

Information Processing Theory

Encyclopedia Article

Information Processing Theory

The following sections of this BookRags Literature Study Guide is offprint from Gale's For Students Series: Presenting Analysis, Context, and Criticism on Commonly Studied Works: Introduction, Author Biography, Plot Summary, Characters, Themes, Style, Historical Context, Critical Overview, Criticism and Critical Essays, Media Adaptations, Topics for Further Study, Compare & Contrast, What Do I Read Next?, For Further Study, and Sources.

(c)1998-2002; (c)2002 by Gale. Gale is an imprint of The Gale Group, Inc., a division of Thomson Learning, Inc. Gale and Design and Thomson Learning are trademarks used herein under license.

The following sections, if they exist, are offprint from Beacham's Encyclopedia of Popular Fiction: "Social Concerns", "Thematic Overview", "Techniques", "Literary Precedents", "Key Questions", "Related Titles", "Adaptations", "Related Web Sites". (c)1994-2005, by Walton Beacham.

The following sections, if they exist, are offprint from Beacham's Guide to Literature for Young Adults: "About the Author", "Overview", "Setting", "Literary Qualities", "Social Sensitivity", "Topics for Discussion", "Ideas for Reports and Papers". (c)1994-2005, by Walton Beacham.

All other sections in this Literature Study Guide are owned and copyrighted by BookRags, Inc.

Contents

Information Processing Theory Encyclopedia Article.....	1
Contents.....	2
Information Processing Theory.....	3

Information Processing Theory

A strategy for the study of cognitive development.

Information processing theory was developed to help **social learning** theorists and others understand how humans learn and solve problems. In information processing theory, the human being is analogous to a computer. In applying information processing theory to child development, researchers examine the maturation of mental processes to explain changes in problem-solving behavior, decision-making, information gathering and storage, and other cognitive processes.

In 1954, D. E. Broadbent formulated the first information processing theory, known as Broadbent's theory of attention. Broadbent based his theory on research that involved a listening task: subjects in Broadbent's study were presented with pairs of digits, one in each ear, and later asked to recall them. Subjects found it easier to repeat the numbers if they could first list all digits presented to one ear, and then list the digits presented to the other ear. The task of integrating the two lists was much more difficult.

In the early 1980s, information processing pioneer Robert Siegler suggested that children's ability to reason improved with age, and that an older child is able to draw upon a greater variety of mental processes than a younger child.

Information processing theorists liken the sensory input to humans to the input functions of a computer. The processes of thinking—perception, problem solving, and **memory**—are similarly compared to the computer's data reading, data processing, and storage capabilities. The actions taken by humans are likened to a computer output.

While the computer analogy is limited and limiting, information processing theory has provided a structure for the study of cognitive processes in children.