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★ ★★CHILD AND ADOLESCENT LEARNERS AND LEARNING PRINCIPLES

Learning Principles Associated to Cognitive, Metacognitive, Motivational, and Affective Factors

IS SCHOOLING IMPORTANT?
IS EDUCATION IMPORTANT?

- **Schooling** is education received at school
- **Education** is a process of teaching, training and learning, to improve knowledge and develop skills.
- Education is a **process** of teaching, training and learning, to improve knowledge and develop skills. (- *Oxford Advanced Learner's Dictionary*)
- Hence schooling only takes place in school while education can occur **ANYTIME** & **ANYWHERE**!

"There's no such thing as NEUTRAL EDUCATION. Education either functions as an instrument to bring about CONFORMITY or FREEDOM" - - Paulo Freire, Pedagogy of the Oppressed

Defining "Learner-Centered"

- "**Learner centered"** is the perspective that couples a **focus on individual learners** - their heredity, experiences, perspectives, backgrounds, talents, interests, capacities, and needs
- **Learner-centered is a reflection in practice of the Learner-Centered Psychological Principles** - in the programs, practices, policies, and people that support learning for all
- **Learner-centered is also related to the beliefs, characteristics, dispositions, and practices of teachers** - practices primarily created by the teacher.
    - they (a) include learners in decisions about how and what they learn and how that learning is assessed;
    - (b) value each learner's unique perspectives;
    - (c) respect and accommodate individual differences in learners' backgrounds, interests, abilities, and experiences; and

- (d) treat learners as co-creators and partners in the teaching and learning process.

14 The Learner-Centered Psychological Principles

- **A. Cognitive and metacognitive factors**
  - **1. Nature of the learning process**
    - The learning of complex subject matter is most effective when it is an intentional process of constructing meaning from information and experience.
    - Successful learners are active, goal-directed, self regulating, and assume responsibility for contributing to their own learning.
  - **2. Goals of the Learning Process**
    - The successful learner, over time and with support and instructional guidance, can create meaningful, coherent representations of knowledge.
  - **3. Construction of Knowledge**
    - The successful learner can link new information with existing knowledge in meaningful ways.
    - Knowledge widens and deepens as students continue to build links between new information and experiences and their existing knowledge base.
  - **4. Strategic Thinking**
    - The successful learner can create and use a repertoire of thinking and reasoning strategies to achieve complex learning goals.
    - Successful learners use it in their approach to learning, reasoning, problem solving, and concept learning.
  - **5. Thinking about Thinking**
    - Higher order strategies for selecting and monitoring mental operations facilitate creative and critical thinking.
    - Successful learners can reflect on how they think and learn, set reasonable learning or performances goals, select potentially appropriate learning strategies or methods, and monitor their progress towards these goals
  - **6. Context Learning**
    - Learning is influenced by environmental factors, including culture, technology and instructional practices.
    - Teachers play a vital role with both the learner and the learning environment.
    - Cultural or group influences on students can impact many educationally relevant variables such as motivation, orientation toward learning, and ways of thinking.

“Tell me who your friends are and I’ll tell you your FUTURE!”

- **B. Motivational and affective factors**
    - **7. Motivational and Emotional Influences on Learning**
        - What and how much is learned is influenced by the learner’s motivation. Motivation to learn, in turn, is influenced by the individual’s emotional states, beliefs, interests and goals, and habits of thinking.
        - The rich internal world of thoughts, beliefs, goals, and expectation for success or failure can enhance or interfere with the learner’s quality of thinking and information processing.
    - **8. Intrinsic Motivation to Learn**
        - The learner’s creativity, higher order thinking, and natural curiosity all contribute to motivation to learn. Intrinsic motivation is stimulated by tasks of optimal novelty and difficulty, relevant to personal interests, and providing for personal choice and control.
        - Intrinsic motivation is facilitated on tasks that learner’s perceive as interesting and personally relevant and meaningful, appropriate in complexity and difficulty to the learner’s abilities, and on which they believe they can succeed.
    - **9. Effects of motivation on effort**
        - Acquisition of complex knowledge and skills require extended learner effort and guided practice. Without learners’ motivation to learn, the willingness to exert this effort is unlikely without coercion.
        - Effort is another major indicator of motivation to learn. The acquisition of complex knowledge and skills demands the investment of considerable learner energy and strategic effort, along with persistence over time.
- **C. Developmental and social factors**
    - **10. Developmental Influences on Learning**
        - As individuals develop, there are different opportunities and constraints for learning.
        - Learning is most effective when differential developmental within and across physical, intellectual, emotional, and social domains is taken into account.
        - Individuals learn best when material is appropriate to their developmental level and is presented in an enjoyable and interesting way
    - **11. Social Influences on Learning**
        - Learning can be enhanced when the learner has an opportunity to interact and to collaborate with others on instructional tasks.

“If you want to be great, surround yourself with GREATNESS!”

- **D. Individual difference factors**

- **12. Individual Differences in Learning**
  - Individuals are born with and develop their own capabilities and talents.
  - Educators need to help students examine their learning preferences and expand or modify them, if necessary.
- **13. Learning and Diversity**
  - The same basic principles of learning, motivation, and effective instruction apply to all learners.
- **14. Standards and Assessment**
  - Assessment provides important information to both the learner and teacher at all stages of the learning process.

I. COGNITIVE LEARNING THEORIES

A. COGNITIVE DEVELOPMENT IN CHILDREN AND ADOLESCENCE (Jean Piaget)

☐ IMPORTANT CONCEPTS IN COGNITIVE DEVELOPMENT

☐ SCHEMA

- refers to **cognitive structures** by which individuals intellectually adapt to and organize their environment
- **an organized unit of knowledge**. The child uses this to be able to understand a situation or an experience which will serve as the basis for organizing actions to respond to the environment.
- Piaget defined a schema as the **mental representation of an associated set of perceptions, ideas, and/or actions**. Piaget also considered schemata to be the basic building blocks of thinking
- It is the individual's way to understand or create meaning about a thing or experience.

☐ ADAPTATION

- is **adjusting one's thinking according to environmental demands**.
- involves the processes of ***assimilation*** and ***accommodation***.

☐ ASSIMILATION

- This is the process of **fitting a new experience** into an existing or previously created cognitive structure or schema.
- An example of assimilation would be when an infant uses a sucking schema that was developed by sucking on a small bottle when attempting to suck on a larger bottle.

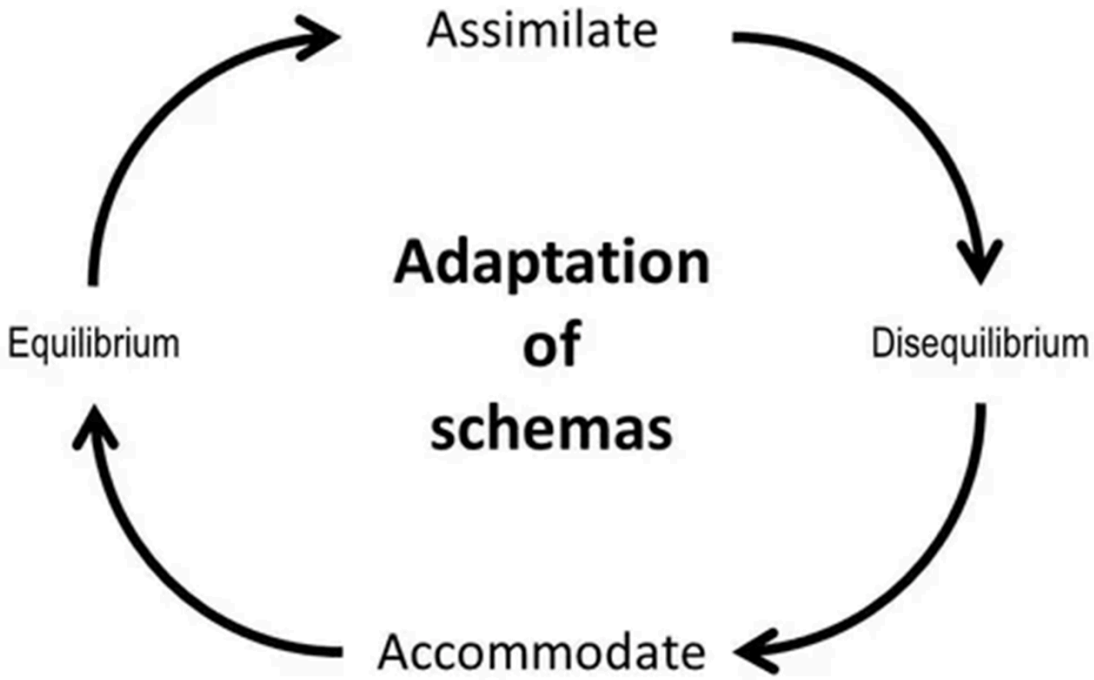
☐ ACCOMMODATION

- It is the process of **changing cognitive structures** in order to accept something from the environment
- this is the process of **creating a new schema**

- ❖ An example of accommodation would be when the child needs to ***modify*** a sucking schema developed by sucking on a pacifier to one that would be successful for sucking on a bottle.

