.

-People are really motivated by enabling them to reach for satisfying the factors that Herzberg identified as real Motivatore such as achievement,advancement, development etcwhich has a far deeper levelof meaning and fulfilment.

-Motivator factors help in increasing the satisfaction but are not that effective on dissatisfaction. Dissatisfaction arises if Hygiene conditions are not good.

If Management wishes to increase satisfaction on the job, it should be concerned with the nature of the work itself- opportunities for assuming responsibility, self realization and status. If management wishes to reduce dissatisfaction then it must focus on work environment- policies, supervision, working conditions. If management is equally concerned with both, then managers must give attention to both set of job factors.

FACTORS AFFECTING MOTIVATION

1)*Anxiety*- If a person is anxious to complete work properly then he/she will be motivated for the work

2) *Curiosity*- Curiosity for a task increases motivation. No curiosity means will to do the task is weak.

3)*Locus of control*-This refers to one’s belief that his or her behaviour is guided by external factors such as fate, luck etc or internal factors such as ability or effort. Aperson who has faith in her /his ability will always be motivated even if he/she fails.

4) *Interest*-If a person is interested in a task, that increases motivation.

5) *Level of aspiration*- Some people aspire to excel in what they do and this aspiration motivates them to work hard and do well.

6) *Attribution style*-The reasons we give to our success or failure affects our motivation. If one feels that success was due to luck then motivation level will not be there.

7) *Achievement*-If one meets achievement in what one does it increases motivation.

8) *Learned helplessness*-If humans feel that they cannot control their environment, this lack of control will impair learning in certain situations. Effect of learned helplessness is a lack of self confidence, poor problem solving, wandering attention and feeling hopeless. Learned helpless children are extrinsically motivated and not so much intrinsically motivated due to their failures.

STRATEGIES OF LEARNING

Co-operative Learning

Peer Tutoring

Collaborative Learning

Co-operative Learning

-It aims to organize classroom activities into academic and social learning experiences.

-Students must work in groups to complete tasks collectively toward academic goals.

-It promotes face to face interaction.

-Individual learning is competitive in nature, while students learning cooperatively can capitalize one another's resources and skills (asking one another for information, evaluating one another's ideas, monitoring one another's work)

-Teacher's role changes from giving information to facilitating students' learning.

-In this learning everyone succeeds when group succeeds. Everyone involved here is accountable for the task.

-It is intellectually demanding, creative, open ended and involve higher order thinking tasks

Peer Tutoring

-In this learning strategy students work in pairs to master academic skill or content.

-It can involve partners of same age or different ages. For example high school student reading with 4th standard student. So that high school student will help his junior in studying certain subject. This helps them to develop social responsibility and understand learning as a process.

-In same age tutoring where students of same age tutor each other. More skilled students may be paired with less skilled students.

-CLASS WIDE PEER TUTORING (CWPT) occurs when the teacher creates highly structured tutoring materials for use during the tutoring session.All methods are designed to increase practice, responding and feedback for students and they often result in increased student motivation & achievement.

Tutoring procedures are also designed that indicate how tutors can determine if a response is correct & how to respond to both correct &incorrect responses.

Teachers actively monitor peer tutoring & may give feedback to students both on content and procedures.

-Student tutor develops sense of responsibility and confidence.

-Studying with peers removes all hesitation and harmonious relationship between students develop.

Collaborative Learning

-Collaborative learning is a situation in which 2 or more people learn or attempt to learn something together.

-In collaborative learning people capitalize on each other's resources and skills (asking one another for information, evaluating ideas, monitoring one another's work)

Collaborative learning is based on the model that knowledge can be created where members actively interact by sharing experiences.

-It includes face to face conversations, computer discussions (online forums, chat rooms etc.)

-It redefines traditional teacher student relationship.

-Collaborative learning activities may include group projects, joint problem solving, debates, study teams & other activities.

It is suitable for higher classes and college level students.

