

Principles and Theories of Learning: Features, Principles and Applications

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ABSTRACT

The knowledge and understanding of the principles and theories of learning for educators is imperative, thus, the discussion of this paper is based on Principles and Theories of Learning: Features, Principles and Applications. It enumerated some basic principles of learning like learner readiness, effect, Exercise Primacy and Recency etc. it also discussed most recent principles of learning including: Meaningful Learning, social learning, Goal oriented learning etc. and their implications to the teacher and students learning. The paper further explained five learning theories and their application in instructional process and then listed the importance of the knowledge and understanding of learning theories to teachers, instructors and instructional facilitators. It then recommended among others that the teaching of principles of learning and learning theories should be a major course in the training of teachers.

Introduction

Principles of learning, sometimes called laws of learning, are research-based guidelines that outline most favorable and desirable conditions to facilitate learning, and ensuring that students and teachers maximize the learning experience. Learning is a process that results in some modification in the learner's ways of thinking, feeling and doing. The characteristics of learning include the idea of learning as a unitary process: it is both an individual and a social experience that is self-active, purposive and can be

creative and transferable. JCU Open eBooks (2024), stated that learning principles provide different frameworks that teachers can use to adapt to students' diverse learning styles and academic needs. Barrick, & Thoron, (2016), enumerated that readiness, exercise, effect, primacy, recency, intensity and freedom are major principles of learning. These are discussed below:

Readiness: implies a degree of willingness and eagerness of an individual to learn something new.

Exercise: states that repetition is the key, the things the teacher most often repeated during a lesson are best remembered. This encourages active learning and student's engagement in their learning, meaning that learners should be actively involved in the learning process, rather than passively receiving information. Examples are students' involvement in activities like: discussions, group work, problem-solving, and hands-on experiments.

Effect: implies that learning is strengthened when accompanied by a pleasant or satisfying feeling.

Primacy: the things you learn first often create a strong impression which can be very difficult to change.

Recency: states that things most recently learned are best remembered.

Intensity: implies that a learner will learn more from the real thing than from a substitute.

Freedom: states that things freely learned are learned best.

Most recent principles of learning and their implications to learning include the following:

- I. **Meaningful Learning:** a relevant and meaningful learning is one connected to learners' prior knowledge, their experiences, and has real-world applications.

Implication

This means that teachers should relate concepts to learners' personal interests and experiences, (previous knowledge), use real-world examples, and encourage questioning.

- II. **Social Learning:** This involves interaction, Learning is often enhanced through social interaction and collaboration with others.

Implication

Learners should be involved in group projects, peer teaching, and discussions can facilitate learning.

- III. **Goal-Oriented Learning:** It is important to state clear learning goals to the learners to help them understand what they are expected to achieve.

Implication

This means defining learning objectives, setting achievable targets, and providing feedback on learner's progress.

- IV. **Feedback and Assessment:** prompt and constructive feedback helps learners monitor their progress and make adjustments.

Implication

Provide feedback on assignments, encourage self-reflection, and use formative assessments.

- V. **Motivation and Emotional Climate:** a positive and supportive learning environment is crucial for motivation and engagement.

Implication

Foster a sense of belonging, encourage risk-taking, and celebrate successes.

- VI. **Individual differences:** it is important to recognize learner's diverse needs and to acknowledge that learners have different learning styles, paces, and strengths.

Implication

Offer varied instructional methods, provide differentiated instruction, and allow for flexible learning. (The Open University 2024).

What are Learning Theories?

Learning theories help educators understand the process of learning, understanding and the application of these theories is essential for effective instruction and successful curriculum development. According to Saunders (2020), learning theories help students absorb the information being taught, and can also help teachers manage students' behavior, and so empowers teachers to create an atmosphere that is more inclusive and conducive to learning. Willingham, et al. (2015), defined Learning theories as frameworks that explain how individuals acquire, process, retain, and recall knowledge and skills, encompassing cognitive, emotional, and environmental influences.

Ormrod, (2012), explained that learning theories describes how students in their learning, receive, process, and retain knowledge during learning involving, Cognitive, emotional, and environmental influences, as well as their prior experiences. All these play a part in how understanding, or a worldview, is acquired or changed and knowledge and skills retained. National University San Diego, blog (2025) describes learning theories as ideas dealing with the ways students learn and retain information, and that they provide insight into the way learners make connections between new information and prior knowledge, store memories, and transfer knowledge to new contexts. Learning theories are conceptual frameworks that describe how people absorb, process and retain information.

Learning theories also offer insight into how learners process feedback from teachers or peers in order to bring a change in their behaviors. Theories in education did not begin until the early 20th century, but curiosity about how humans learn dates back to the ancient Greek philosophers Socrates, Plato and Aristotle. They explored whether knowledge and truth could be found within oneself. By the 19th century, psychologists began to answer this question with scientific studies. The goal was to understand objectively how people learn and then develop teaching approaches accordingly. (Western Governors University (2020).