☐ **EQUILIBRIUM and DISEQUILIBRIUM**

- ❖ it is achieving a **proper balance** between assimilation and accommodation.
- ❖ When our experiences do not match our schemata or cognitive structures, we experience cognitive disequilibrium -- meaning, there is a discrepancy between what we perceived or what is understood.



- **WHAT IS COGNITIVE DEVELOPMENT?**
  - Cognitive development focuses on a child's development in terms of information processing, conceptual resources, perceptual skill, language learning, and other aspects of brain development.
- **COGNITIVE DEVELOPMENT THEORY**
  - proposed by Jean Piaget

- the processes and experiences involved in cognition describe how people come to know about their world
- intelligence is not fixed; and the mind is dynamic
- cognitive development is greatly affected by environmental factors

● STAGES OF COGNITIVE DEVELOPMENT

a. Sensorimotor Stage (0-2)
b. Preoperational Stage (2-6)
c. Concrete-Operational Stage (7-11)
d. Formal-Operational Stage (12-above)

☐ A. SENSORIMOTOR STAGE

- children learn about the world through their senses and the manipulation of objects. Infants are only aware of what is immediately in front of them. They focus on what they see, what they are doing, and physical interactions with their immediate environment.
- infants begin to realize that an object exists even if it can no longer be seen. This important milestone -- known as object permanence -- is a sign that memory is developing.
- **Object permanence -** the awareness that an object continues to exist even when it is not in view. After a child has mastered the concept of object permanence, the emergence of "directed groping" begins to take place.
- **Directed groping** - the child begins to perform motor experiments in order to see what will happen. A child will vary his movements to observe how the results will differ.

☐ **Hallmarks**:

A. **sensorimotor intelligence** – children think with action (directed groping)
B. **mental invention /discovery**- to think out an action before representing it. Children discover how to resolve minor conflicts around them.
C. **representational thought** – the capacity for imagining the environment other than he directly perceives it.
D. **concept of permanence**
E. **imitation/deferred imitation** – To defer an action is to set it aside until some future time; to imitate is to see someone perform some act and then try to act in an exact manner. Thus, putting the two together, deferred

imitation is watching an individual perform something that you will also perform at some later date

F. **solitary play**

☐ B. PREOPERATIONAL STAGE

- children develop memory and imagination. They are also able to understand things symbolically, and to understand the ideas of past and future.
- Actions of children in this stage are based on thought but the actions do not always seem logical from an adult perspective. (pre-logical thought)
- **OPERATION**- means actions based on logical (sensible) thought.

☐ **Hallmarks**:

A. **Symbolic representation**- they use things to represent another thing. However, it is not limited to objects, as kids develop the ability to think symbolically, they "play pretend," imagining themselves as other people, or even animals or fantastical objects. They also use signifiers -- such as sounds or gestures -- to refer to concrete objects or people.

B. **Irreversibility**- they cannot reverse operations. Irreversibility is a stage in early child development in which a child falsely believes that actions cannot be reversed or undone. For example, if a three-year-old boy sees someone flatten a ball of playdough, he will not understand that the dough can easily be reformed into a ball.

C. **Perceptual centration**- they focus on one aspect of things. **Centration** is the tendency to focus on only one aspect of a situation at one time. When a child can focus on more than one aspect of a situation at the same time they have the ability to **decenter**.

D. **Egocentrism**- they think they are the center of everything; they are self-centered. Refers to the child's inability to see a situation from another person's point of view.

E. **language acquisition**- Children learn to speak.

F. **Animism**- they give life to inanimate things. This is the belief that inanimate objects (such as toys and teddy bears) have human feelings and intentions

G. **Artificialism** - This is the belief that certain aspects of the environment are manufactured by people (e.g. clouds in the sky).

H. **Parallel and associative play**

☐ C. CONCRETE-OPERATIONAL STAGE

- The first stage of logical or operational thought.
- children become more aware of external events, as well as feelings other than their own. They become less egocentric and begin to understand that not everyone shares their thoughts, beliefs, or feelings.
- Children realize that there is stability in this world.
- They can reason out, but it is only limited to tangible objects and direct experiences.

☐ **Hallmarks:**

A. **Reversibility**- they can reverse operations.
B. **Decentration**- they can now focus on other aspects of an object
C. **Identity**- they can recognize the identity of an object, animal, or human.
D. **Classification**- they can arrange things according to a given criterion. The ability to simultaneously sort things into general and more specific groups, using different types of comparisons. For example, kids who collect superhero trading cards might be able to sort their cards by good-guy/bad-guy status, gender, and particular category of superhero powers
E. **Seriation**- They can order things. (rank) The cognitive operation of seriation involves the ability to mentally arrange items along a quantifiable dimension, such as height or weight.
F. **Spatial reasoning** - is the ability to understand and to reason (to draw conclusions) using cues in the environment that convey information about distance or direction. (object at a distance will be small in sight but it does not mean that it is the actual size)
G. **Competitive play**- they play but think of competition more than enjoyment

☐ D. FORMAL-OPERATIONAL STAGE

- children are able to use logic to solve problems, view the world around them, and plan for the future.
- actions are based on logical thinking.

☐ **Hallmarks:**

- abstract reasoning- the ability to think logically or sensibly about intangibles. The individual can think about hypothetical and abstract concepts they have yet to experience. Abstract thought is important for planning regarding the future.
- Examples of abstract thinking:
    A. **Reflective thinking -** thinking harder before doing something
    B. **Hypothetical deductive reasoning** - to think of possible answers/outcomes. The individual will approach problems in a systematic and organized manner, rather than through trial-and-error.
    C. **Creative thinking** - thinking out of the box or creating new out of the usual
    D. **Critical thinking -** judging things; criticizing by given facts

☐ IMPLICATIONS OF THE THEORY

☐ **1. Sensorimotor Stage**

- provide different sensory experiences to the child
- introduce a variety of toys
- encourage physical activities

☐ **2. Preoperational Stage**

- talk to the child
- answer his questions
- avoid “baby talk”
- encourage imaginative and pretend play but make sure the child knows that it just make-believe
- set good examples
- teach the child about empathy, sharing & helping others

☐ **3. Concrete Operational**

- encourage him to talk about school and friends
- urge the child to be more competitive but practice sportsmanship
- understand his need to be with the “barkada”
- provide concrete objects when learning
- use more of direct experiences if convenient

☐ **4. Formal Operational**

- strengthen classroom lessons
- observe his ability to reason out logically
- ask questions that make him think and reflect
- respect his need to become a more independent thinker

B. **LEV VYGOTSKY's SOCIAL CONTEXTUAL THEORY**

- provide socialization to aid in cognitive development
- encourage communication
- respect **"private speech"**
- Vygotsky believed that social interaction does more than transmit ideas.
- People provide guidance and support known as scaffolding for children as they attempt new and more complicated tasks.

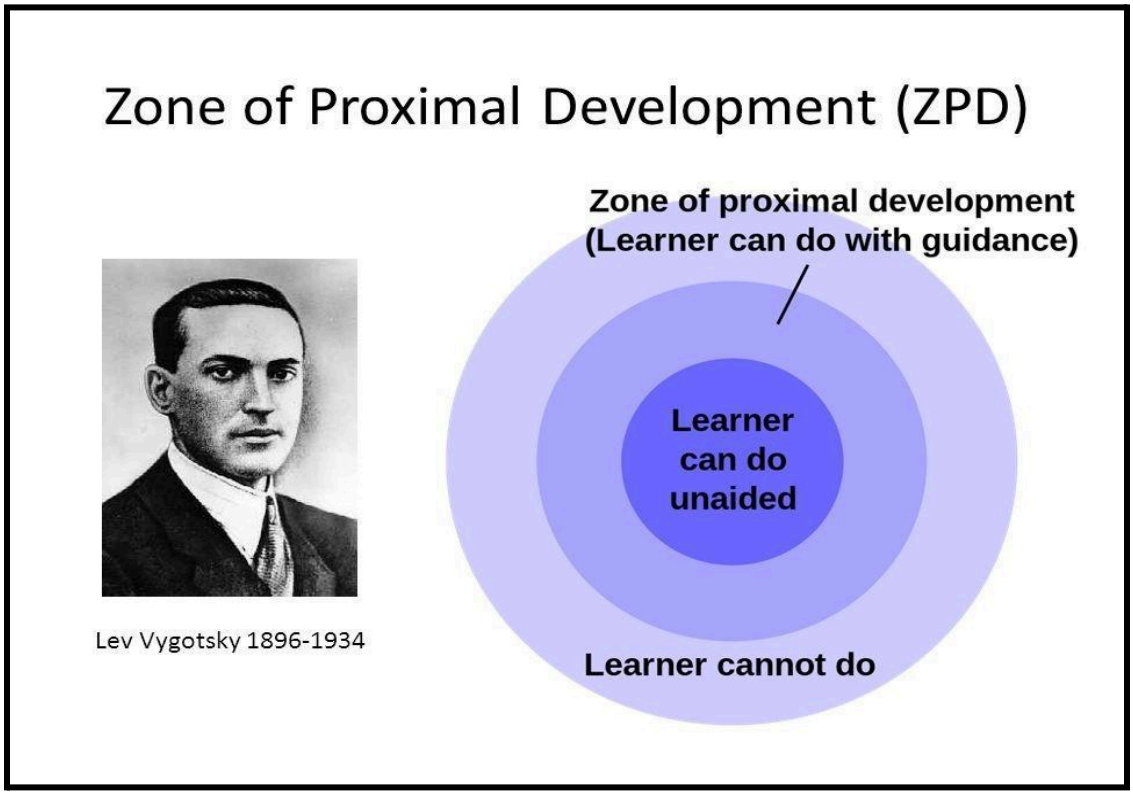
☐ The concept, **"Zone of Proximal Development" (ZPD)** was developed by Soviet psychologist and social constructivist Lev Vygotsky (1896 – 1934).

