

Educational psychology

Psychology, Motivation



Educational Psychology Introduction Educational psychology is the study of how humans learn in educational settings, the effectiveness of educational treatments, the psychology of teaching, and the social psychology of schools as organizations. Although the terms "educational psychology" and "school psychology" are often used interchangeably, researchers and theorists are likely to be identified as educational psychologists, whereas practitioners in schools or school-related settings are identified as school psychologists.

Educational psychology is concerned with the processes of educational attainment among the general population and sub-populations such as gifted children and those subject to specific disabilities. Educational psychology can in part be understood through its relationship with other disciplines. It is informed primarily by psychology, bearing a relationship to that discipline analogous to the relationship between medicine and biology. Educational psychology in turn informs a wide range of specialities within educational studies, including instructional design, educational technology, curriculum development, organizational learning, special education and classroom management. Educational psychology both draws from and contributes to cognitive science and the learning sciences. (Lucas, Blazek, & Raley, 2005).

Brief Historical Background of Educational Psychology Plato and Aristotle

Grinder traces the origins of Educational Psychology to Plato who believed that all knowledge is innate at birth and is perfectible by experiential learning during growth. Aristotle, Plato's student, was the first to observe that "association" among ideas facilitated understanding and recall. He believed that comprehension was aided by contiguity, succession, similarity and contrast. Locke In the late 1600's, John Locke advanced the hypothesis that

people learn primarily from external forces. He believed that the mind was like a blank tablet (tabula rasa), and that successions of simple impressions give rise to complex ideas through association and reflection. Locke is credited with establishing "empiricism" as a criterion for testing the validity of knowledge, thus providing a conceptual framework for later development of experimental methodology in the natural and social sciences. Comenius John Comenius (1592-1670) was a Moravian clergyman, and the first person to recognize the age differences in children's ability to learn. He also noticed that children learn more effectively when they are involved with experiences that they can assimilate. Rousseau In France, during the mid 18th century, Jean Jacques Rousseau put forth a new theory of educational pedagogy. In his famous work *Emile*, published in 1762, he explained his views on the benefits of health and physical exercise, and the belief that knowledge acquisition occurs through experience and that reason and investigation should replace arbitrary authority. He proposed educating children according to their natural inclinations, impulses and feelings.

Pestalozzi Some people consider Johann Heinrich Pestalozzi (1746-1827) to be the first applied educational psychologist. He was one of the first educators who attempted to put Rousseau's teaching into practice and teach children by drawing upon their natural interests and activities. Spencer Herbert Spencer helped transform sentiments about pedagogy into systematic theory and method through his emphasis on the scientific study of the educational process. Herbart Johann Friedrich Herbart is acknowledged as the "father of scientific pedagogy" (in Grinder, 1989). He was the first scientist to distinguish instructional process from subject matter. According to

Herbart, interest develops when already strong and vivid ideas are hospitable towards new ones, thus past associations motivate apperception of current ones. Herbartianism, in predicting that learning follows from building up sequences of ideas important to the individual, gave teachers a semblance of a theory of motivation. Wundt Herbartian psychology led to the founding of Wilhelm Wundt's laboratory in 1879. Wundt extended Herbart's theory of apperception into a theory of consciousness, whereby he sought to explain associations among mental processes. Titchener One of Wundt's students, Edward Bradford Titchener (1867- 1927) was one of the first eminent Educational Psychologists to practice in America. He was director of the psychology laboratory at Cornell University, and he regarded the study of the generalized mind to be the only legitimate purpose of psychological investigation. He focused on such higher mental processes as concept formation and argued that introspection is a valid form for interpreting great variety of sensations and feelings. Dewey In 1896, John Dewey launched an attack against Titchener and his ideas. Dewey argued that a stimulus and the response it elicits constitute a reflex arc, and that that arc should be the minimal unit of analysis, and its function should be the basis for understanding it. Dewey believed that individual address aspects of their environment, not because these features possess the qualities of being interesting, but because they are viewed instrumentally as ways of realizing a purpose. This belief gave rise to the theory of "functionalism". Functionalism encouraged developments in mental testing, investigation of individual differences and studies of adaptive behavior. Thorndike Edward L. Thorndike (1874-1949) disdained what he considered to be intuitive,

