Migration Letters

Volume: 21, No: S10 (2024), pp. 707-728

ISSN: 1741-8984 (Print) ISSN: 1741-8992 (Online)

www.migrationletters.com

Impact Of Learning Theories And Learning By Doing In Education

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Abstract

How to teach and when to teach is the process of teaching effectively; it is the field of psychology. The said research paper investigated different learning theories and their impacts on learning. The method of the study was reviewing the theories. Learning by donning was found to be more significant than other learning theories. Teachers should know about all learning theories deeply and adopt elective teaching methods according to the needs and psyche of students.

Keywords: *Behaviorism, Cognitivism, Constructivism, Learning by doing, Child Learning.*

Introduction

Developing successful teaching methods begins with gaining an understanding of how pupils learn. Students' learning theories do not have a simple answer, but they give essential insight into how complicated learning is. Learning theory frameworks[1] may be divided into three categories:

a) **Behaviorism:** Reinforcement shapes student behavior.
b) **Cognitivism:** based on what we already know
c) **Constructivism:** Experiential, self-directed learning is how students build their knowledge.

Several theories have risen after Plato, each with a unique perspective on today's pupils' learning. How students learn best is explained by a collection of learning theories.

What is Behaviorism?

Repeated acts, verbal reinforcement, and incentives to participate are all elements of behaviorism. Rule-setting and behavior control are two of the essential functions of this tool.

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A fundamental tenet of behaviorism holds that knowledge exists independently of the learner and may be acquired via experience. Learning is viewed as a process in which the learner is a blank slate that has to be filled in. Learning arises due to the formation of new connections resulting from this encounter. Learning occurs when a stimulus alters a person's behavior (Watson & Kimble, 2017).

What is Cognitivism?

Cognitivism is an alternative to behaviorism, focusing on pupils analyzing information rather than just reacting to stimuli. There is still a noticeable shift in behavior, but this results from a shift in one's thinking and information processing. According to cognitive load theory, learning happens when pupils reorganize knowledge by seeking new explanations or modifying existing ones (Bordwell, 1989).

What is Constructivism?

Constructivism is founded on learning new things by building on what we already know and have done. Learning, therefore, is a one-of-a-kind experience for each individual. Students adjust their knowing models by overcoming misunderstandings or reflecting on earlier beliefs. For constructivist techniques to succeed, students must have a preexisting knowledge foundation. Bruner's spiral curriculum is a terrific illustration of constructivism in action (Steffe & Gale, 1995).

What is Pragmatism?

In the late 1800s, pragmatism began as a philosophical movement in the United States. Charles Sanders Peirce, William James, John Dewey (all members of The Metaphysical Club), and George Herbert Mead were its most prominent advocates. A pragmatic or rational approach to problems is meant by "pragmatism." Practicing pragmatism is solving difficulties logically and practically (James, 1975).

What is reconstructionism?

Educational aims – Reconstructionist education empowers students to be agents of positive social change. There is a widespread belief that schools should not be considered apart from society and that educators should be more actively involved in social causes (Stanley, 1992).

Importance of Learning Theories

Using learning theories as a guide while designing a course is essential because:

Theories give a framework to define, analyze, and predict how people learn to understand how individuals learn. Therefore, an educational theory can help us better judge education's design, development, and delivery.

There are a variety of approaches to learning (behaviorism, cognitivism, constructivism, connectivism, etc.). Much effort and study has gone into these thinkers' theories regarding how people learn. Designers of learning experiences can use this information to reexamine how people learn.

Understanding how information is used, how knowledge is formed, and the learning process may be explained using learning theories. Instructional designers may use these frameworks to tailor lessons to the specific requirements of their students and students themselves.

"Effective teaching" necessitates that "the optimal theoretical perspectives for the forms of learning we deal with and their consequences for teaching" be determined, according to Schunk (2020). According to Harasim (2017), learning theories should not exist just as high-level abstractions but as a part of actual educational practice as a foundation. To "reflect on their practice, improve upon, rethink and polish [their] work, and contribute to the advancement of

the subject," educators can benefit from an awareness of learning theories (Harasim, 2017). Additionally, theories connect educational research to practice by offering "means for organizing and translating research findings into suggestions for educational practice" (Schunk, 2020). "A framework for measuring the truth and utility of beliefs" (Lefrançois, 2019).
Harasim (2017) states that each learning theory has pedagogies and technology. "The choice or preference of one specific theoretical approach will have substantial ramifications for how technology is employed to enhance instruction," asserts Bates (2014). According to Schunk (2020), teachers should ask themselves, "How does learning occur?" and use the answer to guide their lesson plans, teaching methods, and student activities, among other things. Ultimately, instructors plan, produce, and deliver compelling learning experiences using learning theories and their linked educational practices and technology (consciously or not).

Statement of the Problem

Nowadays, learning theories are very much focused on teaching; in education, they are essential in how children learn because every child has a different IQ level, and his ability to learn and understand is also different. This research study aimed to explore all these theories and codex the best learning theory and model.

Objectives of the Study

The primary objectives of the study were;

1. To explore all learning theories of education, their pioneer, and proponents.
2. To investigate different learning using theories that support learning by experience.
3. To diagnose the pioneers and theories who work and support theory learning by doing so in education.
4. To explore differently, accept the theory of learning by doing.

To compare different theories and find the most suitable theory for our classroom.

Research Questions

The purpose of this research was to find answers to the following questions.

1. Discuss all learning theories and see how all learning theories differ from each other?
2. Why is learning by doing theory more popular? Do children learn more from this theory?
3. Do teachers need to know what theories?

Research Methodology

This research was done on an explanatory basis; findings and results were extracted from the literature review and discussion. All the more popular learning theories are included in the study, and their literature review is discussed. Based on this, the results were extracted. Moreover, which theory is more effective now, and children are learning more from it was seen. Moreover, to what extent it will be helpful to do so.

Literature Review

Is it possible to integrate educational learning theories in our classrooms? Is there any way to tell what is current and what would work best for our students? (Pritchard, 2017). Behaviorism, Cognitivism, and Constructivism are the three primary learning theories. From Vygotsky to Piaget and Bloom to Maslow and Bruner, there is a breakdown and explanation of the world's 15 most prominent learning theories. To answer the issue "How can an individual learn something new if the topic itself is unfamiliar to them," Plato first pondered in ancient Greece. Several theories have risen after Plato, each with a unique perspective on today's pupils' learning. How students learn best is explained by a collection of learning theories. Even though

there are so many educational theories, they all come into three categories: behaviorism, Cognitivism, and Constructivism.

Behaviorism

A fundamental tenet of behaviorism holds that knowledge exists independently of the learner and may be acquired via experience. A behaviorist views learning as an opportunity for the learner to acquire new knowledge (Watson & Kimble, 2017). New connections are created, and learning happens due to this contact. Learning occurs when a stimulus alters a person's behavior. Non-educational examples include Pavlov's research. It is well known that Pavlov's famous "Salivating Dog Experiment" demonstrated that the dog's salivary glands become activated when he rings a bell every time the dog is fed.

Cognitivism

Cognitivism is an alternative to behaviorism, focusing on pupils analyzing information rather than just reacting to stimuli.

There is still a noticeable shift in behavior, but this results from a shift in thinking and information processing (Bordwell, 1989). In the early 1900s, Wolfgang Kohler created cognitive theories in Germany inspired by Gestalt psychology. An accurate translation of Gestalt is "the organization of things as a whole which is seen as greater than its component elements." Several evidence-based educational ideas are founded on cognitivism. These include the dual coding theory, cognitive load theory, retrieval practice, and schema theory.

