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► **To cite this version:**

Mehedi Hasan Anik. Three Major Learning Theories and their Applications in Educational Settings. 2022. hal-04450407

HAL Id: hal-04450407

<https://hal.science/hal-04450407>

Preprint submitted on 14 Feb 2024

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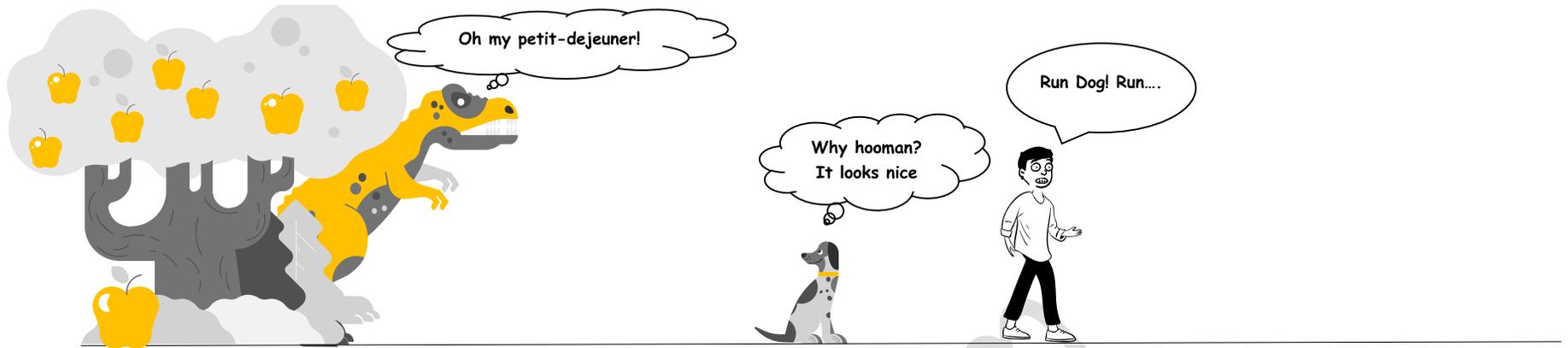
Three Major Learning Theories and their Applications in Educational Settings

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I have developed simple yet useful materials concerning how three major learning theories- *behaviorism*, *cognitivism*, and *constructivism* can impact our education, and identified the major key points relevant to educational application. I organized the key points under the themes namely- major beliefs, aims of education, characteristics of the curriculum, teaching-learning strategies, teacher-student relationship, strengths, and weaknesses. Hopefully, the comic characters and jokes will make the theories interesting to the readers. At the end of this reading of the theories, readers/teachers will be able to -

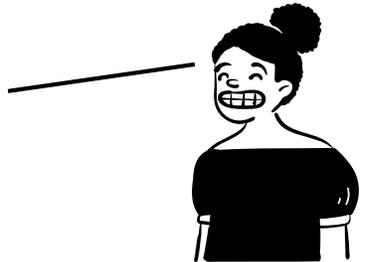
- Explain the key ideas of the three learning theories.
- Explain how these theories are linked to education.
- Identify appropriate T/L strategies for specific learning goals.



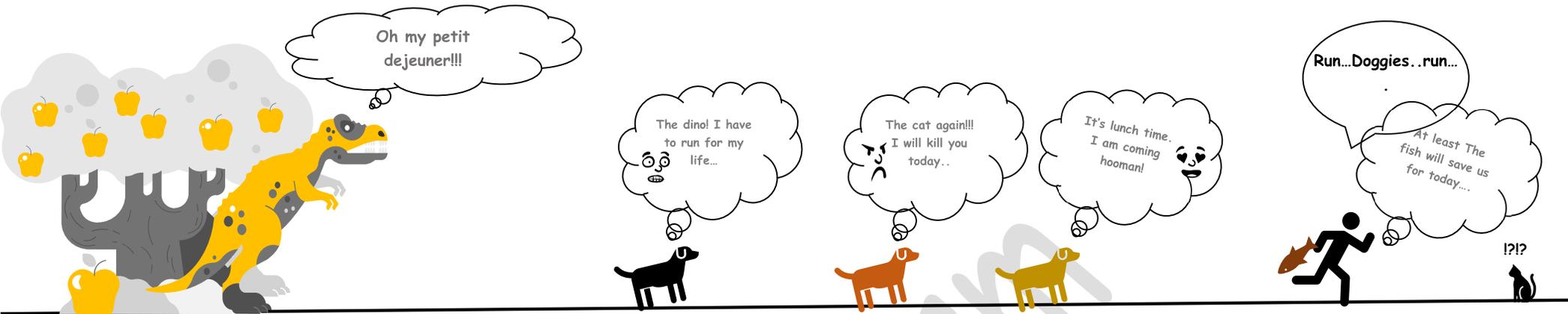
If you don't want to lose your dog, bring your dog to a behaviorist.....