UNIT-4

Social Constructivist Learning - Vygotsky

- *Vygotsky was born in 1896, the same year Piaget but in Belorussia.*
- *Vygotsky family was Jewish and they shared a rich culture background with most of their fellow townspeople.*
- *At University of Moscow, Vygotsky studied law, history, and Philosophy. He graduated in 1917, the year of the Russian Revolution*
- *Vygotsky was committed Marxist.*

- **Social constructivism** maintains that human development is socially situated and knowledge is constructed through interaction with others.
- It emphasised that **culture** plays a large role in the cognitive development of a person.
- The social cognition learning model asserts that ***culture is the prime determinant of individual development***. Humans are the only species to have created culture, and every human child develops in the context of culture. Therefore child's learning development is affected in ways of the culture of family environment in which he or she is brought up.

Role of culture

- Culture makes two sorts of contribution to a child's intellectual development.

A. Through culture children acquire much of the content of their thinking. That is their knowledge.

B. The surrounding culture provides a child with a process or means of their thinking.

- Cultures teach children both what to think and how to think.

Importance of Language

- Language is a primary form of interaction through which ***adults transmit*** to the child the rich body of knowledge that exist in culture.
- As learning progresses the child's own language comes to serve as her primary tool of intellectual adaptation

- Children can use internal language to direct their own behaviour. (enact)
- ***Social Speech*** :- Speech that we hear as people talk around us or to us.
- ***Private Speech*** :- Speech that children say aloud to themselves; later internalized to form inner speech and mental activity.
- ***Internalization*** :- The process of taking external speech and activity and making it internal and mental.

. *Zone of proximal development*

- A difference exist between what child can do on her own and what the child can do with help.
- Vygotsky called this difference the Zone of proximal development.
- Much of what child learns from the culture around her and much of the child's problem solving is mediated through an adult's help.

Role of Scaffolding

- Interactions with surrounding culture and social agents, such as parents and more competent peers, contribute significantly to a child's intellectual development.
- Scaffolding means nothing but providing support to the learner to go beyond what can be presently done.
- Scaffolding means nothing but provision of adequate assistance.
- Such scaffold help to learn with confidence.

Implications for education

- Children learn through interaction, curricula should be designed to emphasize interaction between learners.
- Use of co-operative learning method.
- Assessment method must take into account of zone of proximal development.
- Reciprocal teaching is used to improve student's ability to learn from text.
- Scaffolding, reciprocal teaching, and guide instruction are effectively strategies that implement Vygotsky's theory. Scaffolding is a temporary supportive structure that the teacher creates to assist a student to accomplish a task that they could not complete alone.
- A constructivist teacher creates a context for learning in which students can become engaged in interesting activities that encourages and facilitates learning.
- Guided instruction involves the teacher and student exploring problems and then sharing their different problem solving strategies in an open dialogue.

MEANINGFUL LEARNING-DAVID AUSUBEL

- Ausubel supported the theory that learners form and organise knowledge by themselves. He emphasized the importance of verbal learning which he considered to be very effective for mature pupils.
- Pupils gradually learn to associate new knowledge with existing concepts in their mental structures. To ensure meaningful teaching, it is necessary to avoid rote memorization of facts. Pupils need to manipulate ideas actively.

Principles of Ausubel's Meaningful Learning

1) Meaningful verbal learning involves internalization of the material presented to the learner through Progressive Differentiation & Integrative Reconciliation.
2) Meaningful learning results when new information is acquired by **linking** the new information in the learner's own cognitive structure.
3) More general and inclusive ideas of a discipline are presented first. Gradually, step by step, the concepts are differentiated in terms of 'details' or 'specificity'. For example the concept 'plants' is a concept apex. As the learner grows, she assimilates more differentiated concepts into the concepts of plants. The learner learns about acquatic plants, terrestrial plants and other plants. Thus widening his/her concept of plants.
4) Once the inclusive concepts are presented and organized within a learner, new ideas are taken in and relationships are explored between ideas to know similarities and differences. As a result new learning takes place. This is **Integrative Reconciliation**. Eg learner identifies differences between concepts like acquatic and terrestrial plants. He notices their similarities.
5)) A primary process in learning is **subsumption** in which new material is related to relevant ideas in the existing cognitive structure.