Cognitivism theorists believe learning happens when the learner reorganizes knowledge by seeking new explanations or modifying existing ones.

This is considered a shift in knowledge rather than merely a shift in behavior, and it is recorded in long-term memory. To a large extent, Jean Piaget is responsible for developing cognitive learning theories.

Examples of how teachers A teacher's ability to incorporate cognitivism into their classroom is limited only by their imagination.

Constructivism

Constructivism is founded on the concept that we learn new things by building on what we already know and what we have already done. Learning, therefore, is a one-of-a-kind experience for each individual. Resolving misunderstandings and reflecting on earlier beliefs are two ways students modify their models of understanding (Steffe & Gale, 1995).

For constructivist techniques to succeed, students must have a preexisting knowledge foundation. The spiral curriculum by Bruner is a good illustration of constructivism in action. As pupils build their knowledge base, the instructor should examine and address any misunderstandings that may have emerged, as the effects cannot always be predicted. This hypothesis may not be appropriate if you are looking for consistent results. Problem-based learning, research and creative projects, and group collaborations are examples of constructivism in the classroom.

Piaget's Theory of Cognitive Development.

Psychology's Piaget is a fascinating figure. First, he only studies children; second, he talks about development (not learning) rather than linear growth; and third, it is a stage theory, not a linear progression theory. I do not know what to make of it. There are a few fundamental concepts to grasp and a few steps to comprehend. Some of the fundamentals:

Schemas: They are the foundation upon which all knowledge is built.

Adaptation processes: These facilitate the changeover between stages. Those were his words for equilibrium, assimilation, and adaptation.

Stages of Cognitive Development: Sensorimotor, Preoperational, Concrete Operational, Formal Operational.

There you have it. Throughout childhood, children form schemas of knowledge of the world. These concepts about real-world objects allow the youngster to respond appropriately.

Accommodation occurs when the child's Schema is inadequate to explain what is going on and has to be adjusted. Assimilation occurs when the Schema deals with a new object or circumstance. Equilibrium is restored, and life carries on after the change. Adaptation, Equilibrium, Assimilation, Assimilation, and so on... Learning is a perpetual cycle of this sort.

A person's chronological age determines these four stages of cognitive development:

Piaget's Stages of Cognitive Development

Basic Schemas and Object Permanence (the concept that something exists even when you cannot see it) are taught to children throughout the Sensorimotor Stage, which lasts from birth to two years. Between the ages of 7 and 11, children begin working out problems in their heads rather than physically in the actual world, known as the Concrete Operational Stage. They also learn to be resourceful (something stays the same quantity even if it looks different). Abstract cognition and logical reasoning are developed during this stage, which lasts from the age of 11 until maturity and includes hypothesis testing. Piaget's theory stages entail the rediscovery and reconstruction of information throughout the process. Knowing a child's stage helps educators determine what to provide them depending on what they can and cannot do. People like John Sweller and John Flavell's work on metacognition have been inspired by Piaget's cognitivism, which has resulted in some beautiful research. From 2 to 7 years old, the child's capacity to think symbolically and use schema increases (the idea that one thing can stand for another; words, for example, or objects). Until this time, children are still unable to comprehend the opinions of others due to their lack of Theory of Mind (Empathy). Equilibrium occurs when a youngster has created a functional Schema that can explain what they see in the environment.

Vygotsky's Theory of Learning

Vygotsky rejects Piaget's theory that growth precedes learning (Harland, 2003). In his opinion, cultural factors rather than developmental stages underpin cognitive development since he believes social learning is an essential component of cognitive growth. As a result, he contends that learning differs between cultures rather than being a universal process guided by the kinds of structures and processes proposed by Piaget.

Zone of Proximal Development

Children and those learning from co-construct knowledge in the Zone of Proximal Development. As a result, the social context in which children are raised profoundly affects their thinking and beliefs. They also have different views on the meaning of words. Language and mind become interwoven at the age of three for Vygotsky, whereas Piaget sees language as a means to express one's thoughts. What is the source of that? Their cognitive and language abilities and tools are contained in their social context. Vygotsky discusses Elementary Mental Functions, which he refers to as Attention, Sensation, Perception, and Memory. When children connect with their sociocultural environment, they use these fundamental skills to enhance themselves, utilizing whatever cultural resources they have. Note-taking and mnemonics are examples of Western memory methods, while other cultures may choose storytelling to recall

information. In this approach, diversity in learning styles among cultures may be neatly summarized.
The essential concepts in this learning theory are scaffolding, the ZPD, and the more knowledgeable other (MKO). So, here is how it all goes:

More Knowledgeable Other (MKO)
The MKO does not have to be someone who knows more than the youngster, although it is possible. Cooperative learning in ZPD is achieved by working with the kid and MKO, who can undertake this work independently. Scaffolding is the process of increasing a child's ZPD as they learn to accomplish more things on their own.

Vygotsky Scaffolding
The MKO is responsible for figuring out where that scaffold should be placed so the kid can work independently and collaborate with others. This stems from Vygotsky's belief that language is central to all of this since it serves as the primary means of communication between a kid's MKO and the child and a potent tool for solidifying knowledge of the world.
For example, a child's "inner voice" becomes Private Speech, separate from Social Speech, which happens between individuals. Social Speech gradually transitions into private speech, and presto! Because the youngsters are now participating with themselves, it is a learning experience! The primary line is that a child's ZPD will have more accessible tools and internalize more Social Speech as Private Speech if their social and cultural context is richer. As a result, it does not take a genius to see that the learning environment and interactions are critical.
Rosenshine's Principles of Instruction also include scaffolding in the learning process.

Bloom's Domains of Learning
Bloom, an educational psychologist from the United States, stated in 1956 that three types of learning are cognitive, emotional, and psychomotor. Throughout the 1950s until the 1970s, David Krathwohl and Anne Harrow collaborated with Bloom on the three domains (Hoque, 2016).

The Cognitive Domain (Bloom's Taxonomy)
First introduced in 1956, this domain focuses on the premise that objectives connected to cognition may be separated into subdivisions and ranked in order of cognitive complexity. Bloom's taxonomy is based on these ranking subdivisions. The following are the original subdivisions (knowledge is at the bottom, and assessment is the most mentally taxing):
i. Knowledge, ii. Understanding, iii. Application, iv. Analysis, v. Synthesis, vi. Evaluation
Nonetheless, in (2000-01), Bloom's original partner, David Krathwohl, and a colleague, Lorin Anderson (Anderson was a previous student of Bloom's), substantially reworked the subdivisions. Subdivisions were renamed verbs instead of nouns, making employing them in lesson plans and curricula simpler. Also, the top two subdivisions were rearranged in the opposite order. The new taxonomic classification is:

The Affective Domain
Many different feelings and emotions fall under the affective domain (also called the "feeling" domain). In 1964, Krathwohl and Bloom came up with the idea. The emotional domain is rarely employed when planning math and science because emotions and feelings are unnecessary for those topics. However, instructors of the arts and languages must always include the fiery realm. As you move up the list, you will see subcategories ranging from "reception" to "characterization." The list of all rated positions is: a) Receiving, Being aware of stimulation from the outside world (feel, sense, experience). b) Responding to stimulation from the outside

world (satisfaction, enjoyment, contribution). c) Valuing: The student's perception of their value (showing preference or respect). d) Organization, Values conceptualization, and organization (examine, clarify, integrate.) e) Characterization. The capacity to put their beliefs into action. It is time to conclude.