Because, after the treatment, your dog will be able to-

- Run while seeing a big dinosaur!! (Learning new behaviour)



Behaviorism in Education (Summary)						
Formula: Stimulus → Response						
Major Beliefs	Aim of Education	Characteristics of Curriculum	T/L Strategies	Teacher-Student Relationship	Strengths	Weaknesses
<ul style="list-style-type: none"> ✓ Stimulus-Response: Quantitatively observing response (individual's behavior) to the stimuli (external environment). ✓ Determining specific stimulus responsible for specific learning and then implementing the idea. 	<p>The aim of the education is to make students look like "our whatever ideals we set"</p>	<ul style="list-style-type: none"> ✓ Predetermined specific aims, goals and objectives-oriented curriculum (this is one of the behavioral approaches of curriculum). ✗ Learner-centered curriculum. 	<p>(Mom: if you want a bicycle, you should get highest in math. Teacher: If you want highest mark, you should give up practicing cycling. Me: then what will I even do with the cycle if I eventually give up cycling?)</p> <ul style="list-style-type: none"> ✓ Using punishment-reward to direct learners towards certain goals. ✓ Time bounded examination-based. ✓ Promoting unnecessary competitions, memorization 	<p>The student's task is to remember the skill and respond, while the instructor offers feedback (indicate whether the response is correct and incorrect) and provide for practice.</p> <ul style="list-style-type: none"> ✓ Teacher=authority. ✓ Learners=respondents. 	<ul style="list-style-type: none"> ✓ Helps to form measurable and observable learning outcomes among the students. ✓ Modifying behavior for autistic children and learners with special needs 	<ul style="list-style-type: none"> ✓ Denies learners central position in the education system. ✓ Ignores learners' individual potentials and possibilities and tries to shape all the learners in the same ideals. ✓ You can't depend on your dog to determine what your child need.



This time, all the dogs run..but.. did they run for the similar purpose?

The response was same. But their thought processes were different. With behaviorism theories, you can't answer "why" or "how" they decided to run.

Cognitivism explores the "why" or "how" answer behind the behavior! And it's time to remove the animals from the scene.. It is "human time"!

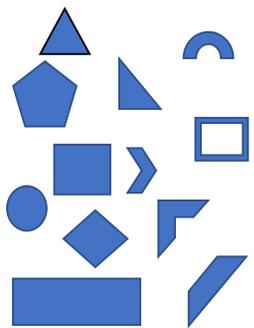


Cognitivism in Education (Summary)

