Summary of 5 Principles of Instruction

The Five Principles of Instruction is a problem-based theory where learners use four different phases. The principles of activation, demonstration, application, and integration are necessary to the success of a learner.

Learning is facilitated when learners:

- apply it to real-world problems (Task/Problem Centered)
- can connect current learning with previous learning (Activation)
- see a practical demonstration of learning to solve the problem (Demonstration "Show Me")
- can use new information in a meaningful way (Application "Let Me")
- can actively interact with what they have learned through discussion (Integration)

Students must be shown what is going to be learned rather than being told and should be encouraged and motivated to practice the lessons they have learned. They also must be given a chance to "do" through a variety of assessments and activities.

Definition of learning theory and instructional design theory

Learning theories are one of the foundations of education that explain and describe how learning occurs and factors that influence learning, such as climate and activity within classrooms. They provide variety in pedagogies that help in enhancing student development and understanding. The learning theories are behaviorism, cognitivism, and social learning theory. Learning theorists not only disagree on the definition of learning, but also on the role of memory, types of learning, and how transfer of knowledge occurs.

Instructional design theories prescribe strategies that have generally been proven reliable and effective in facilitating learning. Basic assumptions, principles of each theory, and how instruction should be structured to facilitate learning are considered. Instructional design theories are derived from learning research and theories. They identify methods of instruction and conditions that optimize learning outcomes intend to control variables in the learning environment to achieve certain results.

Definition of learning from all three theories

Behaviorism encourages students to "show desirable behavior" to master a certain knowledge or skill. It is based on the idea that knowledge is independent and on the exterior of the learner. In a behaviorist's mind, the learner is a blank slate, and the behavior is shaped by the reinforcement. Positive and negative reinforcement increase whereas the punishment decreases the probability of the repetition of behavior.

Cognitivism encourages students to "think about their thinking" to help them unlock a concept or subject they struggle with. It emphasizes making knowledge meaningful and helping learners organize and relate new information to existing knowledge in memory. Cognitive processing can often be affected by schema, which is a "packet of information" or cognitive framework that helps organize and interpret information.

Social learning encourages students to "learning how to learn" as they ideally become "expert learners" by questioning themselves and their strategies. With a well-planned classroom environment, students are given ever-broadening tools to keep learning with the idea that learning happens in a social context and is impacted by perception, environment, and behavior. Internal thoughts and external forces can both play an important role in cognitive processes.

To sum it up, these three theories specify what processes underlie learning. In behaviorism, people learn by the processes of *shaping* and *chaining*. In cognitivism, people learn by the processes of *assimilation* and *accommodation*. In social learning, people learn by *observing* and *imitating* the behaviors of certain "models".

Why the three theories reject each other

Behaviorism vs. Cognitivism

Behaviorists use feedback through reinforcement to modify behavior in the desired direction, while cognitivists make use of feedback through knowledge of results to guide and support accurate mental connections. Cognitivists claimed that behaviorism failed to explain cognition. Cognitivists objected to behaviorists because they felt that behaviorists thought learning was simply a reaction to a stimulus and ignored the idea that thinking plays an important role. There is still a behavior change evident, but this is in response to thinking and processing information. The implication of learning based on cognitivism is more relevant for older children and/or adult learners because it is about making connections to previous experiences of the learners. The prior knowledge plays a key role in learning new concept. Cognitivism is usually considered more appropriate for explaining complex forms of learning such as reasoning, problem-solving, and information-processing than are those of a more behavioral perspective.

Social Learning vs. Behaviorism and Cognitivism

While social learning theory agrees with behaviorism about outside influences on behavior, it goes a step further and suggests that internal psychological processes are also an influence on behavior. Social learning theorists would argue that teachers should not just disseminate knowledge to students like empty "vessel" receives it as what behaviorists would describe. While cognitivism is about building on prior knowledge, social learning theory is about building new ideas and concepts based on one's own discoveries. Cognitivists think of the mind as a reference tool to the real world, whereas social learning theorists believe that the mind filters input from the world to produce its own unique reality. Social learning theory does not share with cognitivism and behaviorism the belief that knowledge can be "mapped" onto a learner. They do not deny the existence of the real world but contend that what we know of the world stems from our own interpretations of our experiences.