PROCESS OF MEANINGFUL LEARNING

- **Ausubel** proposed **4 processes** by which meaningful learning can occur-

1) **DERIVATIVE SUBSUMPTION**: Describes a new situation in which new information is learnt. Eg- a child knows about a gulmohar tree that he had never seen before. His basic idea of tree is unaltered at the same time he learns something more.

2) **CORRELATIVE SUBSUMPTION-** It enriches the higher level concept. The child till now only knew of trees with green leaves. Then he sees a tree with red leaves. He correlates this new knowledge and slightly alters his original concept of trees.
3) **SUPERORDINATE LEARNING-** A higher concept is derived. For eg. The child learns that trees as fir, spruce are coniferous trees or that most Indian trees are deciduous trees.
4)) **COMBINATORIAL LEARNING-** It describes a process by which the new idea is derived from another idea that comes from his previous knowledge(in a different but related 'branch')eg the child learns that paper is made from tree pulp, the child learns the role of trees in ecological balance, he learns about forest fires.

EDUCATIONAL IMPLICATIONS

- **General ideas of a subject (general statement) must be presented first, and then progressively differentiated in terms of detail and specificity.** Eg. While teaching digestive system, present as a whole then go to individual parts.
- Instructional materials should attempt to integrate new material with previously presented information. **Teach using comparisons and cross referencing of new and old ideas.** Eg. While teaching earthquakes refer to the interior structure of earth. **Advance organizers** should be used where instructors should incorporate advance organizers when teaching a new concept. The advance organizer is a tool or a mental learning and aid to help students integrate new information with their existing knowledge leading to 'meaningful learning' as opposed to rote memorization. Eg. Instructors should use a number of examples and focus on both similarities and differences. While teaching about respiration, it is useful to give an analogy of how cars need oxygen to burn fuel. It is same with the human body, where the processes of digestion and respiration help production of energy.
- **Rote memorization should be discouraged** and learning should be made meaningful. The most important single factor influencing learning is what the learner already knows. Proceed from **known to unknown**.
- **Meaningful Verbal Learning** depends on critical ability and readiness to receive, teacher should make use of the adequate pedagogical techniques such as precise and accurate definition of concepts, giving similarities and differences between related concepts, and enabling learners to define in their own words.
- Developing thinking skills in students requires specific instruction and practice rather than application. Teachers should address analysis, evaluation and synthesis using advance organizers that encourage students to operate at higher levels of abstraction.
- Teacher should present big picture of concepts, ideas that students can link with existing mental map of the content area. For example while teaching machines teacher can ask students to list the machines they know of.

DISCOVERY LEARNING-JEROME BRUNER

- Born New York City, October 1, 1915.
- Ph.D. in 1947 from Harvard
- He was in the faculty in the Department of Psychology at Harvard University from 1952 - 1972.
- Bruner was one of the founding fathers of constructivist theory.

- Bruner's theoretical framework is based on the theme that learners construct new ideas or concepts based upon existing knowledge

- Students learn by ***exploring and interacting*** with their environment.
- However discovery should not be random, but **systematic.**
- Learners should be assisted to formulate their own learning goals.
- Discovery involves the natural and inherent human desire to solve problems and search for solutions.
- This desire to solve problems results in learning.
- Bruner said anybody can learn anything at any age, provided it is stated in terms they can understand
- Therefore it is necessary to introduce powerful concepts to the learner, transfer learning to many different situations, let the learner confront problems.
- According to Bruner discovery learning is an ***inquiry based, constructivist learning theory*** that takes place in ***problem solving situations*** where the learner draws on his or her own past experience and existing knowledge to discover facts and relationships and new truths to be learned. Students interact with the world by exploring and manipulating objects or performing experiments.
- To Bruner important outcomes of learning include not just the concepts, categories and problem solving procedures invented previously but also the **ability to invent** these things for oneself.

