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Learning and Teaching Theory

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Abstract: *Learning and instructional theories are essential foundations for developing effective educational practices. This abstract reviews the basic concepts of various learning theories, including behaviorism, cognitivism, constructivism, and humanism, and explains how each theory influences instructional strategies in educational settings. Behaviorism focuses on the relationship between stimulus and response as the basis for shaping learning behavior, while cognitivism emphasizes the process of information processing in the individual's mind. Constructivism posits that knowledge is actively constructed by learners through experience and interaction, while humanism emphasizes the development of learners' potential and psychological needs. This review also identifies the practical implications of these theories, such as the role of the teacher as a facilitator, the use of diverse learning methods, and the importance of adapting approaches to learner characteristics. By understanding the diversity of learning and instructional theories, educators can design more appropriate instruction and improve student learning outcomes.*

Keywords: *Learning Theory, Learning Theory; Education*

INTRODUCTION

Learning is a conscious effort process carried out by individuals for a change in attitude and behavior from not knowing to knowing, from not having an attitude to having the right attitude, from being unskilled to being skilled at doing something (Slameto, 2015). Learning can be defined as a mental or (psychic) activity that occurs due to active interaction between individuals and their environment which results in relatively permanent changes in the aspects of: cognitive, affective and psychomotor "Bloom's Taxonomy" (Bloom, 1956). These changes can be something completely new or improvements/improvements from previously obtained learning outcomes (Hamalik, 2011). Learning is also seen as a mental activity that takes place in active interaction with the environment and results in changes in knowledge, understanding, skills, and attitude values (Winkel, 2004). This entire process shows that learning is dynamic and continuous throughout life (Putriani Lubis, 2025)

The study of learning theory is an important foundation in understanding how individuals acquire knowledge, skills, attitudes, and values (Dahar, 2011). Various learning theories have developed and made significant contributions to the world of education. The behaviorist theory pioneered by B.F. Skinner emphasizes that learning is an observable change in behavior as a result of stimulus and response (Skinner, 1974). Meanwhile, the cognitive theory developed by Jean Piaget views learning as a mental process involving information processing and the development of cognitive structures (Piaget, 1972). The theory emphasizes that knowledge is actively constructed by individuals through social interactions and learning experiences (Vygotsky, 1978). Lev Vygotsky was influenced by constructivist thinking.

The development of learning and instructional theories is inseparable from the efforts of educational experts to understand how students acquire knowledge effectively. Good learning is not only oriented towards achieving learning outcomes, but also takes into account student characteristics, the learning environment, and the interaction processes that occur during the learning activity (Aunurrahman, 2014). From the perspective of educational psychology, the learning process involves changes in cognitive structures that occur gradually through experiences gained by individuals while interacting with their environment (Ausubel, 1968). Therefore, students need to be given the opportunity to actively discover and develop their own knowledge through various meaningful learning activities so that the understanding gained becomes deeper and lasts for a long time (Bruner, 1960).

Furthermore, education is essentially not only aimed at transferring knowledge, but also at developing critical thinking skills, creativity, and social attitudes necessary for social life (Dewey, 1916). Learning experiences gained directly through practice, observation, and active involvement in learning activities are believed to improve students' understanding of the material being studied (Kolb, 1984). Along with technological developments, the use of appropriate learning media has also become an important factor in increasing the effectiveness of the learning process because it can help students understand abstract concepts in a more concrete and understandable way (Mayer, 2009). Thus, teachers are required to be able to choose learning strategies and media that are appropriate to the needs and characteristics of students.

In addition to environmental factors and learning methods, learning success is also influenced by various psychological factors originating from within the student, such as interest, motivation, attention, and readiness to learn (Muhibbin Syah, 2010). From a behaviorist perspective, the learning process can be formed through the relationship between stimulus and response that is carried out repeatedly, resulting in certain behavioral changes (Pavlov, 1927). However, the humanistic approach views that students need to be given the freedom to develop their potential optimally according to their individual needs and abilities (Rogers, 1969). In addition, learning success is also influenced by the intensity of practice carried out by students, because the more frequently a skill is practiced, the stronger the skill is mastered and maintained (Thorndike, 1911). Therefore, an understanding of various learning theories is an important foundation for educators in designing a learning process that is effective, innovative, and appropriate to the development of students.