The Psychomotor Domain

The psychomotor domain includes reflex actions, interpretative movements, and discrete physical functions. Dissecting and sketching a heart are two examples of psychomotor learning objectives that are commonly misunderstood. Physical (kinesthetic) activity is a means of conveying information about cognition, not psychomotor learning. In dance or gymnastics, we learn how to utilize our body and senses to interact with the world through psychomotor learning. In the psychomotor realm, Anita Harrow distinguished between reflexive and more complicated forms of learning that need exact control.

i. **Reflex movements.** We are born with these motions or develop them during puberty. Our bodies perform these functions without thinking about them, for example, breathing, opening and shutting our eyes, or shivering when it is cold.
ii. **Fundamental movements.** For example, running, leaping, and walking are basic motions frequently incorporated into more complicated actions, such as participating in a sport.
iii. **Perceptual abilities.** It includes talents that allow us to perceive our surroundings and plan our actions to engage with them. Their range encompasses everything from visual to aural.
iv. **Physical abilities.** This includes strength, endurance, skill, and flexibility, among others.
v. **Skilled movements.** Movements learned for sport (such as high diving or trampolining) and dancing or playing a musical instrument are included in this section's goals (placing fingers on guitar strings to produce the correct note). "Muscle memory" is a phrase we use to describe these motions.
vi. **Non-discursive communication.** Non-verbal communication refers to activities such as facial expressions, posture, and gestures, all examples of non-verbal communication.

Gagné's Conditions of Learning

The Conditions of Learning, written by Robert Mills Gagné, an American educational psychologist, was published in 1965. The analysis of learning objectives and the varied teaching approaches required for different objectives are discussed in this chapter (Clark, 2018). He referred to them as his five conditions of learning, all of which fall under the cognitive, emotional, and psychomotor domains.

Gagné's 5 Conditions of Learning. (1) Verbal information (Cognitive domain)**, (2)** Intellectual skills (Cognitive domain)**, (3)** Cognitive strategies (Cognitive domain)**, (4)** Motor skills (Psycho-Motor domain)**, (5)** Attitudes (Affective Domain)

Gagne's 9 Levels of Learning

According to Gagne's five criteria for successful learning, students' advancement through nine stages of learning should be the focus of each class, and each lesson should contain activities that carry students through each level. Using the nine stages of learning, the five learning conditions were supposed to be activated, and therefore, learning would take place. A) Gain attention. B) Inform students of the objective. C) Stimulate recall of prior learning. D) Present the content. E) Provide learning guidance. F) Elicit performance (practice). G) Provide feedback. H) Assess performance. I) Enhance retention and transfer to the job. J) Benefits of

Gagne's Theory. Using Gagne's nine stages of learning and Bloom's taxonomy, instructors have a framework to work with when developing lessons and subject matter. Gagne offers a framework on which to structure your lesson, while Bloom allows you to establish goals tailored to your student's needs.

Jerome Bruner

Bruner's Spiral Curriculum (1960).

i. According to Jerome Bruner, an expert in cognitive learning theory, any subject may be taught in "some intellectually honest form" to any kid at any level of development.
ii. In other words, he was saying that even the most difficult subjects can be taught to young children, provided they are organized and presented in a manner that is appropriate for their age range. Essentially, the three pillars of the spiral education model are: (Takaya, 2008).
iii. It is common for students to return to the same subject matter repeatedly. This helps students retain their knowledge when they return to the topic repeatedly.
iv. Each time a student revisits a subject, it becomes more difficult. This permits the youngster to advance through the material as their cognitive capacity grows.
v. When students revisit a subject, they can connect new concepts with those they already know. Using familiar phrases and concepts helps students better understand the more challenging aspects of the subject.

Bruner's 3 Modes of Representation (1966)

The spiral curriculum inspired Bruner's three ways of representation. These different representational models describe how information is stored in the brain. In contrast to Piaget's age-related stages, Bruner's modes are roughly sequential.

i. **Enactive** Infants and toddlers. Represents knowledge through doing physical acts.
ii. **Iconic** Ages 6 to 12. Visual pictures are used to represent and store knowledge.
iii. **Symbolic:** At least seven years of age. The art of expressing one's feelings and thoughts via symbols and words.

Maslow's Hierarchy of Needs

According to Maslow's theory, pupils pass through a series of sequential needs, from physiological to self-actualization, as they learn and grow in the classroom. As students go through the stages, they become more at ease in their learning environment and more willing to try new things.

It would help to remember that every group would contain learners at different skill levels. Ensuring these kids feel comfortable and secure is significant since they will struggle to progress.

While the philosophy of Maslow emphasizes creating connections between students and teachers, it is less concerned with the organization of lessons or content for your pupils to believe that their needs have been satisfied even if you have the most excellent tools and the most meticulously planned classes in the world, you need to display energy, passion, and empathy (Lester, 2013).

Howard Gardner's Multiple Intelligences

Howard Gardner is a professor of cognition and education at Harvard University's graduate school and an American developmental psychologist. Erik Ericson (see below) and Jerome Bruner were among their professors.

In his 1983 book "Frames of Mind," he outlined his "many bits of intelligence" idea.

According to Gardner, Intelligence was defined as solving problems or creating products that may be used in various cultural contexts.
He came up with a list of things he would look for in a candidate for "intelligent." On his list of requirements, candidates had to meet a variety of requirements and also be able to address real-world situations. Gardner originally proposed seven different types of Intelligence (Smith, 2002).

Gardner's 7 Bits of Intelligence
Intelligence when it comes to languages. She expresses herself using words in both written and spoken form.

i. **Mathematical Intelligence.** Mathematical and scientific reasoning skills are required.
ii. **Musical Intelligence**. Appreciating, composing, and playing musical patterns, including tones, pitches, and rhythms, is integral to being a musician.
iii. **Bodily-kinesthetic Intelligence.** Problem-solving includes the use of mental talents to organize physical motions.
iv. **Spatial Intelligence.** The ability to notice and use patterns in a large or small area.
v. **Interpersonal Intelligence.** The ability to discern the thoughts, feelings, and motives of another.
vi. **Intrapersonal Intelligence.** Self-awareness is recognizing your thoughts, emotions, and motives.

The importance of multiple Intelligence in the classroom.
As pupils learn new abilities and solve issues, Gardner argued that Intelligence rarely works independently but complements one another. He also said intelligence is amoral, which means it may be employed for good or bad. Gardner's theory has received much attention in education, particularly in the United States.
With criticism that it is difficult to teach things in the context of one intellect, Gardner stated that the seven bits of Intelligence provide students with seven options to teach a subject, allowing all students to develop.
According to Gardner, all seven bits of intelligence are necessary for a successful existence, not just the two academic ones.

Naturalist Intelligence
Naturalist intelligence has been added since Gardner's first book was published. This concerns a person's capacity to take in, identify, and organize information from their surroundings.

Erikson's 8 Stages of Psychological Development.
A stage theorist, Erik Erikson, refined Freud's "Psychosexual Theory" into a psychosocial theory encompassing eight phases, incorporating psychological and social components (Orenstein & Lewis, 2020).
According to Erikson, we go through eight growth phases over our lifetime. Each level presents us with a challenge we need to address to feel competent and mature as an adult.