  This action of invention lends the theory the name **DISCOVERY LEARNING THEORY**

  Principles of Bruner's Theory
- Bruner found that for discovery learning to be effective, the following conditions are necessary-

a) ***Prior Knowledge***- Students must have prior knowledge on which to build new concepts. Therefore teacher should design instruction based on previous knowledge.
b) ***Inquiry Teaching-*** Teachers should use guided inquiry to help learners in the investigation and creation of knowledge. Provide tasks or questions for guidance.
c) ***Curiosity and uncertainty-*** Bruner felt that experiences should be designed that will help the student be willing and able to learn.
d) ***Structure of knowledge***- Bruner says that teacher and curriculum designer must specify the ways in which a body of knowledge should be structured so that it can be most easily grasped by the learner.

Bruner developed the ***"spiral curriculum***" a method of building upon knowledge by revisiting a concept using different forms of representation in a continuing cycle and at a higher level of complexity.

- He suggested that one must introduce concepts in different forms of representation i.e action, images and words. The ***Modes of Representation*** are a sequence of representation stages, not dependent on age. This applies to adults as well. The 3 modes of representation are-

1) **Enactive Representation (action based)-** Knowledge expressed through motor responses or actions. For this direct experience or concrete activities should be used. Eg: Learning to add using beads.

2) Iconic Representation (image based): Images represent knowledge. Visual, spatial and graphic images help to build knowledge. Eg: If asked to add two numbers, the child visualizes objects representing the numbers and adds the numbers.

3) Symbolic Representation (Concept based): A combination of symbols demonstrates knowledge which cannot be represented by actions or images. Reason, logic, symbolism are used in this kind of representation. Eg: If asked to add 5 & 8 , a child adds the two without resorting to physical objects or mental images

Educational Implications of Discovery Learning

- Discovery learning helps students learn how to learn. This is called as the ***metacognition***. Such skills can be applied to new situations. When a child has learned to add two numbers and if he has learned about decimal fractions, he applies the same skills to addition of decimal fractions.
- There is a shift **from extrinsic to intrinsic rewards**. There is joy in discovery as the learner ‘owns the learning.’ This is intrinsically motivating.
- Heuristics of discovery involves the student’s independent work and hence knowledge gained is long lasting. **Students are actively involved in learning** and this promotes a healthy learning atmosphere.
- Habits of **responsibility and independence** are fostered. Creative thinking, problem solving attitude are some of the life skills induced by discovery learning.
- **Concept formation** is emphasized. These concepts are the building blocks of knowledge that can be used to construct new structures of knowledge. In mathematics, with adequate knowledge of triangles, a learner constructs knowledge of Trignometry. In English Grammar, adequate knowledge of the concept of parts of clauses, can help the learner understand simple, compound and complex of sentences. It encourages the use of a practical approach that involves structure rather than mastery of facts.
- Use a **SPIRAL CURRICULUM** building upon ideas repeatedly until the student fully understands the concept they are trying to understand benefits the learner. It emphasizes the consolidation of concepts as these are the building blocks of knowledge.
- This theory stresses **higher order thinking**. It is necessary to encourage learners to critically think, analyse and synthesize in order to have meaningful learning. Discovery learning is a psychologically sound method with the learner as the focus.

TRANSFER OF LEARNING

- Learning or training in one situation influences our learning or performance in some other situation.
- This influence is usually referred to the carrying over of learning from one task to another. The learning or skill acquired in one task is carried over to other tasks.
- ***Examples***

1) The learning of addition and subtraction helps a child in learning multiplication and division.
2) Learning of Mathematics helps in solving numerical problems in Physics
3) If one has learned to play tennis one finds it easier to play badminton

Crow and Crow:

"***The carry-over of habits of thinking, feeling or working, of knowledge or of skills, from one learning area to another usually is referred to as the transfer of training."***

TYPES OF TRANSFER OF LEARNING

1)Positive transfer

2) Negative Transfer

3)Zero Transfer

POSITIVE TRANSFER-Transfer of learning or training is said to be positive when the learning or training carried out in one situation proves helpful to the learner in another situation.

- Examples

1) Knowledge and skills related to school mathematics help in the learning of statistical computation.

2)Knowledge of addition and subtraction helps in acquiring knowledge of multiplication and division.