However, the biggest criticism of social learning theory is its lack of structure. Some students need highly structured and organized learning environments to thrive as what cognitivism and behaviorism suggest, but social learning theory focuses on a more laid-back method to help students engage in their own learning. Grading is often removed and places more value on student progress, which can lead to students falling behind and not meeting standardized grading requirements. Students may emulate fellow students, celebrities, and mentors as a means to fit in or garner attention. While positive behaviors are imitated, problematic behaviors are modeled as well.

Argument of your favorite theory and why

Each theory is based on good logic and for me, explains things very well when looking at it from their own perspectives. I believe we need all three theories to support instruction based on the topic we are teaching and the learning need of our students. But if I were compelled to choose between the theories, I think I resonate with social learning theory the most.

Social learning theory encourages me to constantly assess how the activity is helping me gain understanding. It is best applied in classroom because it emphasizes on learner-centered and active learning. As a learner, I believe that I should actively understand the learning materials rather than passively absorbing and memorizing them. In language learning, it's essential to be engaged and motivated in the learning process for learning to be more effective. Social learning practices have been a great way to keep me in my comfort zone. Having native speakers and successful language learners as "models" aid in supplementing the language learning activities and share some knowledge about the most used phrases. This theory gives me the opportunity to share my knowledge and experiences regarding my language learning that may help other learners facing a similar situation. Despite its great emphasis on social interaction, it also involves individual practices and activities as I can train by myself and put my language skills into practice. I think having a sense of independence in my own learning gives me the ownership and responsibility to progress. It's always best to have a separate time when I can do the activities alone to test my own skills and abilities as well as to discuss with my peers the points or parts where I lack and where I thrive during class discussions or video sessions.

One of the primary strengths of this theory that I like is its flexibility in explaining the differences in a person's behavior or learning. For example, the person's behavior may change when there is a change in a person's environment. Learners do not transfer knowledge from the external world into their memories, rather they build personal interpretations of the world based on individual experiences and interactions. Thus, the internal representation of knowledge is constantly open to change and there is not an objective reality that learners strive to know.

Description of why other two theories do not work for me

Behaviorism helped me to learn classroom management techniques that prepared me for difficult students, especially in an ESL classroom. It is great for establishing rules as there will usually be a student in class whose behavior is hard to control, and it can be extra work to get them to pay attention and stop distracting others, especially in a large class. It has been the key in understanding how to motivate and help younger students as I trained them how they should react and respond to certain stimuli. This needs to be done in a repetitive way through verbal reinforcement to take part in regularly reminding them what behavior I am looking for.

While behaviorism is a great option for me, there are some difficulties of this theory as it's best for certain learning outcomes, like foreign or second languages, but aren't as effective in analytical and comprehensive learning. It doesn't encompass enough of human learning and behavior, and that it's not fully developed. Behaviorists would argue that science should consider only observable indicators, which disregards student identity and individuality, whilst other claim it studies actions of the body rather than that of the brain and is therefore inept at assessing real learning.

Cognitivism helped me to organize the information in such a way that my students can assimilate it. It is great in providing meaningful learning through linking new information to existing or familiar information. I teach concepts by first presenting phenomena and problems that relate to them and demonstrate the logical flow of individual topics through flow charts, sketches, and diagrams. They must be shown in a logical sequence and go from simple to complex to stimulate students' thinking of the topic. I learned how to make lecture classes much more interactive by incorporating interactive questions into PowerPoint and use computer graphics, and visual animation in addition to oral and written explanations. In this theory, information comes in as input, the mind processes the information for the time being, and the information is stored away to be retrieved later.