Thought Process

Formula: Stimulus → Thought Process → Response

Major Beliefs	Aim of Education	Characteristics of Curriculum	T/L Strategies	Teacher-Student Relationship	Strengths	Weaknesses
<ul style="list-style-type: none"> ✓ Cognitivism tries to explore the thought process behind the behavior. ✓ Behavior is the result of information processing. A person's behavior is determined by (1) the information available in their environment; (2) the ways they have learned to manipulate (process) information; and (3) the capacities for information processing inherent in the types of brain people have. ✓ Human minds and computers have some attractive similarities: both have inputs, outputs, memory stores and a limited capacity for how much information they can process at any one time. ✓ Views the learner in relation to the total environment and consider the way the learner applies information. 	<p>Develop learners "able" to better act/respond considering the external environment they encounter in their real life.</p>	<ul style="list-style-type: none"> ✓ Predetermined specific aims, goals and objectives-oriented curriculum (same as behaviorism). ✓ Learner-centered curriculum. (Unlike behaviorism). 	<ul style="list-style-type: none"> ✓ Popular strategies: Problem-solving, thinking, information processing and concept formation ✓ Apply a variety of learning strategies that allow learners to connect new information. ✓ Vicarious Learning: Learning from hearing and observation rather than direct, hands-on, instructions. 	<ul style="list-style-type: none"> ✓ Teacher is more flexible and the facilitator of learning. ✓ Students are active participants. 	<ul style="list-style-type: none"> ✓ Unlike behaviorism, cognitivism tries to experiment on human minds rather than on animals. ✓ Tries to explore "how" individual learns rather than what causes learning like behaviorism. 	<ul style="list-style-type: none"> ✓ Over-reliance on the computer metaphor has led cognitive psychologists to neglect the influence of emotions, which computers lack, on thinking and behavior. ✓ Ignore the huge variations between people in how they think and act. ✓ Often fails to explain the influence of genes on behavior.



Instruction: Construct something which can fly.....



Group: Green



Group: Red



Group: Blue

Can you guess..why different groups came up with different ideas where the instruction was same for all?

✓ Because every individual have their own ideas based on their experiences (prior knowledge) and when they put their ideas together in the current context, new idea/s is constructed. That's our constructivism!

Constructivism in Education (Summary)

Cooperative and/or Collaborative Group Activities

Formula for Classroom Implementation: Prior Ideas of Students+ context/Situation → New/modified ideas/knowledge.

Major Beliefs	Aim of Education	Characteristics of Curriculum	T/L Strategies	Teacher-Student Relationship	Strengths	Weaknesses
<ul style="list-style-type: none"> ✓ Knowledge cannot be simply transmitted from one learner to another. ✓ Learning is more meaningful to students when they are able to interact with a problem or a concept. ✓ Student learn best by constructing new ideas based on comparison with current and previous ideas. ✓ Student automatically brings prior ideas/experiences forward. Students share their experience with their group & learn from each other. ✓ Constructivism in Classroom- Context, student learning goals, meaningful activity and application, active involvement. 	<p>" Creating critical thinkers who have knowledge, understanding, interests, skills and mindsets to revise beliefs and existing knowledge to create new knowledge or modify old ones and to form values and attitudes within themselves." (My own understanding of what education's aim should be, based on constructivism)</p>	<ul style="list-style-type: none"> ✓ Learner-centered curriculum. ✓ Curriculum must not exist apart from the social context. ✓ Curriculum focuses on the needs, experiences, interests, and abilities of students. 	<ul style="list-style-type: none"> ✓ Interactive teaching strategies to create meaningful contexts that help students construct knowledge based on their own experience. ✓ Emphasizes on group activity and group problem solving so that the students learn through cooperative learning strategies. ✓ Assessment: Constructivists tend to eliminate standardized tests and grading. Rather they believe assessment as part of learning process. ✓ Hands on materials are used instead of textbooks. 	<ul style="list-style-type: none"> ✓ The learner is in control of his or her own learning. ✓ Students are encouraged to think and explain through reasoning rather than memorization and recitation of the facts. ✓ Teachers select teaching learning strategies convenient to students' responses and aid them to analyze, interpret and predict information. ✓ Teachers construct situations that involve both direct experience with the world of the learner and opportunities to understand these experiences. ✓ Teacher involves students, encourages application, sees relevance. ✓ Students are the thinkers and teachers are the mediators/facilitators. 	<ul style="list-style-type: none"> ✓ Focuses on the whole student, rather than on the content or the teacher. ✓ More group work allows instructors to see many aspects of students' personalities: communication, argumentation, problem-solving skills. ✓ The learner is in control of his or her own learning (Learner-centered approach) 	<ul style="list-style-type: none"> ✓ Asking students to make sense of scientific concepts is a flawed approach, as many scientific discoveries defied sense or cannot be experienced. ✓ If students do not have a solid foundation of basic concepts of science, constructivist approach may create misconceptions. With that in mind, teachers need to set boundary and guidelines