The psychological foundation of education and its influence on learning according to experts

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Info Artikel	ABSTRACT
	Educational Psychology is one of the branches of psychological science that focuses on studying about how to understand teaching and learning in an educational environment. There is also an explanation that the psychology of education is a science and applied science that outlines various human activities in relation to the educational situation. One example is learning how to attract students' attention so that they are more receptive to the lessons taught. From the explanation above, it can be taken that psychology in the field of education is intended to influence educational activities so that the learning and teaching and learning process can take place more effectively by paying attention to the psychological response and behavior of students. As with the study of other sciences, educational psychology has limitations in terms of what is discussed in it. Basically, educational psychology studies several things such as the environment and heredity of education, the development and mental health of students, learning processes and evaluations and others.

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Introduction

Educational psychology is the study of how human beings learn in educational settings, the effectiveness of educational interventions, the psychology of teaching, and the social psychology of schools as organizations. (Lestari and Izzaty 2020, 25) Educational psychology deals with how students learn and develop, often focusing on subgroups such as gifted children and they are subject to certain defects. Researchers and theorists who tend to be identified in the United States and Canada as educational psychologists, while practitioners in schools or schools related to the setting are identified as school psychologists. However this distinction is not made in the UK, where the generic term for practitioners is "educational psychologist".

In the process and implementation of educational activities the role of psychology becomes very absolute. Psychological analysis will help educators understand the psychological structure of the protégé and its activities, so that we can carry out educational activities effectively.

Therefore, we created this paper to provide a view of the foundations of educational psychology and prevent the occurrence of psychological burdens on students and be able to approach well between educators and learners.

Psychological theory according to experts
The flow of behavioral psychology
The Theory of Attribution from Edward L. Thorndike

Based on the results of his experiments in the Laboratory that used several types of animals, he put forward a theory of learning known as the theory of "connectionism". The theory states "Learning in animals and humans basically takes place according to the same principle that is, learning is the event of the formation of a bond (association) between events called stimulus (S) and the response (R) given to the stimulus". (Saputra, Ekawati, and Islamiah 2020, 202)

Thorndike goes on to argue that, the occurrence of this association between stimulus and response follows the following laws. (1) Law of readiness, (2) Law of Exercise, (3) law of effect.

Reinforcement Theory of B.F. Skinner

Skinner developed his theory of learning also from the results of experiments using animals. From his experiments, Skinner (Sanditama, Waluyo, and Suwandi 2020, 40) concluded that we can shape human behavior through the regulation of environmental conditions (operant conditioning) and reinforcement.

Skinner divided this reinforcement into two, namely positive reinforcement and negative reinforcement. Positive reinforcement as a stimulus, if the presentation accompanies a student's behavior that tends to increase the repetition of that behavior, in this case it means that the behavior is strengthened. Meanwhile, negative reinforcement is a stimulus that is eliminated/abolished because it tends to strengthen behavior.

Learning Hierarchy Theory from Robert M. Gagne

According to Orton, Gagne is a new-style Behaviorism figure (Ni'amah and M 2021, 78) (modern neobehaviourist). In developing his theory, Gagne paid attention to objects in the study of mathematics consisting of direct and indirect objects. Direct objects are: facts, skills, concepts and principles. While indirect objects are: learning transfer, ability to investigate, problem-solving ability, self-discipline, and being positive about mathematics.

Gagne is of the view that learning is a change in behavior whose learning activities follow a hierarchy of abilities that can be observed and measured. Therefore the theory of learning proposed by Gagne is known as the " theory of learning hierarchy".

Gagne divides learning into eight types in sequence, namely: learning signals (cues), stimulus – response, sequences of motion, verbal circuits, discernment, concept formation, and problem solving. Gagne argues that the learning process in each type of learning occurs in four stages in sequence, namely stages: understanding, mastery, memory, and re-expression.