☐ The ZPD refers to the difference between what a learner can do without help and what he or she can achieve with guidance and encouragement from a skilled partner. Thus, the term "proximal" refers to those skills that the learner is "close" to mastering.

☐ **Zone of Proximal Development** – an area in which a child has trouble solving a problem alone but can succeed with the help of someone who is more knowledgeable; the area of potential breakthrough.

☐ Vygotsky suggests that a child must be pushed to the edge of his capabilities but that someone should be there to help and encourage him.

☐ **Zone of Actual Development-** an area in which a child can solve a complicated task without the help of a more knowledgeable other.



C. Human Information Processing (How human mind works)

- ***Cognitive psychology*** compares the human mind to a computer, suggesting that we too are information processors and that it is possible and desirable to study the internal mental / mediational processes that lie between the stimuli (in our environment) and the response we make.
    - **Environment** – the source of all inputs into the processing system.
    - **Receptors** – are those sensory systems that allow humans to see, hear, smell, taste, and feel.
        - Information from the receptors enters the sensory register- whose stimuli are stored for a brief moment.
        - From the sensory register, information that receives learner's attention moves into the short-term store. It could be lost or maintained.
        - Information then saved to long-term memory if rehearsed. This can also be retrieved.
        - The response generator is a conversion box converting cognitive activity into messages for physical activity.
    - Effectors are the systems that are produced by the learner. These are the physical means by which the learner operates on the environment.
- **There are three primary stages in IP Theory:**
    a. **Encoding**- information is sensed and perceived.
    b. **Storage**- the information is stored for either a brief or extended period of time depending upon the processes following encoding
    c. **Retrieval**- the information is found at the appropriate time, and reactivated for use on a current task, the true test of effective memory.

II. BEHAVIORAL LEARNING THEORIES

- **John B. Watson** was the first to use the term 'behaviorist'. A behaviorist approach is only concerned with observable stimulus-response behaviors and states that all behaviors are learned through interaction with the environment. Watson's methodological behaviorism asserts the mind is tabula rasa (a blank slate) at birth. He is also notable for emphasizing scientific and objective methods of investigation.

- Behavioral learning theories are a set of psychological theories that attempt to explain how people learn through their **experiences and the consequences of their actions.** These theories focus on observable behaviors and how they are shaped by external stimuli, such as rewards and punishments.
- Behavioral learning theory is about how we learn by repeating behaviors and getting rewards or punishments for them
- Positive results encourage us to repeat behaviors, while negative results discourage us
- In education, positive reinforcement like praise or stickers for correct answers encourages participation, while negative reinforcement like detention or taking away privileges discourages misbehavior
- Behavioral learning theory helps us understand how consequences influence behavior
- By rewarding positive behavior and discouraging negative behavior, we can shape behavior in a positive way.
- Overall, behavioral learning theories provide a framework for understanding how behaviors are learned and can be modified through external stimuli, making them a valuable tool for educators to encourage desired behaviors in their students.

A. PAVLOV's CLASSICAL CONDITIONING

- **Classical conditioning** (also known as **Pavlovian conditioning**) is learning through association and was discovered by Ivan Pavlov, a Russian physiologist
    - He famously said ***"Give me a dozen healthy infants, well-formed, and my own specified world to bring them up in and I'll guarantee to take any one at random and train him to become any type of specialist I might select - doctor, lawyer, artist, merchant-chief and, yes, even beggar-man and thief, regardless of his talents, penchants, tendencies, abilities, vocations and the race of his ancestors" (Watson, 1924, p. 104)***.
- **Here are some of the most important ideas of the classical conditioning theory:**
    - **Conditioning**: Pavlov demonstrated that a neutral stimulus (one that doesn't naturally cause a response) could be conditioned to produce a response by associating it with a stimulus that naturally produces a response.
    - **Unconditioned stimulus (UCS)**: This is a stimulus that naturally produces a response without any learning needed. For example, the smell of food might cause a dog to start drooling.

- **Unconditioned response (UCR)**: This is the response that occurs naturally in response to the unconditioned stimulus. In our example, the dog drooling in response to the smell of food is the unconditioned response.
- **Conditioned stimulus (CS)**: This is the neutral stimulus that has been paired with the unconditioned stimulus to produce a response. For example, if a bell is repeatedly rung just before the dog is fed, the bell might eventually cause the dog to start drooling even when there is no food present.
- **Conditioned response (CR):** This is the response that is learned through the association of the conditioned stimulus with the unconditioned stimulus. In our example, the conditioned response is the dog drooling in response to the sound of the bell.
- **Extinction:** This occurs when the conditioned stimulus is presented repeatedly without the unconditioned stimulus, causing the conditioned response to eventually fade away.

- **Example 1:**
- Let's say you have a pet dog named Fido who gets excited every time he sees his leash because he knows it means he gets to go for a walk. You can use classical conditioning to train Fido to associate a sound, like a bell, with the sight of the leash.
    - ***Unconditioned stimulus (UCS):*** The sight of the leash naturally causes Fido to get excited about going for a walk.
    - ***Unconditioned response (UCR):*** Fido getting excited in response to seeing the leash is the unconditioned response.
    - ***Conditioned stimulus (CS):*** You ring a bell every time you show Fido his leash, so he begins to associate the sound of the bell with going for a walk.
    - ***Conditioned response (CR):*** After repeatedly pairing the sound of the bell with the sight of the leash, Fido starts to get excited at the sound of the bell alone, because he has learned to associate it with going for a walk.

    - ***Extinction***: If you repeatedly ring the bell without taking Fido for a walk, the association between the bell and the walk will weaken and eventually disappear, causing Fido to stop getting excited at the sound of the bell.

- ***Example 2:***
- A dog is afraid of loud thunderstorms.
    - ***Unconditioned stimulus (UCS):*** The loud thunderstorm
    - ***Unconditioned response (UCR):*** The dog's natural response of fear and anxiety
    - ***Conditioned stimulus (CS):*** The sound of a specific song played during the thunderstorm
    - ***Conditioned response (CR):*** The dog becomes fearful and anxious when hearing the specific song, even when there is no thunderstorm.
    - ***Extinction:*** If the specific song is played repeatedly without the thunderstorm, the dog will eventually learn that there is no longer a connection between the song and the thunderstorm, and will stop responding with fear and anxiety. This is known as extinction.

- ***Example 3:***
- Classical conditioning is important in the classroom because it can help students develop positive associations with learning, increase motivation, and improve academic performance. Here is an example of classical conditioning in the classroom:
- **Scenario**:
    - A teacher wants to increase student participation in class by using classical conditioning.
- **Identifiers**:
    - **Unconditioned stimulus (UCS):** Teacher's praise and positive feedback
    - **Unconditioned response (UCR):** Student's feelings of happiness and pride
    - **Conditioned stimulus (CS):** The sound of a bell or chime
    - **Conditioned response (CR):** Increased participation and engagement in class
    - **Extinction:** When the teacher stops using the bell or chime, and the association between the sound and increased participation gradually fades away.

- Example:
    - The teacher uses a bell or chime at the start of each class to signal the beginning of a lesson.
    - Every time the bell or chime is sounded, the teacher provides praise and positive feedback to students who participate and engage in the lesson.
    - Over time, students begin to associate the sound of the bell or chime with positive reinforcement from the teacher.
    - As a result, students become more motivated to participate and engage in class, even without the need for the teacher's praise and positive feedback.
    - Eventually, the teacher can phase out the use of the bell or chime, and the association between the sound and increased participation will still remain.