Five (5) Types of learning Theories

Educators and teachers typically familiarize themselves with five primary theories. Each of the theories prioritizes different concepts. These include:

Behaviorism

The behaviorism theory was originally founded by John B. Watson but it is widely associated with Ivan Pavlov and B.F. Skinner. Behaviorism have the idea that children learn by observing the behavior of others, which could be adults, people in

authority, friends and peers their own age. Behaviorists, believe that the learner's mind is a "blank slate" which is ready to absorb knowledge through repetition and reinforcement as the key role in communicating with the students. (Fatima · 2023). For Ismail (2023), an example of reinforcement is that, the teacher will use either negative or positive reinforcement, which respectively means subtracting ("negative") meaning giving wrong or bad reinforcement or adding ("positive") meaning giving right and encouraging reinforcement, in order to reinforce the desired behavior or discourage an undesired behavior. An example of positive reinforcement might be rewarding or praising a behavior like volunteering during group discussions.

When used in the classroom, the teacher needs to provide positive reinforcement all the time during instruction, like rewards and recognition, to students who show outstanding improvement, effort, or performance. Again repeatedly, they should use body language and nonverbal or physical cues to reinforce and manage behavior. E.g. for one winking the eye, tapping a student's shoulder gently, folding your arms and moving to a specific area of your classroom when your students are becoming disruptive to the learning environment. (Feder, 2021).

Cognitivism

This theory was introduced during the middle of the 20th century, it shifted away from Behaviorism and placed stronger emphasis on the internal thoughts and functions of the mind of the child or learner, this is opposed to merely observing others' behavior and responding to stimuli as propounded by the behaviorists. In contrast to Behaviorism, Cognitivism holds that learning mainly takes place while the student is working to break down and organize new information in their mind. (Western Governors University (2020). It then implies that teachers should ensure that learners remain engaged, learn to group their students for activities or class discussion and. encourage students to identify links between concepts or events.

Constructivism

According to Constructivist Learning Theory (CLT), students learn new information by building upon or by constructing knowledge on their own from their past knowledge or what they have already learned. This represents a more active approach to learning, and opposes the Behaviorism approach, where students arguably take a more passive role in learning. There are two constructivist theories, cognitive constructivism associated with Jean Piaget, and social constructivism or sociocultural linked to Lev Vygotsky. Lev Vygotsky's sociocultural theory emphasizes the crucial role of social interaction and cultural context in shaping cognitive development, arguing that learning is a social process where children learn through interactions with the support of more knowledgeable others. Vygotsky's sociocultural theory asserts that a child's cognitive development and learning ability can be guided and mediated by their social Interactions. His theory states that learning is a crucially social process as opposed to an independent journey of discovery.

Under Vygotsky's sociocultural theory is his Scaffolding theory which is a method of teaching that helps learners understand learning content by working with their teachers or someone who has a better understanding of the content being learned. His scaffolding theory is rooted in his concept of the Zone of Proximal Development (ZPD). McLeod (2024), says this suggests that learners benefit most from learning that provides temporary support known as (scaffolding) to help them achieve tasks they could not do on their own, providing support to learners to help them reach higher levels of understanding. This support is gradually faded or reduced as the learners become more competent in the learning of that content.

Humanism

The humanism learning theory was founded by Carl Rogers, James F. T. Bugental, and Abraham Maslow. Humanist Learning Theory (HLT) is a learner-centric approach to education. Its emphasis is on the learner's untapped potential rather than the methods of learning or the lessons and topics being taught. HLT is built on the premise that humans are fundamentally good and will act appropriately if their basic needs are met, it prioritizes meeting the unique emotional and academic needs of each learner so that they are empowered to take greater control over their own learning. It is important to identify ways to provide learners with more control over the direction and pace of their learning by providing ample support, encouragement, and motivation to them to help them build confidence and connect with the learning materials. (Feder, 2021).

Connectivism

Connectivism, as we mentioned above, has been called a learning theory for the 21st century, this is because connectivism Learning Theory makes effective use of technology, which is an essential tool for learning particularly among 21st century learners and even for the future generations. Connectivism also places a strong emphasis on the ability to find and sift through information in order to conduct reliable research. A connectivist's approach to teaching might be to have your students write a blog or launch a podcast together, involving them in activities that merge technology with group and community interaction. Bringing and using more educational media technology into the classroom and in every learning process is very important, Teaching students how and where to find quality information and conduct solid research is also a critical skill that will help them with tasks like writing and studying throughout their whole academic careers. (Michael Feder 2024).

The Importance of Understanding Learning Theory

Learning theories are important, and holds great value for teachers and students. They provide actionable insight into how learning occurs, they also give insight which, ideally, should be used to drive and inform each teacher's approach to teaching and interacting with their students. Here are a few of ways that teachers and their students can benefit when they bring learning theories into their classrooms or the curriculum:

- Theories of learning provides clarity and direction for both teachers and students by offering a set of principles or guidelines to build teaching approach around.