common sense psychology. He agreed with functionalism, but preferred to be identified as a "connectionist" because he sought to explain learning in terms of stimulus-response connections. He is credited with establishing the "Law of Effect" to account for the strengthening or weakening of connections as a result of experience. In 1914 Thorndike completed the three volume series, *Educational Psychology*. For nearly fifty years the field of Educational Psychology embraced the theory of associationism without question. Cognitive Psychology By the mid 1950s cognitive views of learning gained a ascendancy over the stimulus-response approach. Now questions pertaining to the role of mental phenomenon in learning and development were resurrected. Thus, with the renewed research interest into how individuals acquire, retain, recall and transform information, investigations of higher mental processes achieved unprecedented levels of sophistication and "the mind is once again at the forefront of theory and research in contemporary psychology". (Grinder, 1989, p. 12)

Nature and Scope of Educational Psychology

In this age of science and technology, psychology has been considered as one of the youngest, yet one of the most influential sciences. It has influenced education in many different ways and has give a new turn; a psychological turn to the human mind. For a skilful teacher in this day and age, a great deal of knowledge of educational psychology is highly indispensable. The subject psychology has two aspects pure and applied. Pure psychology formulates techniques for the study of human behaviour, which finds the practical shape in its applied aspects, i. e. branches of applied psychology like clinical psychology, crime psychology, industrial psychology, occupational psychology and educational psychology

Educational Psychology as a Branch of Applied Psychology As discussed above educational psychology is nothing but one of the branches of applied psychology. It is an attempt to apply knowledge of pure psychology to the field of education. It consists of application of psychological principles and techniques to human behaviour in educational situations. In other words, Educational Psychology is a study of the experience and behaviour of the learner in relation to educational environment. In order to develop a clear understanding of the term educational psychology it is necessary to understand the meaning of psychology and education separately. Meaning of the Term Education Education is an activity, which goes on in the society. It attempts to develop the personality of an individual and then prepares him for membership in a society. " Man with education would still be living just like an animal. It is education, which transforms man from a ' two legged animal' into human. It helps him to behave like a man and prevents him from behaving like an animal. Any modification brought about in the behaviour of an individual as a result of his interaction with the environment constitutes learning. " Thus modification of behaviour of an individual for healthy social adjustment in the society is education. Educational Psychology Defined: 1. Crow and Crow: " Educational psychology describes and explains the learning experiences of an individual from birth through old age. " 2. Charles E. Skinner: " Educational Psychology is that branch of psychology which deals with teaching and learning. " 3. Trow : " Educational Psychology is the study of psychological aspects of educational situations. " 4. Stephen: " Educational Psychology is the systematic study of the educational growth and development of a child. " 5. F. A. Peel: " Educational Psychology is the

science of education. " 6. Walter B. Kolesnik: " Educational Psychology is the study of those facts and principles of psychology which help to explain and improve the process of education. " 7. Anderson : " Educational Psychology is a subject to be studied, an area or field of knowledge, a set of application of laws and principles from a wide field of knowledge to a social process a set of tools and techniques, and a field of research. While General psychology is a pure science, Educational psychology is its application in the field of education with the aim of socialising man and modifying his behaviour. " 8. Judd: " Educational Psychology is the science which explains the changes that take place in the individuals as they pass through the various stages of development. " Nature of Educational Psychology - Educational Psychology is a Positive and not a normative science - Educational Psychology is a Behavioural Science - Educational Psychology is an Applied Science - Educational Psychology is Human Experimental Psychology - Educational Psychology is a Social Science - Educational Psychology is a Counselling Psychology - Educational Psychology is an Educational Science Scope of Educational Psychology Scope means, the limits of a particular subject in the field of its operation, what is to be included in its or what subject matter does it contain comes under its scope. Educational psychology, as discussed so far, deals with the behavior of the learner in educational situation only. Therefore, it becomes imperative that educational psychology should limit itself within the four walls of the teaching learning process and educational environment. It must try and solve the problems evolving in actual teaching-learning situations and help the individuals involved in this process. The psychologists who deal with the

problems of education are concerned with what to teach, when to teach and how to teach. A famous psychologist, Lindgren points out that educational psychology is concerned with understanding the learner, the learning process and the learning situation. The scope of educational psychology may be discussed under the following heads: 1. The Learner (pupil) 2. The learning process 3. The learning situation 4. The learning experience 5. The teacher