- **IMPLICATIONS OF CLASSICAL CONDITIONING IN TEACHING**
    - If a student associates negative emotional experiences with school, then this can obviously have bad results, such as creating a school phobia.
    - For example, if a student is bullied at school they may learn to associate the school with fear. It could also explain why some students show a particular dislike of certain subjects that continue throughout their academic career. This could happen if a student is humiliated or punished in class by a teacher.

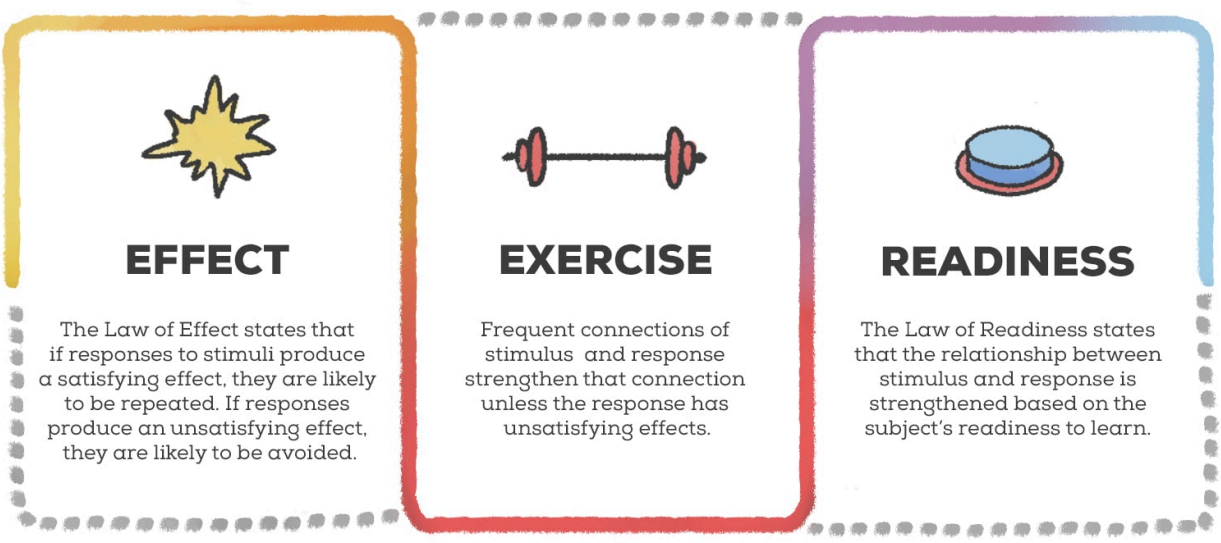
B. THORNDIKE's CONNECTIONISM (Stimulus-Response Theory)

- Thorndike's connectionism is a theory of learning based on the idea that the mind forms associations between stimuli and responses through trial and error.

- **Law of Readiness**
    - First primary law of learning, according to him, is the **'Law of Readiness'** or the '**Law of Action Tendency**', which means that learning takes place when an action tendency is aroused through preparatory adjustment, set or attitude. **Readiness means a preparation of action**. If one is not prepared to learn, learning cannot be automatically instilled in him, for

example, unless the typist, in order to learn typing prepares himself to start, he would not make much progress in a lethargic & unprepared manner.

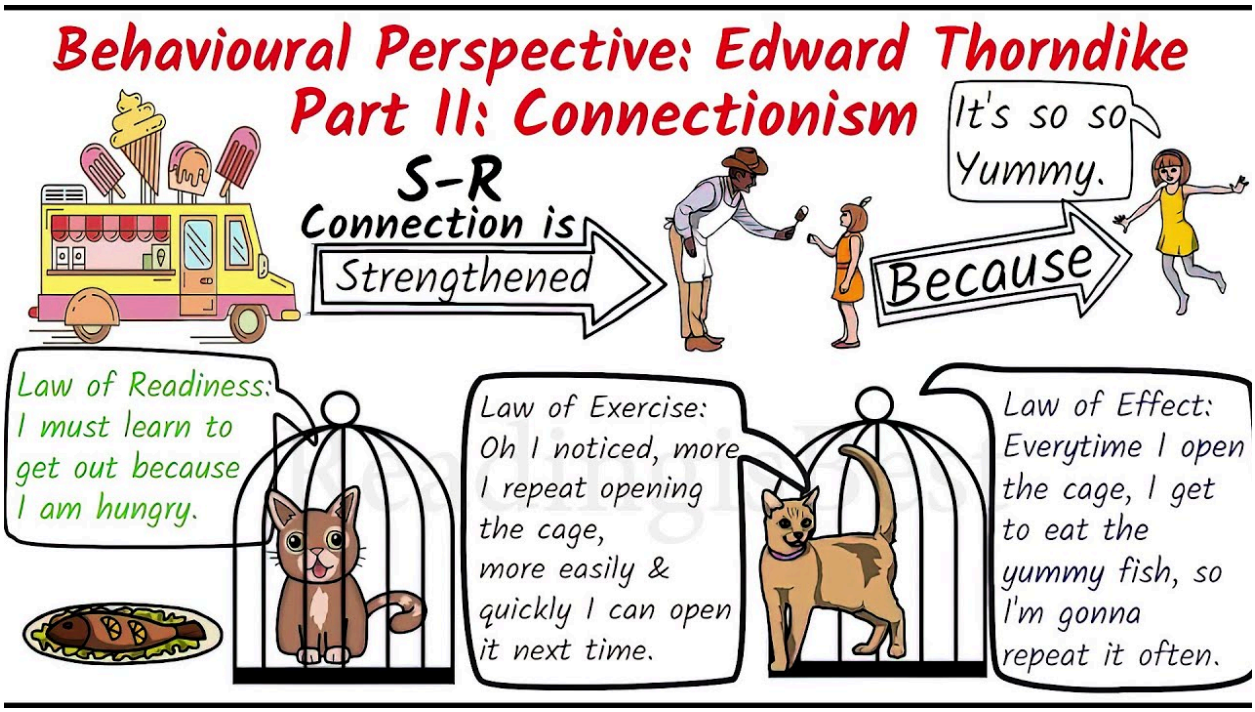
- **Law of Exercise** *(Practice Makes Perfect)*
    - The second law of learning is the **'Law of Exercise'**, which means that drill or practice helps in increasing efficiency and durability of learning and according to Throndike's S-R Bond Theory, the connections are strengthened with trial or practice and the connections are weakened when trial or practice is discontinued.
    - The 'law of exercise', therefore, is also understood as the **'law of use and disuse'** in which case connections or bonds made in the brain cortex are weakened or loosened. Many examples of this case are found in the case of human learning. Learning to drive a motor-car, typewriting, singing or memorizing a poem or a mathematical table, and music etc. need exercise and repetition of various movements and actions many times.
- **Law of Effect (Positive Outcomes = Repeat Behavior)**
    - The third law is the 'Law of Effect', according to which the trial or steps leading to satisfaction stamps in the bond or connection. Satisfying states lead to consolidation and strengthening of the connection, whereas dis-satisfaction, annoyance or pain lead to the weakening or stamping out of the connection. In fact, the 'law of effect' signifies that if the response satisfy the subject, they are learnt and selected, while those which are not satisfying are eliminated. Teaching, therefore, must be pleasing. The educator must obey the tastes and interests of his pupils. In other words, the greater the satisfaction, the stronger will be the motive to learn. Thus, intensity is an important condition of 'law of effect'



- Some key points to remember about Thorndike's connectionism:
    - Learning occurs when associations are formed between a particular stimulus and response.
    - The strength of these associations increases with practice and decreases with time.
    - The law of effect states that behaviors that are followed by pleasant consequences are more likely to be repeated, while behaviors that are followed by unpleasant consequences are less likely to be repeated.