Thus, learning theory and instruction are closely related in educational practice (Maslow, 1954). Mastering the basic concepts of learning theory will help educators create a more focused, systematic, and meaningful learning process (Dahar, 2011), so that educational goals can be optimally achieved (Trianto, 2010).

METHODS

This study uses a qualitative approach with a library research method. This library research was chosen because this study aims to analyze and understand various factors that influence the quality of learning theories and teaching in schools based on data and information obtained from written sources such as scientific journals, books, articles, and other relevant documents.

A qualitative approach is used to deeply explore the thoughts of experts and the results of previous research related to the variables that influence the quality of learning and instructional theories. This method does not aim to quantitatively measure the relationships between variables, but rather to understand the meaning, concepts, and context contained in the literature.

The data in this study are sourced from relevant secondary literature, namely accredited national and international scientific journals, scientific books discussing learning and teaching theories, educational management, and supporting and inhibiting factors in the learning process in schools. The criteria for selecting sources include: (1) Relevance to the research topic, (2) Academic quality and credibility of the source, and (3) Data up-to-dateness, with priority given to literature published in the last five years.

Data collection techniques were conducted through systematic document searches using online databases such as Google Scholar, Garuda Ristek-BRIN, DOAJ, and university digital libraries. Keywords used in the literature search included: learning theory, learning theory, effective learning, learning strategies, learning processes, learning models, and so on.

The collected data was analyzed using content analysis techniques, which identify, categorize, and interpret key findings in the literature related to factors influencing learning and instructional theory. This learning and instructional theory

focuses more on teachers, in order to facilitate the teaching process and produce effective learning..

RESULTS & DISCUSSION

Understanding Learning and Teaching Theory

Learning theory is a set of concepts, principles, and assumptions that explain how individuals acquire, process, store, and remember knowledge through learning experiences. This theory serves as the foundation for understanding behavioral changes and the development of students' abilities during the educational process. Various educational figures have developed learning theories from different perspectives, such as behaviorism, which emphasizes behavioral change through stimulus-response, cognitivism, which emphasizes mental processes, and constructivism, which emphasizes the active role of students in constructing their own knowledge.

In general, learning theory serves as a scientific basis for explaining how learning occurs in individuals. Learning theory enables educators to understand students' internal mechanisms for receiving and processing information, thereby designing more effective learning strategies. Learning theory also helps teachers select learning approaches, methods, and media that are appropriate to student characteristics.

Meanwhile, learning is a process of interaction that occurs between educators, students, and learning resources in a systematically designed learning environment. Learning focuses not only on delivering material but also on how students can actively engage in the process of acquiring knowledge, skills, and attitudes. In this sense, learning is a system involving various interrelated components such as objectives, materials, methods, media, and evaluation.

Thus, learning theory and instruction are closely related. Learning theory provides a conceptual foundation for how students learn, while instruction is the practical application of that theory in educational activities. Without learning theory, the learning process would proceed without a clear direction, and without effective instruction, learning theory would have no practical value in education.

Learning is a conscious effort made by individuals to achieve relatively permanent changes in behavior. These changes encompass cognitive, affective, and psychomotor aspects, as described in Bloom's Taxonomy. The process involves not only increasing knowledge but also developing better attitudes and skills.

Changes that occur during the learning process can include acquiring new knowledge, strengthening understanding, or refining previous learning experiences. Thus, learning is a dynamic and ongoing process that adapts to the development of the individual and their environment. This process occurs through the interaction of the individual with their environment, which provides meaningful learning experiences.

(Slameto, 2015) explains that learning is a process of behavioral change resulting from an individual's experiences and interactions with their environment. This definition demonstrates that experience plays a crucial role in shaping a person's behavior. The richer the experience, the greater the likelihood of change within the individual.

In line with this, (Winkel, 2004) states that learning is a mental activity that results in changes in an individual's knowledge, skills, and attitudes. This emphasizes that learning is not only physical or external, but also involves complex thought processes within an individual.

Besides the concept of learning, instruction also has an equally important meaning. According to (Aunurrahman, 2014), learning is a process of interaction that occurs between students, educators, and learning resources within a specific learning environment. This interaction is key to achieving effective and meaningful learning goals.

According to Rusman (2017), learning is a system consisting of various interacting components, such as objectives, materials, methods, media, and evaluation. All of these components must be designed in an integrated manner so that the learning process can proceed optimally and achieve the desired results.