3)Learning to play badminton may help in playing table tennis**.**

4) Learning Hindi may help a student in learning Punjabi or Guajarati

- **NEGATIVE TRANSFER-**Transfer of learning or training is said to be negative when learning or training in one situation hinders, interferes or weakens the learning in another situation.
- Examples-

1) Learning to pronounce ‘but’ correctly, the child may find it difficult to pronounce ‘put’ correctly.

2) One’s regional language can create problems in learning correct pronunciation and intonation of foreign language.

3) Learning to drive an auto start Kinetic Honda Scooter may find difficulty in driving Bajaj or Vespa Scooter.

4) Having learned to drive on right hand side tourists from Japan and USA may find difficult to drive on left hand side in India and UK.

- ***ZERO TRANSFER-***Transfer is said to be ‘zero’ when learning or training in one situation does not have any significant influence over the learning in another situation.
- Examples-

1) Learning history may neither help nor hinder the learning of economics.
2) Learning to play football may not help or hinder learning to play volleyball.
3) Learning to play guitar or sitar neither helps nor hinders one’s performance in her cooking or laundry class.

THEORIES OF TRANSFER OF LEARNING

<u>Theory of Identical Elements</u>

- This theory was propounded by Thorndike and Woodworth.
- This theory says that the transfer from one situation to another is possible to the extent that there are common or identical elements in the situations
- Example- There is a possibility of transfer from the field of Mathematics to the field of Physics to the extent that there are some common elements like symbols, formulae, equations, numerical calculations etc.

- Similarly transfer takes place from typing to playing a piano to the extent that such skills as eye- finger coordination are identical to both activities.

Theory of Generalization

- This theory has been put forward by ***Charles Judd***.
- This theory insists on a systematic organization and generalization of experiences in order to achieve maximum transfer of learning.
- It advocates transfer of generalizations in new situations in place of identical elements as suggested by Thorndike.
- As a result of certain experiences the individual reaches some conclusion or generalization which can be applied in new situations.
- Thus generalization is nothing but a principle, a law or a rule which can be easily transferred to other situations.
- **Example**- generalized experiences of a child like- By touching fire we get burnt.

Transposition Theory of Transfer

- This theory has been propagated by Gestalt field psychologists.
- They brought into focus the role of insight and emphasized the role of insight in transfer of learning.
- They said that in transfer, the identical elements or generalizations do not get transferred automatically unless one has developed the proper insight of using them and is desirous to transfer it at the right time.
- This process of developing insight into the use of concepts and generalizations in one situation and using it afterwards in other situations is called transposition.
- So there should be development and transposition of proper insight. A person should perceive common factors in different situations and understand how generalization can be used.

Low Road High Road Theory

- The Low Road/High Road Theory on transfer of learning -(developed by **Salomon & Perkins, 1988**)
- Low-road transfer refers to developing some knowledge/skill to a high level of automaticity. It requires a great deal of practice in varying settings. Examples of areas where automaticity can be achieved: shoe tying, keyboarding, or steering a car.
- High-road transfer involves the cognitive understanding and purposeful and conscious analysis, mindfulness, and application of strategies that cut across disciplines. In high-

road transfer, there is intentional mindful abstraction of an idea that can transfer, and then conscious and intentional application of the idea when faced by a problem where the idea may be useful.

Methods of enhancing transfer of learning

1) Linking the present learning with what has been learnt in the past. What one already knows should form base for one's present learning.
2) The learner should try to integrate theoretical studies with the practical experiences.
3) Identical components between the two learning situations should be properly identified. One should try to see relationship between them and then try to transfer learning from one situation to another.
4) The learner should avoid rote learning. He must develop habit of learning through proper understanding and insight in view of his past experiences and present understanding.
5) Learner must make use of multimedia and sensory aids for the proper understanding and gaining required knowledge and skills.
6) Learner should concentrate on the learning of the principles, generalizations and rules. He should discover rules and principles on basis of experiences and then utilize it.
7) Learner should try to learn through his own efforts. He must make use of logical thinking for knowing and discovering things by himself.
8) Learner should seek unity in diversity by searching for commonness and harmony among different subjects and learning experiences. He should not hesitate to utilize the learning of one field in the learning of other fields.