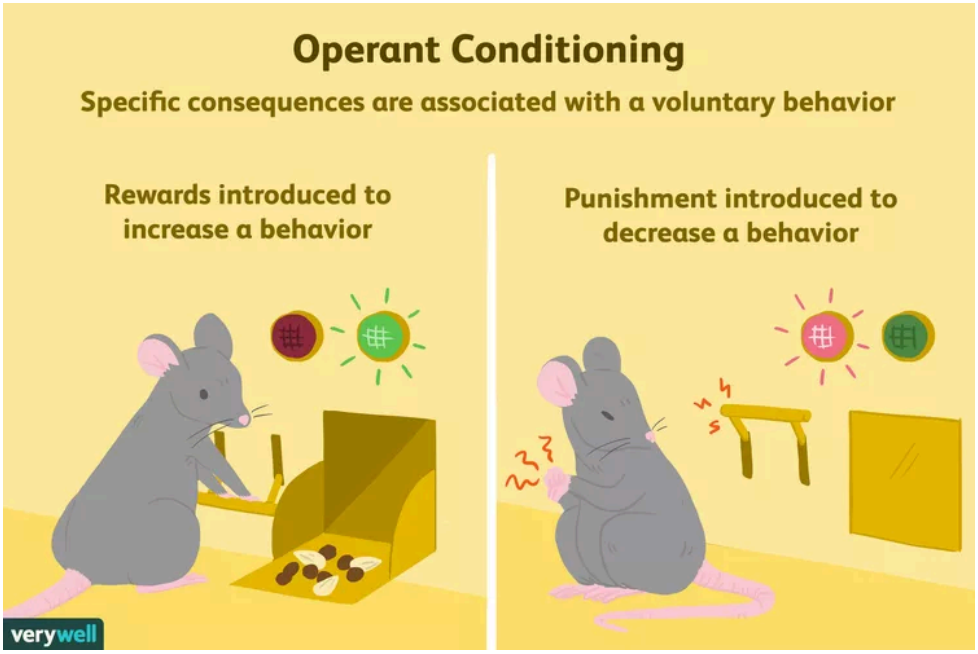
- **Here are some scenarios that illustrate Thorndike's connectionism:**
    - A child learns to tie their shoelaces through trial and error. At first, they struggle and make mistakes, but with practice, they become more adept at the task.
    - A dog learns to associate the sound of their owner's car with the arrival of food. Over time, the dog begins to salivate at the sound of the car engine, even if food is not immediately present.
    - A student learns to study for tests because they receive good grades as a result. The positive reinforcement of good grades strengthens the association between studying and academic success.
    - A person stops smoking cigarettes because they experience negative health consequences. The negative reinforcement of avoiding health

problems weakens the association between smoking and positive feelings.



C. SKINNER's OPERANT CONDITIONING (Burrhus Frederic Skinner)

- **Operant conditionin**g is a type of learning where *behavior is shaped by the consequences that follow it*.
- This means that if a behavior is followed by a **reward or reinforcement**, it is more likely to be *repeated in the future*. On the other hand, if a behavior is followed by a **punishment or negative consequence**, it is *less likely to be repeated*.
- Skinner is regarded as the father of Operant Conditioning, but his work was based on Thorndike's (1898) law of effect. Skinner introduced a new term into the Law of Effect - **Reinforcement**. behavior which is reinforced tends to be repeated (i.e., ***strengthened***); behavior which is not reinforced tends to die out-or be extinguished (i.e., ***weakened***).

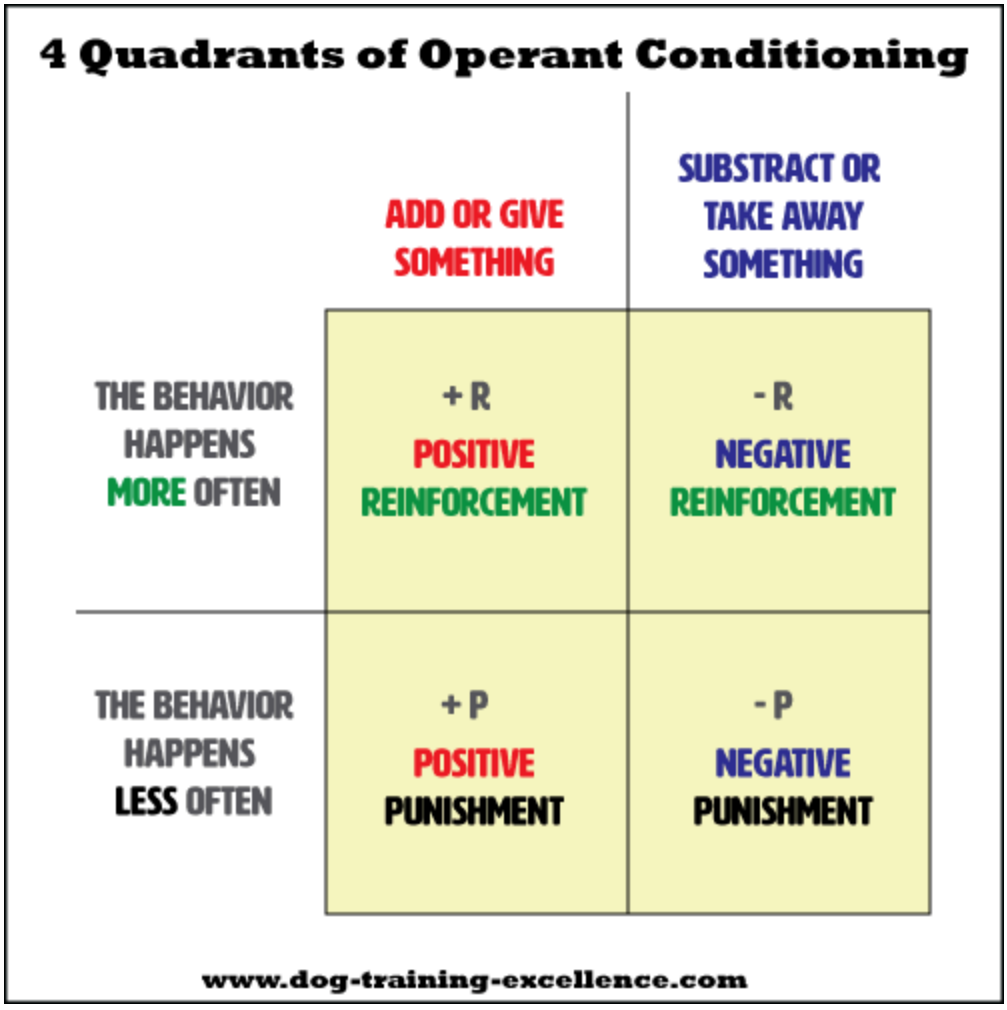
- 

    - Skinner showed how positive reinforcement worked by placing a hungry rat in his Skinner box. The box contained a lever on the side, and as the rat moved about the box, it would accidentally knock the lever. Immediately it did so a food pellet would drop into a container next to the lever. The rats quickly learned to go straight to the lever after a few times of being put in the box. The consequence of receiving food if they pressed the lever ensured that they would repeat the action again and again. Positive reinforcement strengthens a behavior by providing a consequence an individual finds rewarding. For example, if your teacher gives you £5 each time you complete your homework (i.e., a reward) you will be more likely to repeat this behavior in the future, thus strengthening the behavior of completing your homework

- **Skinner identified three types of responses, or operant, that can follow behavior.** (*module*)
    - **Neutral operants:** responses from the environment that neither increase nor decrease the probability of a behavior being repeated.
    - **Reinforcers:** Responses from the environment that increase the probability of a behavior being repeated. Reinforcers can be either positive or negative.

- **Punishers:** Responses from the environment that decrease the likelihood of a behavior being repeated. Punishment weakens behavior.

- **There are four types of consequences that can follow behavior in operant conditioning:**
  - **Positive reinforcement** involves adding a desirable stimulus after a behavior to increase the likelihood of that behavior occurring again.
    - If you study hard and earn, or are given, an A on your exam, you will be more likely to study hard in the future. Your parents may also give you money for your efforts. Hence the result of studying could yield two positive results — the 'A' and the money.
  - **Negative reinforcement** involves removing an aversive stimulus after a behavior to increase the likelihood of that behavior occurring again.
  - **Positive punishment (PP)** involves adding an aversive stimulus after a behavior to decrease the likelihood of that behavior occurring again.
    - If something bad or aversive is given or added, then the behavior is *less likely to occur in the future.* If you talk back to your mother and she slaps your mouth, this is a PP. Your response of talking back led to the consequence of the aversive slap being delivered or given to your face.
  - **Negative punishment (NP)** involves removing a desirable stimulus after a behavior to decrease the likelihood of that behavior occurring again.
    - This is when something good is taken away or subtracted making a behavior less likely in the future. If you are late to class and your professor deducts 5 points from your final grade (the points are something good and the loss is negative), you will hopefully be on time in all subsequent classes.