Erikson's 8 Stages.

i. **Trust Vs. Mistrust (Age 0 – 1.5).** Infants must learn to trust people in this crucial era. If a youngster is mistreated, they may grow up distrusting others.
ii. **Autonomy Vs. Shame (Age 1.5 – 3).** Around this point, youngsters begin to express their preferences for their environment, such as the clothing they wear or which toy they prefer. As a result, youngsters may develop poor self-esteem and guilt if they cannot explore their preferences.

iii. **Initiative Vs. Guilt (Age 3 – 5).** This stage teaches youngsters how to work with others to accomplish their goals. Children will gain a strong feeling of purpose and self-assurance if their parents or instructors enable them to explore this and support their choices.

iv. **Industry Vs. Inferiority (Age 5 – 12).** Children begin to compare themselves to their peers at this period. Those who achieve this will feel accomplished in academics, social and family life, and sports participation.

v. **Identity Vs. Role Confusion (Age 12 – 18).** "Who am I?" and "What do I want to do with my life?" are the questions students at this stage ask themselves. During this stage, they will try out a variety of roles to see which one they feel most comfortable in. At this point, success is defined as having a solid sense of self and the ability to stand up for one's convictions despite differing viewpoints.

vi. **Intimacy Vs. Isolation (Age 18 – 40).** Students' attention switches to developing and sustaining close relationships with others when entering early adulthood.

vii. **Generativity Vs. Stagnation (Age 40 – 65).** People in their 30s and 40s are more concerned with positively impacting the world, either at the job or as a parent. Self-improvement for the sake of others is a central theme throughout this book.

viii. **Ego Integrity Vs. Despair (Age 65+).** People in their forties and fifties reflect on their experiences and assess whether they were successful. Failure-obsessed people are frequently preoccupied with what they "should have" and "could" have done.

Educational Implications of Erikson's Theory of Psychosocial Development

Erikson's work provides educators with a foundation to build their lessons. Understanding our kids' thoughts and feelings helps us plan better.

Having a diverse group of students in our class is a challenge. Therefore, we must diversify our teaching methods to ensure that all students benefit from the experience.

Kolb's Experiential Theory

1984 American education researcher David Kolb introduced his four-stage experiential learning paradigm. On the assumption that learning is the acquisition of abstract concepts that can be applied to various situations, it is the program's foundation. "Knowledge Is Created Through the Transformation of Experimentation as Learning." Each cycle step serves as a precursor and a catalyst for the next. Only after all four phases of the learning process have been accomplished can a student be considered to have mastery of the subject matter. If students skip the reflective observation stage, they will likely repeat the same mistakes. Learning is not a one-step process.

The Peter Principle

Author Laurence Peter and his colleague Raymond Hull created the book "The Peter Principle," in which they presented the concept of the "Peter Principle." There is considerable overlap between this and the classroom, even if it is not strictly a learning theory. Peter Principal works with four degrees of proficiency. They might provide a foundation for a teacher thinking about a long-term teaching method for children's growth (Lazear, 2004).

i. Incompetence Ignored. You cannot perform a task because you are unaware that you lack the necessary knowledge.

ii. Incompetence is a conscious choice. Even though you are still stumped on how to complete the assignment, at least you now know you are stuck. You know there is room for improvement in this area of your expertise.

iii. Self-awareness and Mastery. You can now do the activity, but it needs much attention.

iv. Competence that is not even aware of it. You will have no trouble finishing the job. Repeated practice is the key to achieving this.

Laird's Sensory Theory

Learners are more likely to retain information if their senses are aroused, according to Dugan Laird in 1985. A study indicated that 75 percent of an adult's knowledge was gained through observation. The remaining 12 percent was learned through the senses of touch, smell, and taste (Adelmann & Zajonc, 1989). This study shows that pupils' learning will be enhanced if visual suggestions are provided. Incorporate many senses if you want to make your teachings even more effective. When designing your classes, keep this in mind.

Skinner's Behaviorist Theory

Operant Conditioning

For example, Thorndike (1898) claimed that activities followed by positive responses would be repeated, and those followed by negative responses would not be repeated. Operant conditioning is based on Thorndike's "Law of Effect" (Clark, 2018). Skinner added "reinforcement" to the explanations of the Law of Effect. Reinforced behaviors tend to be repeated (strengthened), whereas unreinforced behaviors fade away. This is Skinner's new explanation of the process (weakened).

Positive Reinforcement

Positive reinforcement as a classroom management method is vital to teaching kids how to behave and conduct themselves. For example, students who vocally respond to questions in class should be rewarded with positive feedback (e.g., a pat on the back). Initially, this should be done for all replies, whether or not they are right. This will foster a habit of responding to queries. The instructor should gradually decrease the frequency of the reinforcement and, as in our previous example, only offer it for the proper replies as the conduct in issue becomes more commonplace.

The teacher will eventually limit the frequency of positive reinforcement to only those of the most excellent quality replies. Students will develop a thirst for excellence as a result of this.

Rogers' Humanist Theory

Facilitative learning is a humanistic learning method pioneered in the 1980s by American psychologist Carl Rogers (DeCarvalho, 1991).

Humanism

Humanism was born to counteract the ideas of cognitivism and behaviorism. Rogers and Maslow's work was based on humanism, as shown in the examples above. The following are essential humanist viewpoints: To reach self-actualization, people have an innate need to learn new things. The learning process, not the result, is the essential aspect of education. Student-led learning and exploration are the best ways for pupils to learn. As a teacher, you have the opportunity to serve as a positive role model for pupils who are embarking on their journeys.

Facilitative Learning

Rogers sees the teacher as a facilitator of learning rather than merely a conduit for information. Relationships between teachers and students are the key to a successful classroom experience. For Rogers, there are three essential traits that a teacher must have to be successful in facilitating learning:

Realness. Using one's personality as a teaching tool is a must. A teacher's ability to be open and honest with their students creates an atmosphere of mutual trust. Instead of being a monotonous, colorless robot, the instructor should express their emotions and thoughts.

Prizing, Accepting, and Trusting. What matters most is that teachers care about their pupils and embrace their sentiments, regardless of how they affect the learning process. Deeper trust and respect are created through these traits.

Empathy. They were inquiring into the student's perspective and emotional state of mind. For facilitative learning to be effective, students must possess specific characteristics. When they are given a task that's both meaningful to them and helpful, practical, and relevant, they will be more likely to succeed.
Then, in Rogers' words: "Learning Becomes Life And A Very Vital Life at That. "The student is on his way to becoming a learning, changing being, sometimes excitedly, sometimes reluctantly."

Canter's Theory of Assertive Discipline
Assertive discipline is a method for teachers to control their classrooms through a well-structured framework. Instead of being authoritarian, it emphasizes the development of a constructive behavior control method by the instructor (Ferguson & Houghton, 1992). According to Canter's stance, no one student should be able to stop another from studying. For pupils to know exactly how the instructor expects them to act and their responsibilities, the teacher must set firm limits and take decisive action when they cross those boundaries. The instructor must follow up on a student's successful task completion by praising and encouraging. Students should know the negative repercussions of deviating from the lesson plan. Bill Rogers, a behavior management master, has worked wonders for my children using the assertive teacher paradigm.

Dreikurs's Classroom Management Theory
This mutual regard pushes students to demonstrate desirable actions, according to Rudolf Dreikurs's discipline philosophy. For him, it was clear that kids were born with a deep yearning to belong in a group and a sense of self-worth and self-confidence that they might use to contribute to that group. The "true purpose of social activity" is the desire to belong, according to Dreikur. "Goals of misbehavior" begin when pupils fail to meet this aim. This conduct stems from a false desire for a feeling of belonging that they are lacking.