To apply the theory of hierarchy (Wahid, Wahyuningsih, and Paridjo 2021, 44) learning this Gagne in mathematics learning needs to be translated operationally, namely: (1) to teach a mathematical topic the teacher needs to: (a) pay attention to the prerequisite abilities needed to learn the topic, (b) compile and register the steps of learning activities and distinguish hierarchically arranged learning characteristics that can be demonstrated by participants educated so that the teacher can observe and measure it. (2) teachers can choose certain types of learning that are considered appropriate for learning mathematics topics to be taught.

Development of learning ability according to Gagne (Al-Mahiroh and Suyadi 2020, 88): (1) Multidescription, that is, learning to distinguish similar stimuli, for example the letters b and d; (2) Learning concepts, that is, learning to make simple responses, such as vowels, dead groups, etc; (3) Learning Principles, that is, learning the principles or rules of concepts.

Streams of cognitive psychology
Jean Piaget's Theory of Intellectual Development

Piaget is a Swiss psychologist whose formal educational background is philosophy and biology. Piaget put forward the Theory of Intellectual (cognitive) Development. According to Piaget there are four levels of Intellectual development. (Ufie 2020, 67): sensorimotor period at the age of 0 – 2 years, preoperative period at the age of 2 – 7 years, period of concrete operation at the age of 7 – 11 years and period of formal surgery at the age of 11 – 15 years.

The Theory of Learning from Jerome Bruner

The mental development of the child according to Bruner (Ni'amah and M 2021, 98) there are three stages, namely: (1) Enaktif stage, children carry out activities in an effort to understand the environment; (2) Iconic Stage, the child understands the world through images – verbal images and visualizations; (3) Symbolic stage, the child already has abstract ideas that are heavily influenced by language and logic.

Based on the results of his observations and experiments regarding learning activities – teaching mathematics, Bruner formulated four general theories about learning mathematics, namely: theorem of conceiving (contruction theorem), theorem of deterrence (notation theorem), theorem of distinction and diversity (contrast and variation theorem) and attribution theorem (connectivity theorem).

The theories of Psychology have helped a lot to form an Educational Foundation in which the child can learn effectively. The psychological foundation is very important because humans have different characters, so they need different theories to be applied in educational cases. Given the close relationship between these theories and education, modern teachers should study them and apply them in the classroom.

Understanding the foundations of educational psychology

To understand the characteristics of learners in childhood, adolescence, adulthood, and old age, educational psychology develops and applies theories of human development. Often described as the stage at which people graduate at maturity, developmental theories describe changes in mental abilities (cognition), social roles, moral reasoning, and beliefs about the nature of knowledge.

According to Pidarta(Erro et al. 2022, 66) "Psychology or the science of the soul is a science that studies the human psyche. The soul itself is a spirit in a state of physical control, which can be influenced by the surrounding nature. The human soul develops parallel to physical growth". Education always involves aspects of human psychology, so the psychological foundation of education is a foundation in the educational process that discusses various information about human life in general as well as symptoms related to personal aspects of humans at each stage of a certain developmental age to recognize and respond to humans in accordance with the stages of their developmental age which aims to facilitate the educational process.

Psychological forms of education

Psychological Developmentgan

There are three theories or approaches to development. The approaches in question are (Rosmalinda, Syahbana, and Nopriyanti 2021, 96): (1) Phasing approach. Individual development goes through certain stages. Each stage has special characteristics that are different from the characteristics at other stages; (2) Differential approach. This approach is viewed by individuals ashaving similarities – similarities and differences – differences. On this basis then people create groups. Children who have similarities are made into a group. Thus there are groups based on gender, intellect ability, talent, race, socioeconomic status, and so on; (3) Ipsative approach. This approach seeks to see the characteristics of each individual, it can be referred to as an individual approach. Looking at the development of a person individually.

Inthis context, the most implemented is the phasing approach. There are 2 types of phasing approaches, namely comprehensive and special. The comprehensive one will include all aspects of development as factors that are taken into account in structuring the stages of development, while those of a special nature only consider certain factors as the basis for arranging the stages of child development, for example the phasing of Piaget, Koglberg, and Erikson.