1. The Learner The term learner applies to students who individually or collectively participate in the educational programmes. These students taken collectively constitute the class. In fact the behavior of the class is none other than the behavior of the students. There can be no teaching without there being a learner. Therefore, Sir John Adams once remarked “ Teacher teaches John Latin. Teacher must have the knowledge of John, before he teaches Latin. Since the knowledge of John is psychology, teacher must study psychology. ” The teaching of Latin without the knowledge of John will not be effective. Johnny (the learner) thus becomes the centre of the teaching — learning process. From the psychological point of view Johnny is a child and he should be considered not as a small man but as a man in the making. His needs, ambitions, fears and other emotions are not the same as those of an adult. Treat him therefore as a developing organism which is a unique and not a small model of an adult. Two learners of the same age differ from one another in a number of ways. When one has a liking for music and dislike for mathematics and science another may have dislike for mathematics and science. Hence, while preparing the curriculum for the learners we must take into consideration the individual differences that exist among the learners. However, intelligent is a learner may be he

cannot become successful in life if he lacks motivation. Hence motivating the learner is very important in the classroom situation from psychological point of view. Not only motivation but also the developmental characteristics, personality, mental health, individual difference and intelligence etc. of the learner come under the scope of educational psychology.

2. The Learning Process Learning is the process by which we acquire and retain attitudes, knowledge, understanding, skills and capabilities that cannot be attributed to inherited behavior patterns or physical growth. Capacity for learning is related to innate physiological factors. Rate of learning depends on both inherited and environmental factors. Each type of learning goes by a different name

1. Affective learning has to do with feelings and values and therefore influences our attitudes and personalities.
2. Cognitive learning is achieved by mental processes such as reasoning, remembering and recall. It helps in problem solving, developing new ideas and evaluation.
3. Psychomotor learning has to do with the development of skills which require efficient coordination between our brains and muscles, as when we read or write or carry out physical skills such as balancing, skipping or juggling.

There are two main ways of learning

1. Deductive learning: This describes the process by which a learner is presented with a hypothesis or general principle and applies a number of tests to it to discover whether it is true or not.
2. Inductive learning: This describes the process which is the reverse of deductive learning. In it, the learner examines related matters to see whether any general conclusions can be drawn. A number of theories have been put forward to explain how we learn. All of them have conceived of learning as a process that progresses in stages.
3. The Learning Situation It is difficult to

imagine any period of our lives situations, when we are not learning something, even though we are not always aware that we are learning. While walking down a street on any ordinary day, we continually modify our behavior (Learning is commonly refers to the modification of behavior through experience) in response to environment. Thus learning situation covers all life experiences that modify our behavior. From academic point of view learning situation refers to the classroom setting, which is composed of pupils, a teacher and a room. All have unique characteristics. In addition to these features, we also have the behavior of teachers and pupils. Behavior includes not only overt physical activity such as talking and doing, but also cognitive processes like cognizing, thinking and evaluating. In the classroom and the school, the teacher is to help bring about desirable changes in pupil behaviour. Through the teacher's interaction with students and students' interaction with one another, many desired interests, motives, social skills, and many outcomes in the cognitive and the psychomotor domains are acquired more efficiently than if there were no partial interaction. 4. The Learning Experience Although Educational psychology does not connect itself directly with the problem of what to teach or connect itself directly with the problem of what to teach or what learning experiences are to be provided for the learner yet it has the full responsibility of suggesting techniques of acquiring the learning experiences. Once the task of Educational Philosophy to decide the aims and objectives of a piece of instruction at a particular stage is finished the need of educational psychology is felt. At this stage, educational psychology helps in deciding what learning experiences are desirable at what stage of the growth and development of the learner so that

these experiences can be acquired with a greater ease and satisfaction. In this area Educational Psychology has the subject matter which deals with the knowledge and principles of psychology which facilitates the selection of the desirable learning experiences for the learner.