Dreikur's 4 Goals of Misbehavior

i. Get noticed.
ii. Become more powerful and in command.
iii. Retaliate for what you have done.
iv. Feelings of inadequacy should be displayed.
v. If a student fails to attain social status via getting attention, they then attempt to gain power and control, which leads to feelings of inadequacy.

How to Combat the 4 Goals of Misbehavior

Gain Attention. Use positive reinforcement when positive conduct is displayed instead of ignoring the attention-seeking. Please, please, please, please distribute the books.

Gain Power and Control. Focus on the positive conduct in the class, ignore any attempt to gain authority, and do not get involved in a power struggle. The black dot, the white square method, is a term coined by Bill Rogers, a behavioral specialist.

Gain Revenge. Remember that the student is attempting to achieve a sense of belonging; this revenge-seeking is a disguised attempt. You may tell pupils that you care about them and their education, no matter what they have done, at a quiet place away from other students.

Display Feelings of Inadequacy. The pupil has given up on themself at this point. "Not doing" will be a symptom of this period (not doing homework, not participating, etc.). Recognition of little wins and achievements is critical for students at this period. You may help kids get out of this stage by showing interest in them and their work.

Pragmatism (Learning by Doing)

Learning by doing believes that we learn better when we engage in the action ourselves. Experiential learning has this as its foundation. Experiential Learning (EL) believes that the most effective method to learn anything is to experience it firsthand. Those memories remain with you and help you recall facts and information. The basic premise is that we may learn more about something when we do it. Put another way, instead of passively absorbing information, you may actively engage with it. You can learn from your errors as long as you actively participate in the learning process. As a result of this mindset, experiential learning was born. American philosopher John Dewey was the first to promote learning by doing. This meant that Dewey placed a high value on student involvement. Instead of relying on lectures and memory, this method challenged the idea that learning occurs through these methods. To gain notoriety, Dewey said that we learn most effectively when actively involved in the subject matter. He believed the best way to do this was to provide a curriculum grounded in pupils' real-world experiences. Since Dewey's discovery is nearly a century old, current studies have objectively proven the relevance of learning by doing (with some significant caveats). In my opinion, a school should reflect a child's daily life, whether at home, in the neighborhood, or on the playground, in terms of how genuine and relevant it is to the child. ——John Dewey (My Pedagogic Creed) "Students were to be presented with real-world issues, and the teachers were to assist them in finding solutions by involving them in a practical exercise. Students will learn to cook and sew in school, which is a regular practice. Students were expected to learn basic skills like writing and numeracy as part of their everyday activities. Building, cooking, and sewing are educational components and representations of students' daily lives."

Trial and Error Versus Instruction

According to Sidman (2009), learning by doing might be error-filled, like trial-and-error learning, or error-free, like an insight or a program. Concepts from Harlow (1949, 1959) are significant. There were several distinct sets of two-stimulus discrimination tasks to go through. Whether they are animals like pigeons, rats, nonhuman primates, or people of all ages and cognitive levels, study subjects may answer new issues in a single trial following a long training sequence. This is true regardless of the subject's age or intellectual level (Reese, 1963).

Learning the Dialectical Method

Kozulin (1984) credited the learning-by-doing idea to John Dewey. However, Plato had already recognized it. To learn "the philosophical method," as Plato termed it, one must put it into practice (Annas, 1981). Due to Plato's belief that the dialectical method could only be acquired via personal experience and practice, he declined to answer young Glaucon's inquiries concerning it in The Republic of Athens.

Relational-Frame Learning

A study by (Eikeseth, 1997) on stimulus equivalence in college students is an example of research emphasizing discovery rather than teaching. Instructions were employed rather than training to set up the first conditional associations. Then, 16 interleaved memory probes for the

taught associations were used to examine the symmetry and transitivity of stimulus equivalency. A memory criterion of at least 15 accurate responses on each of the 16 probes was fulfilled by only 28 out of 58 respondents (or around 48 percent). In contrast, stimulus equivalence was demonstrated by 50 percent of these 28 participants by fulfilling the same threshold on both the symmetry and transitivity tests. A 50% success rate in the first set of probes was likewise obtained when the initial conditional connections were learned by training rather than instructions (Eikeseth, 1997). Eikeseth (1997) mentioned four reports, one for each of the two trials that were carried out. Sidman, Kirk, and Willson-Morris (1985) mentioned an experiment involving a healthy adult. His performance on the early test trials was reasonably consistent with the claim (Eikeseth, 1997). One experiment featured children and significantly retarded institutionalized adults, but the other three included no adults. Devany (1986) utilized the learning-by-instruction strategy as inferior to the training approach, which permits the researcher to continue the training trials until a subject demonstrates stimulus equivalency or may be inferred to be untrainable. The memory condition was reached by 72 percent of the individuals (Eikeseth, Baer, 1997). However, none of the 26 subjects met all the criteria for stimulus equivalence. For this reason, they had predicted that the stimuli would provide the same results as the equivalence relations. The findings from the two experiments suggest that learning stimulus equivalence and maybe all relational frames are best learned through discovery rather than teaching.

Practical Experience in Other Domains

He was not as strict as John B. Watson (1928). Writing requires direct contact with the subject, but he claimed that authors can gain this direct experience through observation rather than involvement. Thus, authors are not required to live the lives they describe, and in some situations, they may even be better off without engaging in such a lifestyle! It would be not easy to see clearly if you were among the crowd, he continued, as an example. Using the qualifier "in some situations" appropriately indicates that the idea is not generally applicable, even though this example may support it. Jesse Stuart, a primitivistic writer, lived much of his life in the rural area where his stories are set, which may explain why his novels had an air of authenticity and truthfulness that made them popular even among urbanized readers (Foster, 1981). I believe he was a spectator in the rural area, and if so, he represents Watson's stance; however, he may have been a participant and, therefore, represents Bernard's. Sir Bernard's position was more consistent with Sergei Tretyakov than Watson's. "A tight relationship should be made between author and topic," Tretyakov (1930) observed, and this does not imply traveling through the subject "like a tourist, a courteous looker-on," but instead actively engaging in the subject. Regarding his personal experience, he became an active member of a communal farm and created a strong relationship. As the American poet Ezra Pound (1931) put it, Tretyakov's viewpoint was nothing new for us: "There is nothing new for us in a writer's living the life he writes about.

Findings of the Study

Why does learning by doing work?

The more familiar you are with a subject, the more you can apply what you have learned to real-world situations. It is effective because it encourages you to actively engage with the content and develop your knowledge, one chord at a time. What is known as the "generation effect" is an excellent way to help students learn by doing. The "generation effect," also known as the testing effect, retrieval practice, or even learning by doing, emphasizes that students comprehend and recall content better when required to develop it rather than examining an account generated by someone else. Many instructors think of themselves as "putting information into the heads" of their students. Science reveals that pupils must build their

knowledge, and in many circumstances, effective learning may be better defined as "drawing information out of students' thoughts." When reading a new piece of writing, ask yourself: What is the point of this piece of writing? What is the author trying to get across in this piece? Is there anything in this passage that is unclear to you? These questions direct your attention to the lesson's content and help you learn by doing. The best learning approach is through active participation and strategies that make you work harder to recall your learning.

How to use learning by doing?