Developmental psychology according to Rouseau (Lynch and Prins 2021, 65) divides the child's development period into four stages, namely: (1) Infancy from 0 – 2 years is mostly physical development; (2) Childhood from 2 – 12 years which is stated to be a new development is like primitive human life; (3) Puberty from 12 – 15 years, characterized by the development of the mind and the willingness to adventure; (4) Adolesenary period from 15 – 25 years, sexual growth is prominent, social, heartfelt, and moral. This teenager has already begun to learn culture.

Psychology of Learning

According to Pidarta(Camellia, Kurnisar, and Dianti 2020, 125) learning is a relatively permanent change in behavior as a result of experience (not the result of development, the influence of drugs or accidents) and being able to carry it out on other knowledge and being able to communicate it to others.

Psychologically, learning can be defined as "an attempt made by a person to obtain a conscious change in behavior from the results of his interaction with the environment"(Mukkaromah and Vardia 2021, 91). This definition implies two meanings: First, that learning is an attempt to achieve a certain goal that is to obtain a change in behavior and Secondly, the change in behavior that occurs must be consciously.

From the understanding of learning above, the activities and efforts to achieve changes in behavior are seen as learning proses, while changes in behavior itself are seen as learning factors. This means that learning is essentially about two things, namely the learning process and learning outcomes.

Psychologists tend to use patterns of human behavior as a model that becomes the principles of learning. These learning principles are then commonly referred to as Learning Theory: (1) Classical learning theory can

still be used, among others, to memorize multiplication and train questions (Mental Discipline). Naturalist theory can be used in out-of-school education, especially lifelong education; (2) The theory of learning behaviorism is useful in developing real behaviors, such as being diligent, getting high scores, not fighting and so on; (3) Cognition learning theories are useful in studying complex materials that require understanding, to solve problems and to develop ideas (Camellia, Kurnisar, and Dianti 2020, 55).

Social Psychology
According to Hollander (1981) social psychology is a psychology that studies the psychology of a person in society, which combines the characteristics of psychology with social sciences to study the influence of society on individuals and between individuals (Zulaika and Purnomo 2021, 44).

The formation of first impressions of others has three main keys, namely: (1) The personality of that person. Perhaps we have heard about that person before or stories similar to that person, especially about his personality; (2) The behavior of the person. When you see the person's behavior after facing each other, then connect it with the stories that have been heard; (3) The background of the situation. The two data above are then associated with the situation at that time, so from the combination of the three data will come out the first impression of the person.

In the world of education, the positive first impressions raised by educators will give children the will and enthusiasm for learning. Motivation is also a social psychological aspect, because without a certain motivation a person is difficult to socialize in society. In this regard, educators have an obligation to explore the motivations of children to appear, so that they are happy to study at school. According to Klinger(Cahyono and Surjaningrum 2022, 83) the factors that determine learning motivation are: Individual interests and needs, Perception of difficulties of tasks, and Hope of success.

The contribution of educational psychology in the learning process
Contribution of Educational Psychology to Curriculum Development.
The study of educational psychology in relation to the development of educational curricula is mainly related to understanding aspects of behavior in the context of teaching and learning. (Harahap 2022, 66) Apart from the various schools of psychology that color education, in essence this psychological study pays attention to how educational inputs, processes and outputs can proceed without neglecting aspects of the behavior and personality of learners.

Psychologically, humans are unique individuals. Thus, psychological studies in curriculum development should pay attention to the uniqueness possessed by each individual, both in terms of intelligence level, ability, attitude, motivation, feelings and characterisctics – other individual characteristics.

The educational curriculum should be able to provide opportunities for each individual to be able to develop in accordance with their potential, both in terms of subject matter and delivery methods.

In particular, in the current context of education in Indonesia, the curriculum developed today is a competency-based curriculum, which in essence emphasizes efforts to develop knowledge, skills, and basic values that are reflected in the habits of thinking and acting. The habit of thinking and acting consistently and continuously allows a person to be competent, in the sense of having the knowledge, skills, and basic values to do something.