5. The Teacher It is not enough for a carpenter to be good at sawing, planing and polishing wood, because every kind of wood has different characteristics and behaves in different ways under his tools. The skilled carpenter needs to know about trees, their variety, their characteristics and how to make the best use of them. So is with the teacher. Teaching skills alone are not sufficient. He must understand the children as learners. He must try to recognize those characteristics that are of significance in helping each child to learn more effectively. Any teacher who knows anything about learners is aware that growing up is more than growing bigger. Children are not little adults nor are adults big babies. It is essential, therefore, that teachers who are closely concerned with children during that period in life when some of the most important developments take place should know as much as possible about the process of growing and developing. One of the first things we notice when we try to understand the learners are how differently they are: how each develops at his own pace and along his own path of progress. No child is typical; each one is in his own way unique. Yet, like the doctor who must learn to recognize which symptoms are serious and which are trivial among his patients' complaints, so the teacher must learn to distinguish between those variations that are normal and those that may indicate a child in need of special attention. Understanding the learner from psychological point of view is an attempt to find out as much as possible about a particular learner

by spending some time with him and learning about his physical, mental and personality characteristics and relevant facts about the environment in which he is growing up. Recording such child studies is important so that the information can be used in wider studies or, where necessary, for helping a child with problems.

6. Positive Science Education psychology is a positive science of human behavior. In the role of science its function is to describe, control and predict human behavior.

7. Applied Science Education psychology is one of the applied branches of psychology. It is an applied behavioral science. It studies the behavior of the educand (learner) in relation to learning.

8. Scientific Approach Educational psychology adopts scientific approach. It uses scientific methods. Obviously, the nature of Educational Psychology is scientific but this statement must be analyzed to discover the nature of science and its characteristic features.

9. Problem of behavior Education psychology studies the behavior of the learner in learning situations. It studies the psychological as well as the physiological behavior of the learner. Psychological basis of behavior are instincts, emotions, sentiments, suggestion, sympathy, imitation and play etc. Physiological basis of behavior are nervous system and glands etc. Educational psychology studies all these psychological basis of behavior.

10. Problems of individual differences Educational psychology studies individual differences and suggests ways and means to provide education to all types of pupils. No two individuals are alike. Individuals differ physically and psychologically. Individual differences are caused due to differences in capacities and capabilities, potentialities and propensities, abilities and intelligence, attitudes and aptitudes, interests and sentiments,

temperaments and traits, age and sex etc. It must be noted that individual differences are mainly caused by heredity and environment. Hence educational psychology studies all these areas.

11. Developmental stages Educational psychology studies the nature of growth and development and general characteristics of physical, mental, emotional and social development at the various stages i. e., at the stage of infancy, late childhood and adolescence.

12. Personality and intelligence Educational psychology also studies nature, development and assessment of personality and intelligence. Adjustment problems with special reference to gifted, backward, handicapped, problem and delinquent children are also studied by educational psychology.

13. Measurement and evaluation Measurement and evaluation is another important field of educational psychology. It gives new and new techniques and tests for measuring intelligence, personality, aptitudes, interests and achievements etc. It is educational statistics which helps us in measurement and evaluation.

Conclusion Educational psychology is psychology in relation to education. It deals with the behavior of the individual in various educational environments. Psychology studies the behavior of the individual in different conditions and situations. Therefore, scope of general psychology is broader than that of educational psychology, which is comparatively limited. Educational psychology deals with the child as a whole-his physical, mental, emotional and social development at various stages. Such development is resulted by heredity and environment, different biological, social and cultural factors. Hence all these aspect and factors come under the purview of educational, psychology. Learning is the key-concept in educational psychology. It is so important and broad-based that

educational psychology is also called learning psychology. The learning process, learning and maturation, nature and conditions of learning, factors influencing; learning, motivation, attention and interest, various kinds of learning and laws of learning come under the scope of educational psychology. The psychological principles underlying various methods of teaching, educational innovations and experiments, educational objectives, mental health and hygiene, special provisions for slow- learners, gifted, handicapped and deprived children are usefully applied to educational development. These are, therefore, part and parcel of educational psychology. The psychological tools and techniques, methods and approaches are profitably used by the educational psychologists for undertaking research studies and experiments in various fields. New methods and techniques are also developed by them for collection, interpretation and analysis of data. All these constitute the scope of educational psychology.