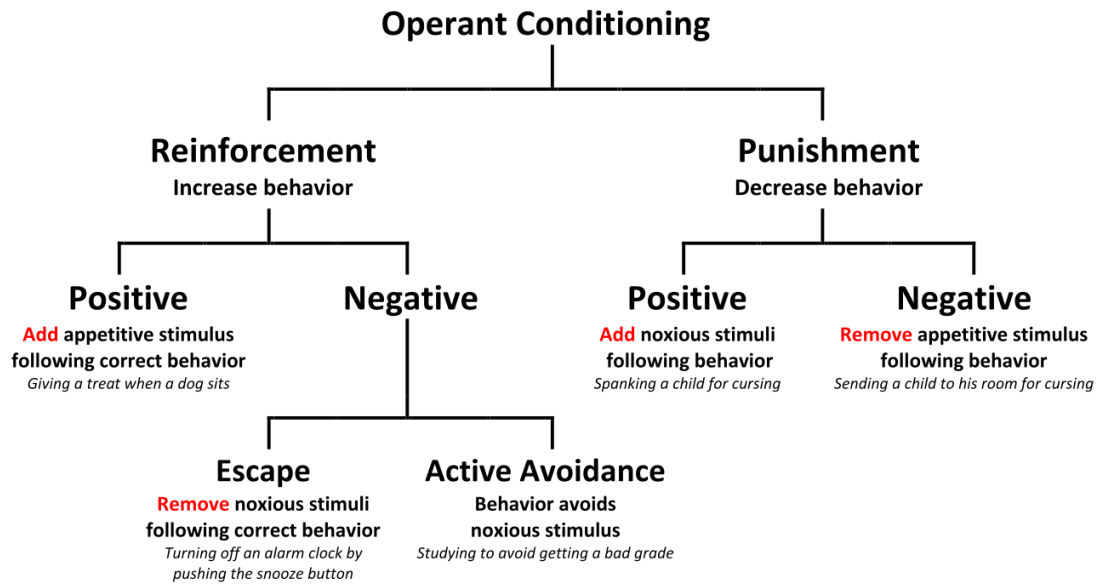
- 

- **DIFFERENCE OF NEGATIVE REINFORCEMENT AND NEGATIVE PUNISHMENT**
  - Suppose you have a student who frequently talks during class, disrupting the learning environment for others. In order to discourage this behavior, the teacher decides to use negative reinforcement.
  - *Here's how it might work:*
    - **Behavior**: Student talks during class
    - **Consequence**: Teacher gives the student a stern look or a verbal warning ("Please stop talking and pay attention to the lesson.")
    - **Outcome**: The student stops talking, thereby avoiding the unpleasant consequence of the teacher's disapproval.
    - In this example, the negative reinforcement is the removal of the aversive consequence (the teacher's disapproval) when the

student stops talking. By removing the unpleasant consequence, the teacher is reinforcing the desired behavior of the student paying attention and not talking during class. This encourages the student to repeat the desired behavior in the future, as they want to avoid the unpleasant consequence of the teacher's disapproval.

- *Here are scenarios that illustrate the difference between negative reinforcement and negative punishment:*
    - **Scenario 1:** A student is playing with their phone during class.
        - **Negative reinforcement:** The teacher allows the student to continue using their phone during class as long as they promise to participate more actively in discussions. This encourages the student to participate more in class in order to avoid losing the privilege of using their phone.
        - **Negative punishment:** The teacher confiscates the student's phone for the rest of the day. This decreases the student's phone usage in class in order to avoid losing the phone again.

    - **Scenario 2:** A child keeps misbehaving by throwing toys in the house.
        - **Negative reinforcement:** The parent allows the child to skip doing the dishes if they refrain from throwing toys. This encourages the child to avoid throwing toys in order to escape from doing the dishes.
        - **Negative punishment:** The parent takes away the child's toys for a day. This decreases the child's toy-throwing behavior by removing a desired stimulus.



- Operant conditioning is used in a variety of settings, including education, parenting, and workplace training.
- **Example**:
    - A student in a classroom who is rewarded with a piece of candy for completing a homework assignment on time is experiencing positive reinforcement. This increases the likelihood that the student will complete future assignments on time.
- The timing of the consequence is also important in operant conditioning. Immediate consequences are more effective in shaping behavior than delayed consequences. Behaviorists discovered that different patterns (or schedules) of reinforcement had different effects on the speed of learning and extinction. **Ferster and Skinner** (1957)
    - **Continuous Reinforcement**: It is a type of reinforcement where a behavior is reinforced every time it occurs. This means that every time a desired behavior is exhibited, a reward is given.
        - For example, a teacher may give a student a piece of candy every time they raise their hand to answer a question in class.
    - **Fixed Ratio Reinforcement**: It is a type of reinforcement where a behavior is reinforced after a fixed number of times it occurs.
        - For example, a salesperson may receive a bonus every 10 items they sell.

- **Fixed Interval Reinforcement**: It is a type of reinforcement where a behavior is reinforced after a fixed amount of time has passed.
    - For example, a student may receive a reward every Friday for completing all their homework during the week.
- **Variable Ratio Reinforcement:** It is a type of reinforcement where a behavior is reinforced after a variable number of times it occurs. This means that the reward is given after an unpredictable number of desired behaviors.
    - For example, a gambler may keep playing a slot machine because they do not know how many times they need to play before they win.
- **Variable Interval Reinforcement:** It is a type of reinforcement where a behavior is reinforced after a variable amount of time has passed. This means that the reward is given after an unpredictable amount of time has passed since the last desired behavior.
    - For example, a person may keep checking their phone because they do not know when they will receive a message or notification.

Schedules of Reinforcement

	Ratio	Interval
Fixed	Deliver reinforcement after an **exact** # of correct responses.	Deliver reinforcement for first correct response after **exact** amount of time has passed.
Variable	Deliver reinforcement after an **average** # of correct responses.	Deliver reinforcement for first correct response after **average** amount of time has passed.

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- Overall, these different types of reinforcement schedules can be used to shape and maintain behaviors. It is important to use them effectively to encourage desired behaviors and discourage undesired behaviors.

A. NEO-BEHAVIORISM

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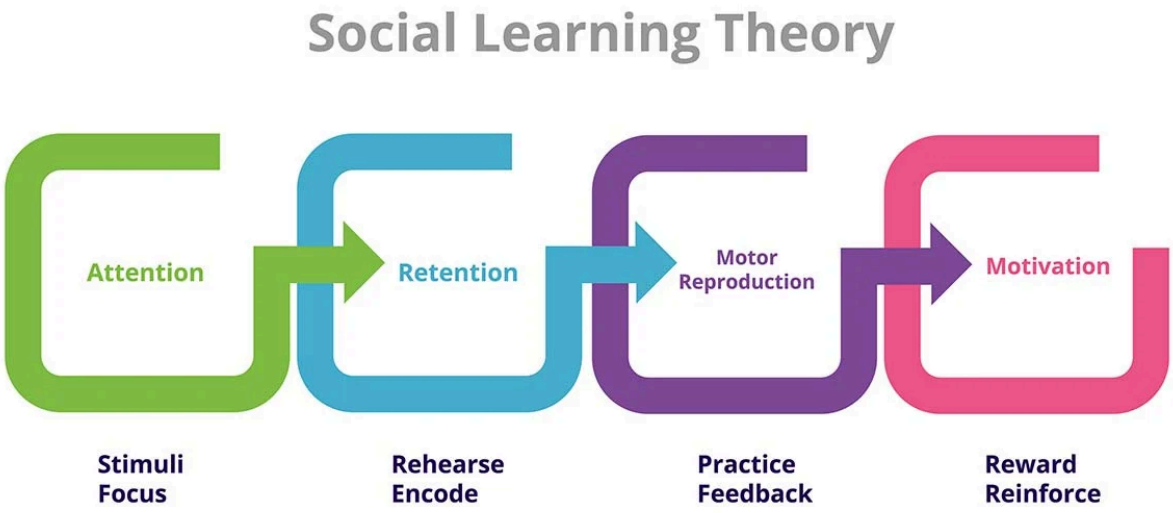
Bandura's Social Cognitive Theory (Vicarious Learning)

- The social learning theory of Bandura emphasizes the importance of observing and modeling the behaviors, attitudes, and emotional reactions of others. Bandura states: "Learning would be exceedingly laborious, not to mention hazardous, if people had to rely solely on the effects of their own actions to inform them what to do. Fortunately, most human behavior is learned observationally through modeling: from observing others one forms an idea of how new behaviors are performed, and on later occasions this coded information serves as a guide for action." Social learning theory explains human behavior in terms of continuous reciprocal interaction between cognitive, behavioral, and environmental influence.



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- **Conditions necessary for effective modeling: (ARMM)**
    a. **Attention** – one must pay attention to the behavior
    b. **Retention**- one must remember the behavior. How well the behavior is remembered.
    c. **Motor Reproduction**- one must replicate the behavior
    d. **Motivation** – one must be willing to show the behavior learned.

- Because it encompasses attention, memory and motivation, social learning theory spans both cognitive and behavioral frameworks. Bandura's theory improves upon the strictly behavioral interpretation of modeling. Bandura's work is related to the theories of Vygotsky which also emphasize the central role of social learning.
- Social learning theory has been applied extensively to the understanding of aggression and psychological disorders, particularly in the context of behavior modification.
- The most common examples of social learning situations are television commercials. Commercials suggest that drinking a certain beverage or using a particular hair shampoo will make us popular and win the admiration of attractive people. Depending upon the component processes involved we may model the behavior shown in the commercial and buy the product being advertised.