- The more theories of learning one is familiar with, the more strategies you will have to connect with a diverse range of students who come from different backgrounds, learn at different paces, and face different academic challenges or obstacles.
- Learning theories facilitate clear communication between teachers and students (including nonverbal communication like body language, as we saw in the section on Behaviorism), along with parents, families, and school administrators.
- As learning outcomes improve, students also develop self confidence and self-esteem.

Applications of Learning Theories by Teachers and Instructional Designers

Learning theories have significant implications for educators and instructional designers, impacting how we approach teaching, design learning materials, and assess student learning, ultimately influencing student outcomes and engagement.

Behaviorism: Focuses on observable behaviors and external stimuli, suggesting that learning occurs through reinforcement and punishment.

Application: Learning is based on a system of routines that “drill” information into a student’s memory bank and elicit positive feedback from teachers and the educational institution itself. (Students who do an excellent job receive positive reinforcement and are signaled out for recognition.). When you use behaviorist principles, focus on delivering prompt feedback to encourage student learning. Also implement reward systems that reinforces your learners’ good behavior. Most importantly, establish consistency by starting your classes with routine activities, like problems on the board. Therefore, teachers should use positive reinforcement and clear consequences to shape desired behaviors and use task analysis; by breaking down complex tasks into smaller, manageable steps, this is crucial for effective instruction.

Cognitivism:

Cognitivism focuses on the internal processes surrounding information and memory. It involves schema, the basic unit of knowledge, and schemata that build up over time. The cognitivists emphasize was on learning that involves internal mental processes like memory, attention, and problem-solving. The implications being that learning should be designed to promote meaningful connections between new information and prior knowledge, using teaching methods or strategies like questioning, elaboration, and mnemonics.

Application: it implies that teachers who engage in cognitive learning try to find out about students’ experiences with their lesson and also emphasize connections between previous learning and ideas and new ones. They should incorporate student experiences, perspectives and knowledge to foster engagement with the material and help students feel respected.

Constructivism:

Constructivism promotes active, internal learning processes that use new information to build upon a foundation of previously acquired knowledge, believing that learners actively construct their own knowledge through experience and interaction.

Applications: teachers should ensure that learning activities are student-centered, encouraging exploration, collaboration, and reflection. The learner builds upon their previous experience and understanding to “construct” a new understanding. Therefore, students should take an active approach to learning rather than being “filled up” with knowledge, so as to construct meaning by interacting with the world around them, as with experiments or studies. Some of the best ways teachers can use constructivism in the classroom include:

- Promoting student autonomy by encouraging students to be active in their learning.
- Hands-on experimentation with interactive materials can also empower them to learn better, especially in science classes, because it can promote engagement and connectiveness in student learning.
- Open-ended questions are another tool for constructivist learning, since they can help foster classroom conversation and dialogue, which encourages students to think critically and form questions and solutions in real time.

Humanism

Humanist learning theory emphasizes the unique needs and capabilities of each student and underscores the efficacy of a personalized education looking at the unique capabilities of each learner rather than the method or materials.

Application: With the understanding that people are inherently good, humanism focuses on creating an environment conducive to self-actualization. In doing so, learners’ needs are met and learners themselves are then free to determine their own goals while the teacher assists them in meeting those learning goals. In the classroom. In a humanistic approach, the teacher provides learners with choices about what to study in order to promote autonomy and intrinsic motivation. There should also be a positive teacher-student relationships, making it important for teachers to form connections with each student using discussions, group work and self-evaluation to encourage critical thinking and good connection.

Connectivism

The connectivism learning theories posits that knowledge and learning reside in diverse sources and experiences that includes understanding how to navigate and source further information via digital means. Informed by the digital age, connectivism departs from constructivism by identifying and remediating gaps in knowledge.

Application: Strongly influenced by technology, connectivism focuses on:

1. A learner’s ability to source and update accurate information frequently.
2. Knowing how and where to find the best information is as important as the information itself.
3. In the classroom, students are to learn good digital literacy habits to help navigate online resources to answer their questions.
4. They should also use digital tools to collaborate.

Theories influence learning in a variety of ways. Learning theory for example can affect teachers' approach to instruction and classroom management. Finding the right approach (even if combining two or more learning theories) can make the difference between an effective and inspiring classroom experience and an ineffective one.

Conclusion

Educational learning principles and theories have come a long way since the days of Socrates and even the pioneers of behaviorism and cognitivism. While these theories will no doubt continue to evolve, teachers and students alike can reap the benefits of this evolution as we continue to develop our understanding of how humans most effectively learn. So, whether you're an aspiring or experienced teacher, a student or a student's parent or guardian, knowing more about principle of learning and each theory can make you more effective in fostering learning.

Recommendation

- The teaching of the principles of learning and learning Theories should of a major course in the training of teachers.
- The knowledge of some principles and theories of learning should be made a criteria for trainee teachers to embark on their teaching practice exercise.

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