In today's digital era, the learning process is experiencing rapid development. Teachers are required to utilize modern technology and learning media to make learning more engaging, interactive, and effective. Mastery of technology is one of the essential competencies for today's educators.

Furthermore, a teacher's ability to manage the classroom is also a crucial factor in creating a conducive learning environment. A comfortable, orderly, and enjoyable learning environment will support active student engagement in the learning process. This will impact overall learning outcomes.

Thus, it can be concluded that learning and instruction are two interrelated and inseparable concepts. Learning focuses on changes that occur in individuals, while instruction emphasizes the interaction process designed to achieve these changes effectively and purposefully.

Review of Learning Theory

Based on a literature review, there are five main learning theories that have made a significant contribution to the world of education: The first is Behaviorism Theory: This theory is according to...(Dimiyati & Mudjiono, 2009)emphasizes that learning outcomes are visible from changes in behavior that can be measured and observed. The learning process is carried out through practice, repetition, and reinforcement, as stated by(Djamarah & Bahri, 2002)This theory focuses on changing students' behavior for the better, both in terms of manners, interest in learning, and other aspects. Second, Cognitive Theory: Cognitive theory views learning as an active process of building new knowledge and experiences in the minds of students.(Sardiman, 2011).

This process involves understanding, processing information, and critical thinking.(Oemar, 2008)added that cognitive learning is the process of developing the ability to think, understand, and remember information through systematic learning experiences. Third, Constructivism Theory: This theory asserts that students actively construct new knowledge based on their experiences and interactions.(Sardiman, 2011)The teacher acts as a facilitator who helps students discover their own concepts.(Djamarah & Bahri, 2002)explains that constructivism prioritizes the relationship between old and new experiences in shaping students' understanding. Fourth, Connectivism Theory: Developed by(George, 2006)This

theory is relevant for the digital age and states that learning occurs not only in the minds of individuals, but also in networks of people and technology.

Knowledge is spread across networks, and learning occurs when a person forms connections between different sources of information.(Urhadi, 2016)adding that knowledge is also stored in digital networks and communities, so that learning involves connections between students, teachers, and online learning resources. Fifth, Social Learning Theory: The learning process in this theory occurs through interaction with other people, observation, and imitation of behavior.(Djamarah & Bahri, 2002).(Nana, 2005)explains that social learning also involves reinforcement from the social environment, with teachers acting as models of good behavior and facilitators of classroom interactions.

The study of various learning theories provides an important foundation in understanding how individuals acquire knowledge, skills, attitudes, and values. Each theory provides a different perspective on the role of teachers, students, and the learning environment: Behaviorism focuses on strengthening and shaping behavior; Cognitivism emphasizes thinking processes and information processing, Constructivism emphasizes active and learner-centered learning, Connectivism accommodates the development of digital technology in learning, and Social Learning emphasizes the role of interaction and the social environment.

A deep understanding of these theories enables educators to design and implement learning that aligns with educational goals and contexts. This allows the learning process to be more focused, systematic, and meaningful, enabling optimal achievement of educational goals.

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Third, Constructivism Theory asserts that students actively construct new knowledge based on their experiences and interactions (Sardiman, 2011). In this theory, the teacher acts as a facilitator who helps students discover their own concepts. Djamarah & Bahri (2002) explain that constructivism prioritizes the relationship between old and new experiences in shaping students' understanding.

Fourth, Connectivism Theory developed by (George, 2006) is relevant for the digital age and states that learning occurs not only in the minds of individuals, but also in networks of people and technology. Knowledge is distributed across networks, and learning occurs when a person forms connections between different sources of information. Urhadi (2016) adds that knowledge is also stored in digital

networks and communities, so learning involves connections between students, teachers, and online learning resources.

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The study of various learning theories provides an important foundation in understanding how individuals acquire knowledge, skills, attitudes, and values. Each theory offers a different perspective on the role of teachers, students, and the learning environment. Behaviorism focuses on reinforcement and behavior formation, Cognitivism emphasizes mental processes and information processing, Constructivism highlights active, student-centered learning, Connectivism responds to digital learning environments, and Social Learning emphasizes interaction and social influence.

A deep understanding of these theories enables educators to design and implement learning that aligns with educational goals and learning contexts. Teachers can select appropriate strategies, methods, and learning models based on the characteristics of students and learning objectives. This ensures that the learning process becomes more structured, effective, and meaningful.