Giving students regular, low-stakes quizzes is one approach to implementing the "learning by doing" method in the classroom. These tests are not meant to measure anything, which is why they are called quizzes in the first place. Instead, they encourage students to interact with the material and develop new ideas based on their studies (Bessen, 2015). Even accessing this information has improved understanding, memory, and the ability to "transfer" that knowledge to other situations. In other words, it turns education into a hands-on, active experience. Surprisingly, psychologist Rich Mayer, an unusual champion of the "Learning by Doing" method, has recently published much on this topic. As a Midwesterner, Mayer tends to speak softly and reverently. "Someone screwed up," rather than "slightly short of being excellent," is the phrase that Mayer prefers to use when talking to people. People do not have evil intentions towards someone like Mayer; we have to deal with the repercussions of our stupid choices. Mayer's go-to piece of wisdom? "Do not give out any bad vibes."

On the other hand, Mayer's team at the University of California, Santa Barbara, has repeatedly demonstrated that we learn by actively creating what we know. His response to my question was straightforward: "Learning is a generative activity." For the technique to function, we must follow Mayer's instructions to the letter. Initially, we pick and choose the knowledge we want to learn—for example, a little Soviet history or Buddhist philosophy. After that, we put what we have learned into practice by forming some mental link between what we already know and what we hope to learn.

Implications of learning by doing

Recent studies on learning as mental action have changed the traditional knowledge about how people acquire expertise. Kent State University's John Dunlosky and colleagues recently analyzed the evidence on various learning approaches. They discovered that highlighting and rereading are two of the most inefficient learning methods. However, why is this happening? Rereading and highlighting do not encourage individuals to learn new things (Yuan et al., 2018). How did Dunlovsky's seminal study determine the most effective approaches? Those that allowed students to learn by doing. By phone, Dunlovskly advised me to engage in more effortful exercises, such as self-quizzes and explaining concepts. When we learn, "we are not merely replicating the knowledge." This is a fundamental element of how our minds operate." We are trying to understand what we know as a group." Self-quizzing and self-explaining proved to be the most successful methods. Many organizations, such as the World Leadership Institute, promote learning by doing. So, how can you follow in the footsteps of these pioneers and bring Learning by Doing into the classroom? Students should be asked to describe the concept or procedure rather than a multiple-choice assessment. Ask your pupils to draw links between several topics and explain how they relate to one another using the notion of elaboration. It has been shown that successful students produce several self-explanations to refine and increase the conditions under which a notion may be used. Isolated instances are used more frequently by less-achievement pupils. Findings from a previous study by Chi show that students can benefit by reciting their explanations and elaborations aloud. "Repeat backs" are another easy-to-use technique that may be used in various ways. After receiving thorough instructions from a person, take a minute to repeat the information. Deliberate repeating of the directions helps you retain the information, making you significantly more inclined to follow

them. Informally known as "free-recollect" or "brain dumps," this is just a list of everything you can recall regarding a specific subject. Brain dumps, despite their simplicity, have been proven to be a very effective method of education. Brain dumps may be an excellent tool for deep learning since they compel you to collect and arrange the information yourself (i.e., learning by doing).

Learning by Doing, Different Approaches

Active Learning

When students are actively engaged or experientially immersed in learning, it is called Active Learning. There may be a wide range of student engagement in this type of learning. According to Bonwell and Eison (1991), students actively learn when they do something other than passively listen. The Association for the Study of Higher Education (ASHE) paper discusses many methods for encouraging active learning. Research shows that kids need to do more than listen to be successful. Students must communicate effectively through writing, speaking, and participating in class discussions. The three learning domains of knowledge, skills, and attitudes are all involved in this process (KSA). Put another way, this taxonomy represents "the aims of the learning process" (Bloom et al., 1956). Pupils require higher-order thinking skills like analysis, synthesis, and assessment (Renkl, 2002).

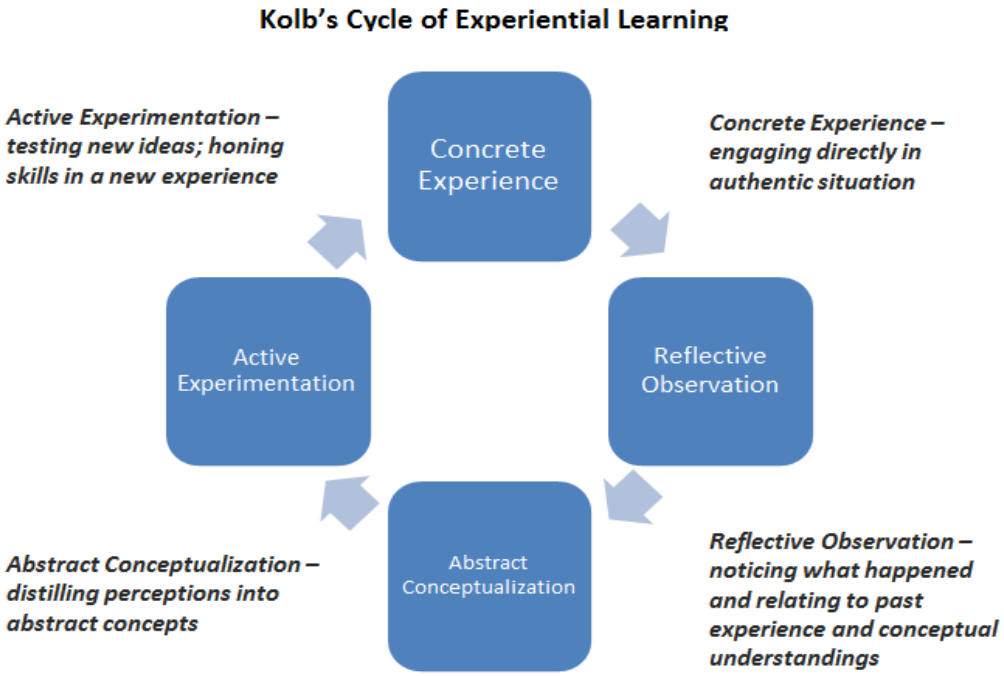
Experiential Learning

1. Students "learn by doing" and reflect on what they have learned in experiential learning. Hands-on laboratory experiments, internships, practicums, and field exercises are only examples of experiential learning activities. Undergraduate research and studio performances are further examples (Smith, 2016). To inspire academic research, well-planned, supervised, and evaluated internships or field experiences can promote interdisciplinarity, civic involvement and career development, leadership, and other professional or intellectual abilities. There are two objectives in experiential learning. One is to study a particular subject, and the other is to learn about one's learning process."
2. The author is David A. Kolb -are- author
3. Experiential learning includes all of the following components:
4. reflection, critical thinking, and synthesizing ideas
5. Giving kids a voice, allowing them to take charge of their learning and hold themselves responsible for the outcomes.
6. Student-centered learning environments encourage students to participate in various activities.
7. Learning from natural consequences, failures, and accomplishments in a well-designed learning experience.

How does it work?

The experiential learning process is depicted in Kolb's (1984) learning cycle (see figure below). The integration of the following is a part of this process:

i. **knowledge**—what you have learned from school and your own experiences
ii. **activity**—Knowledge applied to a real-world context;
iii. **reflection**—creating new knowledge through the combination of information and activities (Indiana University, 2006)



The Experiential Learning Cycle

The experiential learning cycle, developed by David Kolb, is one of today's most effective education methods. In every contact and experience, the experiential learning cycle consists of four steps: experience, reflection, thinking, and action.

You must first have the experience to begin the learning process. You must reflect on the experience, review it from various perspectives, and then use abstract thinking to draw conclusions and conceptualize the experience's meaning. Finally, it would help if you decided to do something about it. You do not even realize you are learning while participating in this loop. It happens constantly, and it is changing our lives for the better. Most people prefer one learning style over another regarding this knowledge acquisition cycle.