☐ Principles

- learn by observing
- learn without a change in behavior
- modeling is reinforced by the model, by a third person, by the behavior itself, and by vicarious reinforcement. (In psychology, reinforcement is a way to recognize and reward desirable behavior in hopes that it will continue. Now, let's put the two together: vicarious reinforcement is our tendency to repeat or duplicate behaviors for which others are being rewarded.)

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III. CONSTRUCTIVIST LEARNING THEORIES

A. JEROME BRUNER's CONSTRUCTIVIST THEORY
B. GESTALT THEORY
C. DAVID AUSUBEL's SUBSUMPTION THEORY
D. COOPERATIVE AND EXPERIENTIAL LEARNING

IV. PSYCHOSOCIAL, PSYCHOSEXUAL, AND HUMANIST THEORIES OF LEARNING

A. ERICKSON's PSYCHOSOCIAL THEORY

- While Erikson's theory of psychosocial development shared some similarities with Freud's, it is dramatically different in many ways. Rather than focusing on sexual interest as a driving force in development, Erikson believed that **social interaction** and experience played decisive roles.
- This theory proposed that development occurs in a series of eight stages, beginning with infancy and ending with old age.
- Each stage is named for a **particular psychosocial crisis or challenge** that every child must resolve to be able to move on to the next stage.
- **Stages of Psychosocial Theory of Development (PSYCHOSOCIAL CRISIS)**

STAGES OF PSYCHOSOCIAL THEORY OF DEVELOPMENT by Erik Erikson	
Stage 1. • **TRUST vs MISTRUST** • *(birth – 1 year old) infancy*	**Stage 5** • **IDENTITY vs CONFUSION** • *(12 – 18 years old) adolescence*
Stage 2. • **AUTONOMY vs SHAME/DOUBT** • *(1 – 3 years old) toddlerhood*	**Stage 6** • **INTIMACY vs ISOLATION** • *(19 – 29 years old) early adulthood*
Stage 3. • **INITIATIVE vs GUILT** • *(3 – 6 years old) early childhood*	**Stage 7** • **GENERATIVITY vs STAGNATION** • *(30 – 64 years old) middle adulthood*
Stage 4 • **INDUSTRY vs INFERIORITY** • *(7 – 11 years old) middle childhood*	**Stage 8** • **INTEGRITY vs DESPAIR** • *(65 – death) late adulthood*

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1. **TRUST vs MISTRUST**

    - ☐ If the parents/caregivers can give the baby a sense of familiarity, consistency, and continuity, then the baby will develop the feeling

that the world is a safe place to be, that people are reliable and loving. **TRUST** is developed.

- ☐ If parents/caregivers reject the infant or harm him/her, if other interests cause both parents to turn away from the infant's needs to satisfy their own instead, then the infant will develop **MISTRUST**. He/she will be apprehensive and suspicious around people.
- ☐ If this stage is managed well, the child will develop a virtue of **Hope**, a strong belief that, even when things are not going well, they will work out well in the end

2. **AUTONOMY vs SHAME/DOUBT**
   - ☐ If the parents permit the child to explore and manipulate his or her environment, the child will develop a sense of **AUTONOMY or independence**. The parents should not discourage or push the child. This way, the child will develop both self-control and self-esteem.
   - ☐ If parents give children unrestricted freedom and no sense of limits or if they try to help them do what they should learn to do for themselves, parents will give them the impression that they are not good for much and children will assume that things are too difficult to learn. This will lead children to **SHAME AND DOUBT**.
   - ☐ If this stage is managed well, children will develop the virtue of **Willpower or Determination**.
   - ☐ **"Can Do"** will be their motto.
   - ☐ Develop a sense of independence in many tasks
3. **INITIATIVE vs GUILT**
   - ☐ Initiative means a positive response to the world's challenges, taking on responsibilities, learning new skills, and feeling purposeful. The child has the ability to organize activities around some goals. Parents can encourage initiative by encouraging children to try out their ideas. Thus, a sense of **INITIATIVE** is developed.

- ☐ A parent has the responsibility, socially, to encourage the child to "grow up" --- "You're not a baby anymore!" But if this process is done too harshly and too abruptly, the child learns to feel **GUILTY** about his/her feelings.
- ☐ If this stage is managed well, it will lead to psychosocial strength of **Purpose.**

4. **INDUSTRY vs INFERIORITY**
   - ☐ Children must dedicate themselves to education and learning social skills society requires them. Children must learn the feeling of success, whether in school, in the playground, academic or social. Thus, children will develop a capacity for **INDUSTRY**.
   - ☐ If a child is allowed too little success, because of harsh teachers and rejecting peers, then he/she develops a sense of **INFERIORITY** or Incompetence. Additional sources of inferiority are racism, sexism, and other forms of discrimination.
   - ☐ If this stage is managed well, the virtue of **Competence** will be developed.
   - ☐ Develop self-confidence in abilities when competent or sense of inferiority when not
5. **IDENTITY vs ROLE CONFUSION**
   - ☐ Identity means knowing who you are and how you fit in to the rest of the society. It requires that you take all that you've learned about life and yourself and mold it into a unified self-image, one that your community finds meaningful. With this, a sense of **IDENTITY** is developed.
   - ☐ But, without these, a **ROLE CONFUSION** will likely occur. Meaning, there is an uncertainty about one's place in society and in the world. Adolescents who are confronted by role confusion, are suffering from the *Identity Crisis*.
   - ☐ If this is managed well, the virtue of **Fidelity** will be developed.
   - ☐ Fidelity means loyalty, ability to live by society's standards despite imperfections, incompleteness, and inconsistencies.
6. **INTIMACY vs ISOLATION**

- ☐ Intimacy is the ability to be close to others, as a lover, or friend, and as a member of society. Because a person has a clear sense of who he/she is, he/she no longer needs to fear "losing" himself/herself, as many adolescents do. **INTIMACY** is developed.
- ☐ The *"fear of commitment"* some people seem to exhibit as if there is something holding them back, may lead to **ISOLATION**.
- ☐ If this stage is managed well, the virtue of **Love** will exist.
- ☐ Love, in the context of this theory, means putting aside differences and antagonisms. It also includes not only love in a good marriage, but also love between friends and neighbors as well.
- ☐ Establish intimacy and relationships with others

7. **GENERATIVTY vs STAGNATION**
   - ☐ Generativity is an extension of love into the future. It is a concern for the next generation and future generations. People at this stage are less "selfish". They practice generativity by having and raising children. People would also do things like social activities that can contribute to the welfare of future generations – anything that satisfies that "need to be needed". **GENERATIVITY** is developed.
   - ☐ **STAGNATION**, on the other hand, is self-absorption, caring for no-one. The stagnant person stops being a productive member of society.
   - ☐ If this stage is managed well, a virtue of **Care** is developed.
   - ☐ A person has a capacity to serve through the rest of his/her life.
   - ☐ Contribute to society and be part of a family
8. **INTEGRITY vs DESPAIR**
   - ☐ **EGO INTEGRITY** means coming to terms with your life, and thereby coming to terms with the end of life. People in this stage, look back and accept the course of events and the choices they made in their life as they lived it.
   - ☐ If some older people become preoccupied with their failures, the bad decisions they made, and regret that they don't have the time and energy to reverse them. **DESPAIR** will happen

- ☐ If this stage is managed well, **Wisdom** is developed.
- ☐ Person is somewhat gifted to be truly wise by their simple and gentle approach to life and death, by their ***"generosity of spirit"***.
- ☐ Assess and make sense of life and meaning of contributions

B. FREUD's PSYCHOSEXUAL THEORY AND COMPONENTS OF PERSONALITY

1. Freud's Component of Personality

- Sigmund Freud is considered to be the father of psychiatry.
- Among his many accomplishments is, arguably, the most far-reaching personality schema in psychology: the Freudian theory of personality. It has been the focus of many additions, modifications, and various interpretations given to its core points. Despite many reincarnations, Freud's theory is criticized by many (e.g. for its perceived sexism) and it remains the focus of hot discussions on its relevance today.
- According to Freud, our personality develops from the interactions among what he proposed as the three fundamental structures of the human mind: the id, ego, and superego.

☐ The Id

- The id, the most primitive of the three structures, is concerned with instant gratification of basic physical needs and urges. It operates entirely unconsciously (outside of conscious thought).
- For example, if your id walked past a stranger eating ice cream, it would most likely take the ice cream for itself. It doesn't know, or care, that it is rude to take something belonging to someone else; it would care only that you wanted the ice cream.

☐ The Superego

- The superego is concerned with social rules and morals—similar to what many people call their "conscience" or their "moral compass." It develops as a child learns what their culture considers right and wrong.
- If your superego walked past the same stranger, it would not take their ice cream because it would know that that would be rude. However, if both your id and your superego were involved, and your id was strong enough to override your

superego's concern, you would still take the ice cream, but afterward you would most likely feel guilt and shame over your actions.

