

EDUCATIONAL PSYCHOLOGY

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## Session 1

### Educational Psychology

Educational psychology is the branch of psychology that deals with the scientific study of human learning. The study of learning processes, both cognitive and behavioral, allows researchers to understand individual differences in intelligence, cognitive development, motivation, self-regulation, self-concept, affect, and personality, as well as their role in learning. The field of educational psychology relies heavily on quantitative methods, including testing and measurement, to enhance educational activities related to instructional design, classroom management, and assessment, which serve to facilitate learning processes in many educational settings across the lifespan.<sup>[1]</sup>

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](#). It is also informed by [neuroscience](#). 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](#). In universities, departments of educational psychology are usually housed within faculties of education, possibly accounting for the lack of representation of educational psychology content in introductory psychology textbooks.<sup>[2]</sup>

The field of educational psychology involves the study of memory, conceptual processes, and individual differences (via cognitive psychology) in conceptualizing new strategies for learning processes in humans. Educational psychology has been built upon theories of Operant conditioning, functionalism, structuralism, constructivism,

humanistic psychology, Gestalt psychology, and information processing.<sup>[1]</sup>

Educational Psychology has seen rapid growth and development as a profession in the last twenty years.<sup>[3]</sup> School psychology began with the concept of intelligence testing leading to provisions for special education students, whom could not follow the regular classroom curriculum in the early part of the 20th century.<sup>[3]</sup> However, "School Psychology" itself has built a fairly new profession based upon the practices and theories of several psychologists among many different fields. Educational Psychologists are working side by side with psychiatrists, social workers, teachers, speech and language therapists, and counselors in attempt to understand the questions being raised when combining behavioral, cognitive, and social psychology in the classroom setting.<sup>[3]</sup>

## History

### Early years

Educational Psychology is a fairly new and growing field of study. Though it can date back as early as the days of Plato and Aristotle, it was not identified as a specific practice. It was unknown that everyday teaching and learning in which individuals had to think about individual differences, assessment, development, the nature of a subject being taught, problem solving, and transfer of learning was the beginning to the field of educational psychology. These topics are important to education and as a result it is important to understanding human cognition, learning, and social perception.<sup>[4]</sup>

### Plato and Aristotle

Educational psychology dates back to the time of [Aristotle](#) and [Plato](#). Plato and Aristotle researched individual differences in the field of education, training of the body and the cultivation of psycho-motor skills, the formation of good character, the possibilities and limits of moral education. Some other educational topics they spoke about were the effects of music, poetry, and the other arts on

the development of individual, role of teacher, and the relations between teacher and student.<sup>[4]</sup> Plato saw knowledge as an innate ability, which evolves through experience and understanding of the world. Such a statement has evolved into a continuing argument of nature vs. nurture in understanding conditioning and learning today. [Aristotle](#) observed the phenomenon of "association." His four laws of association included succession, contiguity, similarity, and contrast. His studies examined recall and facilitated learning processes <sup>[5]</sup>

### **[John Locke](#)**

[John Locke](#) followed by contrasting Plato's theory of innate learning processes. Rather, he introduced the term "tabula rasa" meaning "blank slate." Locke explained that learning was primarily understood through experience only, and we were all born without knowledge. Locke introduced this idea as "empiricism," or the understanding that knowledge is only built on knowledge and experience.

### **Before 1890**

Philosophers of education such as Juan Vives, Johann Pestalozzi, Friedrich Fröbel, and Johann Herbart had examined, classified and judged the methods of education centuries before the beginnings of psychology in the late 1800s.

### **[Juan Vives](#)**

[Juan Vives](#) (1493–1540) proposed induction as the method of study and believed in the direct observation and investigation of the study of nature. His studies focus of humanistic learning, which opposed scholasticism and was influenced by a variety of sources including philosophy, psychology, politics, religion, and history.<sup>[6]</sup> He was one of the first to emphasize that the location of the school is important to learning.<sup>[7]</sup> He suggested that the school should be located away from disturbing noises; the air quality should be good and there should be plenty of food for the students and teachers.<sup>[7]</sup> Vives emphasized the importance of understanding individual differences of the students and suggested practice as an important tool for learning.<sup>[7]</sup>

Vives introduced his educational ideas in his writing, "De anima et vita" in 1538. In this publication, Vives explores moral philosophy as a setting for his educational ideals; with this, he explains that the different parts of the soul (similar to that of Aristotle's ideas) are each responsible for different operations, which function distinctively. The first book covers the different "souls": "The Vegetative Soul;" this is the soul of nutrition, growth, and reproduction, "The Sensitive Soul," which involves the five external senses; "The Cogitative soul," which includes internal senses and cognitive facilities. The second book involves functions of the rational soul: mind, will, and memory. Lastly, the third book explains the analysis of emotions.<sup>[8]</sup>

### ***Johann Pestalozzi***

[Johann Pestalozzi](#) (1746–1827), a German educational reformer, emphasized the child rather than the content of the school.<sup>[9]</sup>

Pestalozzi fostered an educational reform backed by the idea that early education was crucial for children, and could be manageable for mothers. Eventually, this experience with early education would lead to a "wholesome person characterized by morality" <sup>[10]</sup>

Pestalozzi has been acknowledged for opening institutions for education, writing books for mother's teaching home education, and elementary books for students, mostly focusing on the kindergarten level. In his later years, he published teaching manuals and methods of teaching.<sup>[10]</sup>

During the time of [The Enlightenment](#), Pestalozzi's ideals introduced "educationalisation." This created the bridge between social issues and education by introducing the idea of social issues to be solved through education. Horlacher describes the most prominent example of this during The Enlightenment to be "improving agricultural production methods." <sup>[10]</sup>

### ***Johann Herbart***

Johann Herbart (1776–1841) is considered the father of educational psychology.<sup>[11]</sup> He believed that learning was influenced by interest in the subject and the teacher.<sup>[11]</sup> He thought that teachers should consider the students existing mental sets, what they already know, when presenting new information or material.<sup>[11]</sup> Herbart came up

with what is now known as the formal steps. The 5 steps that teachers should use are:

1. Review material that has already been learned by the teacher<sup>[11]</sup>
2. Prepare the student for new material by giving them an overview of what they are learning next<sup>[11]</sup>
3. Present the new material.<sup>[11]</sup>
4. Relate the new material to the old material that has already been learned.<sup>[11]</sup>
5. Show how the student can apply the new material and show the material they will learn next.<sup>[11]</sup>

## 1890–1920

[William James](#)<sup>[edit]</sup>



William James

The period of 1890–1920 is considered the golden era of educational psychology where aspirations of the new discipline rested on the application of the scientific methods of observation and experimentation to educational problems. From 1840 to 1920 37 million people immigrated to the United States.<sup>[6]</sup> This created an expansion of elementary schools and secondary schools. The increase in immigration also provided educational psychologists the

opportunity to use intelligence testing to screen immigrants at Ellis Island.<sup>[6]</sup> Darwinism influenced the beliefs of the prominent educational psychologists.<sup>[6]</sup> Even in the earliest years of the discipline, educational psychologists recognized the limitations of this new approach. The pioneering American psychologist William James commented that:

Psychology is a science, and teaching is an art; and sciences never generate arts directly out of themselves. An intermediate inventive mind must make that application, by using its originality".<sup>[12]</sup>