The Experiential Learning Style

We all have different ways of navigating the learning cycle. People prefer using the learning cycle based on their personality, educational specialty, professional job, culture, and adaptive abilities. According to Kolb's Experiential Learning Profile (KELP), there are nine ways to navigate the learning cycle. We naturally gravitate toward our favored leadership style when on autopilot or under pressure. There are distinct differences between learning styles and other typologies that define innate characteristics. There are many different learning styles, each with a preference for some forms of learning and a lack of use for others. Learning styles can also help you comprehend others whose methods differ from yours. Learning about your and others' preferred learning styles may help you have more fruitful conversations, collaborations, and relationships.

Experiencing: When you communicate in an Experiencing-style manner, you come across as involved, connected, kind, and open-minded. You are great at working in groups and building connections based on mutual trust. You do not mind expressing your feelings openly.

Imagining: Caring, trustworthy, empathic, and creative characteristics of the Imagining style. You show self-awareness and sensitivity to the feelings of others. As someone who thrives under pressure, you can think on your feet and develop innovative solutions to problems.

Reflecting: Your patience, care, and restrained demeanor allow others to take the lead when you use the Reflecting approach. As you pay attention, keep an open mind and learn from various sources. You can look at problems from several angles and find the root causes.

Analyzing: Using the Analyzing style, you are organized, systematic, and exact in your writing. Preparation and critical thought help you avoid mistakes and better understand the issue. You are meticulous when it comes to sifting through data and facts.

Thinking: The Thinking style is characterized by skepticism, organization, and control. Analyze issues using quantitative tools and make your arguments logically sound. You can express yourself clearly and make sound decisions independently.

Deciding: As a Deciding person, you are honest, accountable, and straightforward. You come up with realistic answers and make goals for yourself. You can focus on one thing at a time.

Acting: In the Acting style of communication, you are self-confident, goal-oriented, and fearless. You set goals and objectives and devise a plan to meet them by a specific date. You can carry out ideas even if you have a limited budget.

Initiating: The Initiating style encourages you to be extroverted, impulsive, and able to shrug off defeats or "failure." You take advantage of any opportunity that comes your way and do not hold back.

Balancing: When using the Balancing method, you seek and bridge gaps in a scenario others might miss. You are a flexible problem solver who can quickly adjust to new circumstances.

Discussion

i. Learning theories often fall into one of three categories: behaviorism, cognitivism, or constructivism, depending on your perspective. Several significant learning theories were from Dewey, Kolb, Vygotsky, Piaget, and Bloom to Maslow and Bruner. All were implemented in their starting days. Some became extinct because new advanced theories came. Learning by doing is the most influential theory; it is a scientific theory; children learn things in the long term. Instead of this, other theories are essential, like behaviorism, reconstructionism, Bruner's repeated learning theory, Piaget's cognitive development theory, Kohler's insight learning theory, Erickson's psychosocial theory, and Rousseau's natural learning theory. All theories are essential, and a good teacher can implement all these theories in children's age groups and cognitive levels. Bloom's educational domain, Vygotsky's Scaffolding, Gagné's 5 Conditions of Learning, Howard Gardner's Multiple Intelligences, Laird's Sensory Theory, Rogers' Humanist Theory, Dreikurs's Classroom Management Theory.

ii. There are many theories about learning by doing; learning by doing involves hands and active involvement, keen observation, activities, experiments, etc. Research has shown that it is the best way to learn in the long term. Passive learning benefits short-term memory, but active learning and learning from experience go on for as long as life.

iii. Kolb and Dewey's theories found best for implication; in Pakistan, activity-based learning is implemented till the elementary level. Activity-based education does not work up to the elementary level; pure experimental groups start at the secondary level and go beyond.

iv. This kind of learning gives immediate feedback and an opportunity to deliberate on what to keep doing, alter and repeat or change altogether," he writes.

v. Aristotle said 2400 years ago that "for the things we have to learn before we can perform them, we learn by doing."

vi. John Dewey once remarked, "Give the pupils something to do, not something to study; and the doing is of such a type as to require thinking; learning naturally ensues."

vii. Experiential education returns after 25 years of integrating computers into classrooms, mostly replacing printed worksheets with digital ones.

viii. Learning through hands-on activities is more fun and likely to stick in students' minds. To improve one's skills, one must put out the effort, make errors, reflect, and fine-tune one's strategy.

ix. The power of hands-on learning is rooted in belonging to a larger group. The city is used as a classroom for place-based learning. It uses local resources and partners in learning and links local challenges to global themes.

x. Learning from experience or by doing is natural learning that occurs in natural phenomena. From all the above, research scholars suggested implementing experience-based learning in every grade of class in Pakistan.

Conclusion

i. It was concluded that all learning theories are essential for different learners. However, learning by doing is the most popular theory of education. The pioneer of pragmatism

theory, John Dewey, changed the education system to practical; Aristotle laid the foundation of realism and changed the idea of idealism because he said only experimental learning is authentic. Pavlov laid the foundation of classical conditioning. Skinner presented operant conditioning; he was a student of Watson. John Locke says children's minds are blank slates; you write what you want. He gave the "tabula rasa." Bruner gave the idea of spiral sequencing; in this idea, the child repeats the lesion daily. Piaget gave the idea of cognitive development, and Erickson gave the idea of psychosocial development, where the child learns from socialization. Bloom's educational domain, Vygotsky's Scaffolding, Gagné's 5 Conditions of Learning, Howard Gardner's Multiple Intelligences, Laird's Sensory Theory, Rogers' Humanist Theory, and Dreikurs's Classroom Management Theory are all essential theories. One teacher must know these theories and their implication.

ii. It was concluded that learning by doing is fun in education. It is the natural way to learn and to remember things for long-term memory. It is the natural setting of learning.

iii. It is a brand-new approach to education.

iv. It is possible to put knowledge into action rapidly. Using experiential learning, pupils can immediately put what they have learned into practice. As a result, they are more likely to remember what they have learned.

v. Students were encouraged to conduct their research and to collaborate with their peers in the process.

vi. Encouragement of cooperation within the group. Working in groups is a standard part of experiential learning, so students can practice working together as a team while they are learning.

vii. Students learn to think critically and take responsibility for their learning through this method.

viii. It is easier to retain information if you apply what you have learned rather than just reading about it in textbooks. Because it aids in retaining information, this is a valuable method. After all, you will have a stronger sense of ownership over the information and be more inclined to put it to good use in the future.

ix. Self-esteem is built by helping a youngster see and appreciate their talents. If something is fun to do, kids tend to get immersed in it.

x. Incorporating hands-on learning is a crucial component. Putting what you have learned into practice is easier when you have the time and resources to go deep. It is easier to apply what you have learned when you have had a wide array of experiences.

xi. Practicing what you have learned in the real world helps you become a better person. Long-term problems foster initiative, perseverance, and project management abilities.

xii. In light of this, what can we conclude? The best learning approach is through active participation and strategies that make you work harder to recall your learning. However, you must be aware of when to use these methods. One must first create a solid foundation to get the benefits of learning by doing.

xiii. Before you can obtain the competence in question, you must offer your short-term memory bit-sized bits of knowledge. Practice makes perfect is a cliche that has to be replaced by the more realistic proverb, which states that "actively engaged practice makes learning more effective.

Recommendations

Teachers should know about all learning theories deeply and adopt elective teaching methods according to the needs and psyche of students.