Although cognitivism describes the mind functions like a computer processor that transform learners into active participants in their learning, memories are not directly observable as majority of studies involving the brain is using inference. Cognitivist approach ignores other reasons for behavior other than cognitive. For instance, a behavior could be due to cognitive and social reasons. The explanation to knowledge is that it is an internal process governed by rules. But 'who has the knowledge to interpret this rules' is one of the main criticisms that cognitivism received.

Conclusion

Each of these theories provided me some insight into how learners might efficiently learn, especially in language learning. One way current teachers and aspiring instructional designers, like me, can be prepared to help learners who struggle is to consider different theories and tactics that could be helpful. I realized that by focusing on learning theories can give me additional resources, strategies, and knowledge of when and why to employ each to help reach my students and increase their understanding. I think it's important to get knowledge about these three different learning theories to learn more about teaching and learning strategies and to be ready to take on students and the classroom. When you understand more about how students learn, you're much more likely to provide instructional solutions as an instructional designer and an effective educator. To decide between to choose one theory when designing instruction or to draw ideas from different theories may depend on many different factors. There is no single or perfect learning theory that applies to every student. Behaviorism will be applied to novice learners where they study fact-based on information. Cognitivism will be applied to established learners where they make connections using fact-based information. Constructivism will be applied to sophisticated learners where they use fact-based information and knowledge of connections to create greater understanding of a content area.