Thus in the development of a competency-based curriculum, psychological studies are mainly concerned with aspects of: (1) the ability of students to do things in various contexts; (2) the student's learning experience; (3) learning outcomes, and (4) standardization of student abilities (Amalia 2020, 30).

The Contribution of Educational Psychology to the Learning System
The study of educational psychology has given birth to various theories underlying the learning system. We know that there are a number of theories in learning, such as: classical conditioning theory, connectionism, operant conditioning, gestalt, power theory, cognitive theory and other learning theories. Despite the controversy that accompanies the weaknesses of each of these theories, in fact they have made a significant contribution to the learning process.

In addition, the study of educational psychology has also given birth to a number of principles that underlie Nasution's learning activities (Nasution and Hanina 2021, 76) highlight thirteen principles in learning, namely: (1) In order for a person to truly learn, he must have a goal; (2) That goal must arise from or relate to the needs of his life and not because it is forced by others; (3) The person must be willing to experience various kinds of difficulties and strive diligently to achieve the goals that are valuable to him; (4) That learning must be evident from the change in his behavior; (5) In addition to the main goal to be achieved, it also obtains sideline results; (5) Learning is more successful by doing or doing; (6) A person learns as a whole, not only intellectual aspects

but also includes emotional, social, ethical aspects and so on; (7) A person needs help and guidance from others; (8) To learn, insight is needed. What is learned must be truly understood and learned not just memorizing loose facts verbalistically; (9) In addition to pursuing actual learning goals, a person often pursues other goals; (10) Learning is more successful, if the effort gives a pleasant success; (11) Deuteronomy and practice are necessary but must be preceded by understanding; (12) Learning is only possible if there is a willingness and desire to learn.

The Contribution of Educational Psychology to the Assessment System
Educational assessment is one of the important aspects of education to understand how far the success rate of education is. Through psychological studies we can understand what behavioral developments students get after participating in certain educational or learning activities.

In addition, psychological studies have made a real contribution in measuring the potential possessed by each learner, especially after the development of various psychological tests, both to measure the level of intelligence, aptitude and personality of other individuals. (Huges and Nurjaman 2022, 63) We know a number of psychological tests that are currently still widely used to measure the potential of an individual, such as the Multiple Aptitude Test (MAT), Differential Aptitude Test (DAT), EPPS and other measuring instruments.

The understanding of intelligence, aptitudes, interests and other aspects of personality through psychological measurement, has an important significance for the efforts of the development of the educational process of the individual in question so that in turn an optimal development of the individual can be achieved. Therefore, how important the mastery of educational psychology is for teachers in carrying out their professional duties.

The condition of children who were not yet adults until they became adults means experiencing changes, because they are guided, and guidance activities are efforts or interaction activities between educators, students and the environment. The alteration is a symptom that arises psychologically. It is in this relationship that educators must be able to understand the changes that occur in individuals, both their development and growth. On that basis, educators also need to understand the foundation of education from a psychological point of view. (Akbar 2020, 55)

Thus, psychology is one of the main foundations of education. Between psychology and education is a very difficult unit to separate. The subject and object of education is human beings, while psychology examines the psychological symptoms of human beings. Thus the two become an inseparable whole.

Conclusion

Based on the discussion above, it can be concluded thatthe psychological aspect of education is a foundation in the educational process that discusses various information about human life in general and symptoms related to personal aspects of humans at each stage of a certain developmental age to recognize and respond to humans in accordance with the stages of their developmental age which aims to facilitate the educational process . The foundational forms of educational psychology include, Psychological Development, learning, social. In its development, the psychological foundation of education has a role as a curriculum development in the learning and assessment system.

The suggestions we can give to readers are as follows: (1) Educators are required to apply the values of the psychological foundation of education in the teaching and learning process; (2) Educators pay more attention to the foundation of educational psychology that suits the learners; (3) That way, the development of students is expected to develop optimally and lead in the intended direction.

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