Ultimately, the integration of these learning theories in educational practice allows teachers to create a more comprehensive and adaptive learning environment. By combining behavioral, cognitive, constructivist, connectivist, and social perspectives, learning can better accommodate the diverse needs of students. This leads to more optimal achievement of educational goals and improved learning outcomes.

The relationship between learning theory and learning in achieving educational goals

The relationship between learning theory and instruction is very close and complementary in the world of education. Learning theory provides the conceptual basis for how individuals acquire knowledge, while instruction is the practical application of that theory in educational settings. The two are inseparable because effective learning is always based on sound learning theory.

Learning theory serves as a scientific foundation that explains the internal processes that occur within students during learning. This process encompasses how information is received, processed, stored, and recalled. By understanding learning theory, educators can understand how students' cognitive abilities work and thus design learning that is appropriate to their developmental stage.

In practice, classroom learning is a direct implementation of various established learning theories. For example, behaviorism theory is implemented through the provision of stimuli and reinforcement, while cognitivism theory emphasizes thinking processes, conceptual understanding, and problem-solving. Constructivism, on the other hand, emphasizes the active involvement of students in constructing their own knowledge through learning experiences.

This relationship demonstrates that learning theory forms the basis for determining the approaches, strategies, methods, and learning techniques used by teachers. Without an understanding of learning theory, teachers tend to teach mechanically without considering the psychological needs and characteristics of students. As a result, the learning process becomes less effective and does not achieve optimal results.

Furthermore, learning theories also help teachers design realistic and measurable learning objectives. Each theory offers a different perspective on how students learn, allowing teachers to choose the approach that best aligns with the desired goals. This makes the learning process more focused and systematic.

In the context of modern education, the relationship between learning theory and instruction is evolving along with technological advances. Teachers no longer rely solely on conventional methods but also utilize digital media and learning technology. The use of this technology must remain grounded in learning theory to maintain a clear pedagogical direction.

Learning theory also plays a role in helping teachers understand individual differences among students. Each student has a different learning style, pace of comprehension, and background. By understanding learning theory, teachers can differentiate learning so that each student receives optimal learning opportunities.

Effective learning can only be achieved if learning theory is applied appropriately to the process. This includes selecting appropriate methods, using relevant media, and effective classroom management. When learning theory is applied correctly, the learning process becomes more active, interactive, and meaningful for students.

Thus, the relationship between learning theory and instruction is integrative and mutually influential. Learning theory provides the foundation for thinking, while instruction serves as the vehicle for its implementation in educational practice. Both work together to create a quality educational process oriented toward achieving learning objectives.

Ultimately, it can be concluded that educational success is largely determined by the extent to which learning theories can be accurately implemented in the learning process. The better a teacher's understanding of learning theories, the more effective classroom instruction will be. This will directly impact improved learning outcomes and the achievement of overall educational goals.

CONCLUSION

Learning is a conscious effort that produces relatively permanent changes in an individual's cognitive, affective, and psychomotor aspects. While instruction is a system of interactions between students, educators, and learning resources aimed at achieving educational goals. Various expert opinions confirm that changes resulting from learning are permanent and stem from experience and interaction with the environment. Effective learning requires adapting to current developments, particularly in the current digital era.

The five main learning theories analyzed have made significant contributions to education. Behaviorism emphasizes behavioral change through reinforcement and practice. Cognitive theory focuses on thinking and information

processing. Constructivism emphasizes the active construction of knowledge by learners through experience and interaction. Connectivism accommodates learning in the digital age by asserting that knowledge is distributed across networks of people and technology. Social learning theory emphasizes the role of observation, imitation, and social interaction in the learning process.

A thorough understanding of various learning theories is a crucial foundation for educators in designing and implementing effective learning. Each theory offers a different perspective on the role of learning components, so teachers need to be able to select and apply theories that align with the objectives, student characteristics, and learning context. By mastering the basic concepts of learning and instructional theories, educators can create a focused, systematic, and meaningful learning process, which will ultimately support the optimal achievement of educational goals.

In the digital era, teachers are also expected to be able to follow developments in technology and learning media to avoid inequalities in the learning process, learning and improving the quality and attractiveness of learning. The use of appropriate technology, which is in line with theoretical principles.

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