References

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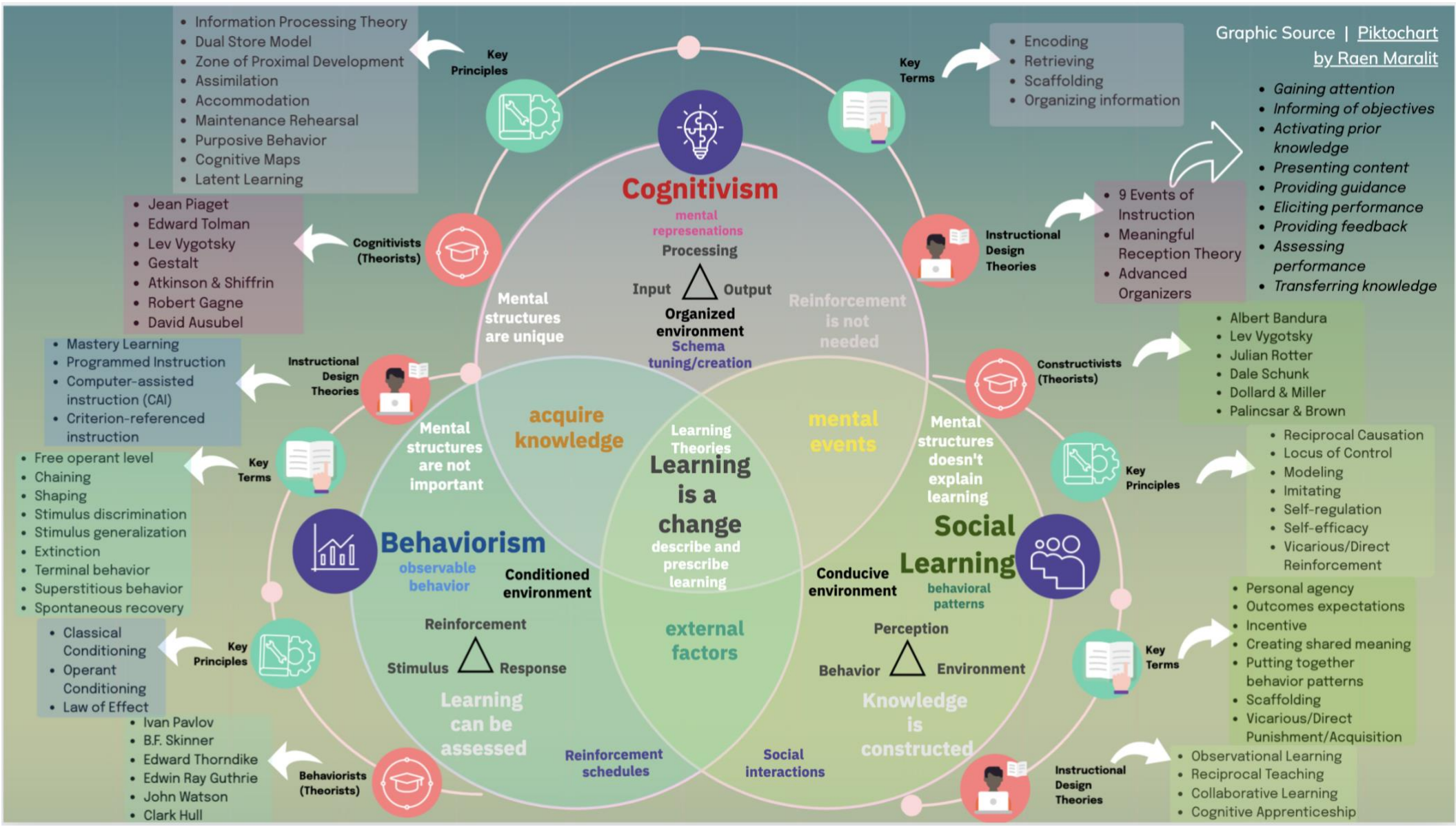
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Cognitivism
mental representations
Processing
Input
Output
Organized environment
Schema tuning/creation
Mental structures are unique
Reinforcement is not needed
Key Principles
Information Processing Theory
Dual Store Model
Zone of Proximal Development
Assimilation
Accommodation
Maintenance Rehearsal
Purposive Behavior
Cognitive Maps
Latent Learning
Key Terms
Encoding
Retrieving
Scaffolding
Organizing information
Cognitivists (Theorists)
Jean Piaget
Edward Tolman
Lev Vygotsky
Gestalt
Atkinson & Shiffrin
Robert Gagne
David Ausubel
Instructional Design Theories
9 Events of Instruction
Meaningful Reception Theory
Advanced Organizers
Gaining attention
Informing of objectives
Activating prior knowledge
Presenting content
Providing guidance
Eliciting performance
Providing feedback
Assessing performance
Transferring knowledge
Instructional Design Theories
Mastery Learning
Programmed Instruction
Computer-assisted instruction (CAI)
Criterion-referenced instruction
Mental structures are not important
acquire knowledge
Learning Theories
Learning is a change
describe and prescribe learning
mental events
Mental structures doesn't explain learning
Constructivists (Theorists)
Albert Bandura
Lev Vygotsky
Julian Rotter
Dale Schunk
Dollard & Miller
Palincsar & Brown
Key Terms
Free operant level
Chaining
Shaping
Stimulus discrimination
Stimulus generalization
Extinction
Terminal behavior
Superstitious behavior
Spontaneous recovery
Behaviorism
observable behavior
Conditioned environment
Reinforcement
Stimulus
Response
Learning can be assessed
external factors
Reinforcement schedules
Social interactions
Conducive environment
Social Learning
behavioral patterns
Perception
Behavior
Environment
Knowledge is constructed
Key Principles
Reciprocal Causation
Locus of Control
Modeling
Imitating
Self-regulation
Self-efficacy
Vicarious/Direct Reinforcement
Key Principles
Classical Conditioning
Operant Conditioning
Law of Effect
Key Terms
Personal agency
Outcomes expectations
Incentive
Creating shared meaning
Putting together behavior patterns
Scaffolding
Vicarious/Direct Punishment/Acquisition
Behaviorists (Theorists)
Ivan Pavlov
B.F. Skinner
Edward Thorndike
Edwin Ray Guthrie
John Watson
Clark Hull
Instructional Design Theories
Observational Learning
Reciprocal Teaching
Collaborative Learning
Cognitive Apprenticeship