References

Adelmann, P. K., & Zajonc, R. B. (1989). Facial efference and the experience of emotion. Annual review of psychology, 40(1), 249-280.
Annas, J. (1981). An introduction to Plato's Republic. Oxford: Oxford University Press.
Bessen, J. (2015). Learning by doing. Yale University Press.
Bloom, B. S., Krathwohl, D. R., & Masia, B. B. (1956). Taxonomy of educational objectives: The classification of educational goals. New York, NY: David McKay Company.
Bonwell, C.; Eison, J. (1991). Active Learning: Creating Excitement in the Classroom AEHE-ERIC Higher Education Report 1. Washington, D.C.: Jossey-Bass. ISBN 978-1-878380-08-1.
Bordwell, D. (1989). A case for cognitivism. In Iris (Vol. 9, No. 1989, pp. 11-40).
Clark, K. R. (2018). Learning theories: cognitivism.
Cohen, I. S. (1962). Programmed learning and the Socratic dialogue. American Psychologist, 17, 772-775.
DeCarvalho, R. J. (1991). The humanistic paradigm in education. The Humanistic Psychologist, 19(1), 88-104.
Devany, J. M., Hayes, S. C., & Nelson, R. O. (1986). Equivalence class formation in language-able and language-disabled children. Journal of the Experimental Analysis of Behavior, 46, 243-257.
Eikeseth, S., & Baer, D. M. (1997). Use of a preexisting verbal relation to prevent the properties of stimulus equivalence from emerging in new relations. In D. M. Baer & E. M. Pinkston (Eds.), Environment and behavior (pp. 138-144). Boulder, CO: Westview Press.
Ferguson, E., & Houghton, S. (1992). The effects of contingent teacher praise, as specified by Canter's Assertive Discipline Programme, on children's on-task behavior. Educational studies, 18(1), 83-93.
Foster, R. E. (1981, February). Primitivism in the short fiction of Jesse Stuart. Lecture presented in the Benedum/Centennial Seminars 1981, West Virginia University, Morgantown, WV.
Harasim, L. (2017). Learning Theory and Online Technologies (2nd edition). Routledge Ltd.
Harland, T. (2003). Vygotsky's zone of proximal development and problem-based learning: Linking a theoretical concept with practice through action research. Teaching in higher education, 8(2), 263-272.
Harlow, H. F. (1949). The formation of learning sets. Psychological Review, 56, 51- 65.
Harlow, H. F. (1959). Learning set and error factor theory. In S. Koch (Ed.), Psychology: A study of a science (Vol. 2, pp. 492–537). New York: McGraw-Hill.
Hoque, M. E. (2016). Three domains of learning: Cognitive, affective, and psychomotor. The Journal of EFL Education and Research, 2(2), 45-52.
James, W. (1975). Pragmatism (Vol. 1). Harvard University Press.
Keeling, E. L., Polacek, K. M., & Ingram, E. L. (2009). A statistical analysis of student questions in a cell biology laboratory. Life Sciences Education, pp. 8, 131–139.
Kozulin, A. (1984). Psychology in utopia: Toward a social history of Soviet psychology. Cambridge, MA: MIT Press.
Lazar, R. M., Davis-Lang, D., Sanchez, L. (1984). The formation of visual stimulus equivalences in children. Journal of the Experimental Analysis of Behavior, 41, 251-266.
Lazear, E. P. (2004). The Peter Principle: A theory of decline. Journal of political economy, 112(S1), S141-S163.
Lefrançois, G. R. (2019). Theories of human learning: Mrs Gribbin's cat (Seventh / Guy R. Lefrançois.). Cambridge University Press.
Lester, D. (2013). Measuring Maslow's hierarchy of needs. Psychological reports, 113(1), 15-17.
Lisina, M. I. (1985). Child-adults-peers: Patterns of communication (K. Judelson, Trans.). Moscow: Progress Publishers.
Montessori, M. (1964). The Montessori method (A. E. George, Trans.). New York: Schocken. (Translation originally published 1912).
Ojose, B. (2008). Applying Piaget's theory of cognitive development to mathematics instruction. The mathematics educator, 18(1).
Orenstein, G. A., & Lewis, L. (2020). Eriksons stages of psychosocial development. StatPearls [Internet].
Piaget, J. (1970). Piaget's theory. In P. H. Mussen (Ed.), Carmichael's handbook of child psychology (3rd ed., Vol. 1, pp. 703-732). New York: Wiley.
Plato. (1941). The republic of Plato (F. M. Cornford, Trans.). New York: Oxford University Press.

Pritchard, A. (2017). Ways of learning: Learning theories for the classroom. Routledge.

Reese, H. W. (1963). Discrimination learning set in children. In L. P. Lipsitt & C. C. Spiker (Eds.), Advances in child development and behavior (Vol. 1, pp. 115-145). New York: Academic Press. Reese, H. W. (1964). Discrimination learning set in rhesus monkeys. Psychological Bulletin, 61, 321-340.

Reese, H. W. (1989). Discrimination learning set in children. In H. W. Reese (Ed.), Advances in Child Development and Behavior (Vol. 21, pp. 153-189). New York: Academic Press.

Renkl, Alexander; Atkinson, Robert K.; Maier, Uwe H.; Staley, Richard (1 January 2002). "From Example Study to Problem Solving: Smooth Transitions Help Learning". The Journal of Experimental Education. 70 (4): 293–315.

Robinson, E. S. (1930). W. KÖHLER Gestalt Psychology (Book Review). The Journal of Genetic Psychology, 37, 431-450.

Schunk, D. H. (2020). Learning Theories: An Educational Perspective, 8th Edition. Pearson Education.

Sidman, M. (2010). Errorless learning and programmed instruction: The myth of the learning curve. Invited tutorial presented [by W. J. McIlvane] at the meeting of the Association for Behavior Analysis, San Antonio, TX, May/June.

Sidman, M., Kirk, B., & Willson-Morris, M. (1985). Six-member stimulus classes generated by conditional-discrimination procedures. Journal of the Experimental Analysis of Behavior, 43, 21-42.

Smith, A. (2016). Experiential learning. Edward Elgar Publishing Limited.

Smith, M. K. (2002). Howard Gardner and multiple intelligences. The encyclopedia of informal education, 2, 96-132.

Stanley, W. B. (1992). Curriculum for utopia: Social reconstructionism and critical pedagogy in the postmodern era. SUNY Press.

Steffe, L. P., & Gale, J. E. (Eds.). (1995). Constructivism in education. Psychology Press.

Takaya, K. (2008). Jerome Bruner's theory of education: From early Bruner to later Bruner. Interchange, 39(1), 1–19.

Tretyakow, S. [M.] (1930). Report. Front, 1(1), 45-52.

Walkiewicz, E. P., & Witemeyer, H. (1980). Ezra Pound's contributions to New Mexican periodicals and his relationship with Senator Bronson Cutting. Paideuma, 9, 441-459.

Watson, J. B. (1928, June 16). Feed me on facts. Saturday Review of Literature, 4(47), 966–967.

Watson, J. B., & Kimble, G. A. (2017). Behaviorism. Routledge.

Yuan, X., Song, D., & He, R. (2018). Reexamining 'Learning by Doing': Implications from Learning Style Migration. The Design Journal, 21(3), 313-330.

Zaporozhets, A. V., Zinchenko, V. P., & El'konin, D. B. (1971). Development of thinking. In A. V. Zaporozhets & D. B. El'konin (Eds.), The psychology of preschool children (J. et al., Trans.; pp. 186-254). Cambridge, MA: MIT Press.