☐ **The Ego**

- In contrast to the instinctual id and the moral superego, the ego is the rational, pragmatic part of our personality. It is less primitive than the id and is partly conscious and partly unconscious. It's what Freud considered to be the "self," and its job is to balance the demands of the id and superego in the practical context of reality.
- So, if you walked past the stranger with ice cream one more time, your ego would mediate the conflict between your id ("I want that ice cream right now") and superego ("It's wrong to take someone else's ice cream") and decide to go buy your own ice cream.
- While this may mean you have to wait 10 more minutes, which would frustrate your id, your ego decides to make that sacrifice as part of the compromise–satisfying your desire for ice cream while also avoiding an unpleasant social situation and potential feelings of shame.

a. Freud believed that the id, ego, and superego are in constant conflict and that adult personality and behavior are rooted in the results of these internal struggles throughout childhood.
b. He believed that a person who has a strong ego has a healthy personality and that ***imbalances in this system*** can lead to **neurosis** (what we now think of as **anxiety** and **depression**) and unhealthy behaviors…

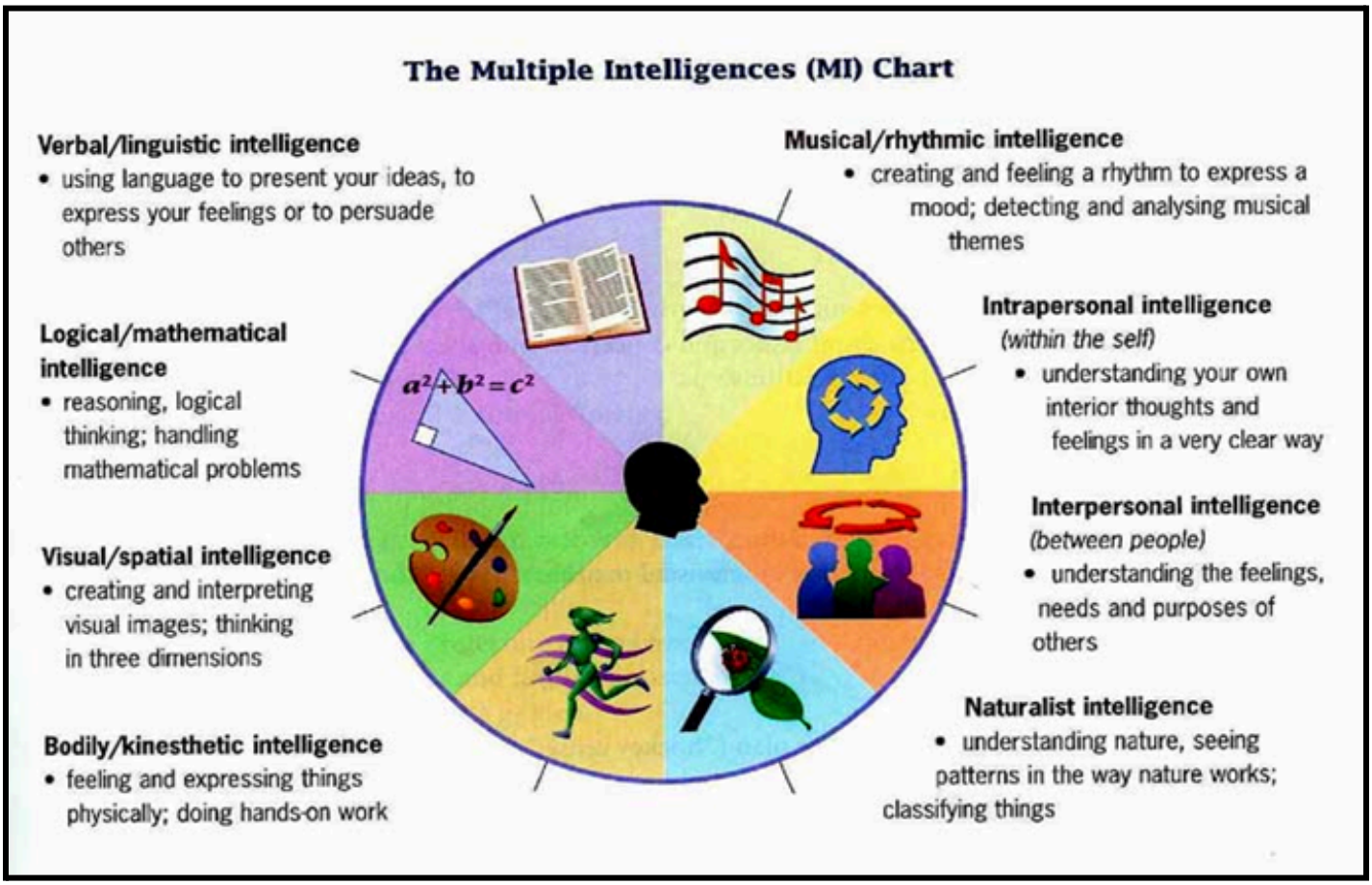
2. Freud's Psychosexual Of or relating to both psychological and sexual aspects.

C. KOHLBERG's MORAL DEVELOPMENT THEORY

V. STUDENT DIVERSITY

A. LEARNING STYLES

B. Multiple Intelligences – Howard Gardner



1. **VISUAL/SPATIAL** - children who learn best visually and organize things spatially. They like to see what you are talking about in order to understand. They enjoy charts, graphs, maps, tables, illustrations, art, puzzles, costumes - anything eye catching.
2. **VERBAL/LINGUISTIC** - children who demonstrate strength in the language arts: speaking, writing, reading, listening. These students have always been successful in traditional classrooms because their intelligence lends itself to traditional teaching.

3. **MATHEMATICAL/LOGICAL** - children who display an aptitude for numbers, reasoning and problem solving. This is the other half of the children who typically do well in traditional classrooms where teaching is logically sequenced, and students are asked to conform.
4. **BODILY/KINESTHETIC** - children who experience learning best through activity: games, movement, hands-on tasks, building. These children were often labeled "overly active" in traditional classrooms where they were told to sit and be still!
5. **MUSICAL/RHYTHMIC** - children who learn well through songs, patterns, rhythms, instruments and musical expression. It is easy to overlook children with this intelligence in traditional education.
6. **INTRAPERSONAL** - children who are especially in touch with their own feelings, values and ideas. They may tend to be more reserved, but they are actually quite intuitive about what they learn and how it relates to them.
7. **INTERPERSONAL** - children who are noticeably people oriented and outgoing and do their learning cooperatively in groups or with a partner. These children may have typically been identified as "talkative" or " too concerned about being social" in a traditional setting.
8. **NATURALIST** - children who love the outdoors, animals, field trips. More than this, though, these students love to pick up on subtle differences in meanings. The traditional classroom has not been accommodating to these children.
9. **EXISTENTIALIST** - children who learn in the context of where humankind stands in the "big picture" of existence. They ask, "Why are we here?" and "What is our role in the world?" This intelligence is seen in the discipline of philosophy.

C. Daniel Goleman's Emotional Intelligence

- **Emotional intelligence** is every bit as important to learning as intellectual prowess or IQ. As a result, tens of thousands of schools throughout the world currently incorporate "social and emotional learning" in their curricula. In some schools, courses geared toward developing emotional intelligence are mandatory.
- ***"high IQ does not necessarily guarantee success in the classroom or the boardroom."***

    - **Emotional Intelligence** – our intelligence to handle our emotions

- **Meta-mood** – the cornerstone to emotional intelligence; being smart of what we feel

☐ **self-awareness/self-control**

- knowing what one is feeling at any given time and understanding the impact those moods have on others

☐ **self-motivation**

- utilizing emotional factors to achieve goals, enjoy the learning process and persevere in the face of obstacles

☐ **empathy and graciousness**

- sensing the emotions of others

☐ **self-regulation**

- controlling or redirecting one's emotions; anticipating consequences before acting on impulse

☐ **adeptness in relationship**

- managing relationships, inspiring others and inducing desired responses from them

☐ IMPLICATIONS FOR EDUCATORS

- According to Goleman, bullying, disciplinary problems, violence and drug abuse are reduced in schools with a high EQ. With a solid basis in emotional intelligence, academic performance — as well as behavior — improves.
- EQ levels will vary widely, depending on each child's home environment. Thus, teachers must be able to recognize those children whose emotional literacy needs a boost.
- Teachers should be ready to talk about feelings in the classroom.
- The message is that no emotion is "wrong," but certain ways of expressing those emotions or acting on them are indeed inappropriate.

★ ★★RESEARCH IN SOCIAL STUDIES

★ ★★FACILITATING HUMAN LEARNING

★ ★★Research 1

★ ★★ THE TEACHER

★ The Teaching Profession