

Learning to make mayonnaise and learning about democracy probably seem as though they have little in common. However, both involve learning and making use of information, information that may not always be meaningful to learners, even when, as in the case of mayonnaise, the result is highly familiar.

Learning information meaningfully has roots as a field of study in the verbal learning tradition begun by Ebbinghaus (1885; see Chapter 1). Whereas Ebbinghaus believed that human learning and memory should be uncontaminated by old associations or meaning, others, such as David P. Ausubel, thought that meaning was at the very core of cognitive experience. It made no sense to Ausubel, an educational psychologist, to study learning with materials so bereft of meaning as the nonsense syllables invented by Ebbinghaus and adopted by many cognitive psychologists. Ausubel preferred to use prose, or textual materials of some length, because text passages more closely approximate the kinds of learning materials students encounter in actual classrooms.

Ausubel developed a theory of meaningful learning on a course parallel with and essentially unaffected by the cognitive information-processing theory discussed in the previous chapter. Although he regarded the human nervous system as a "data-processing and storage mechanism" (Ausubel, 1965, p. 8), Ausubel did not consider as cognitive theory the computer models of cognition being developed at the time by Newell, Simon, and Shaw (1958).

Ausubel also considered his work, at least initially, to be fundamentally different from the thrust of schema theory, which began to draw the attention of cognitive scientists at about the same time Ausubel was publishing. As the concept of schema has developed in the cognitive literature, however, it is similar to Ausubel's position, and in 1977, Richard Mayer proposed a synthesis of verbal learning research from a variety of perspectives that included schema theory and Ausubel's meaningful learning theory.

Today, Ausubel's theory is not considered particularly current, whereas the concept of schema has retained an active position in learning research and theory. Nonetheless, there are several aspects of Ausubel's meaningful learning theory that have become a standard part of educational practice. Moreover, the emphasis on understanding that characterizes Ausubel's work is gaining ground in other approaches to instruction, although with a slightly different twist. "Understanding... is knowledge in thoughtful action. This would be no more than a philosophical point if it could be taken for granted that the acquisition of knowledge brought about understanding like the caboose of a train" (Perkins & Unger, 1999, p. 95). Ausubel wrote as though he did take it for granted that understanding automatically followed knowledge. For him, that is what meaningful learning was all about. However, subsequent research has shown that transfer, or use of prior learning in new or related contexts, is by no means as assured as Ausubel might have believed.

This chapter therefore and concludes with practical on teaching for understanding judge their competing claim plain that theories presented

Ausubel's Meaningful

Meaning, according to Ausubel, is not only inside the learner. He argued that learners might experience meaning when learners actively interact with experience to gain meaning, reception learning (Ausubel, Novak, & Hanesian, 1978).

As a means of differentiating classrooms, Ausubel (1961) distinguished between reception learning, considered important because it is a type of learning in which the learner is therefore required to be available for later use. It is required to "rearrange a given cognitive structure, and reorganize it such a way as to create a new relationship. After this process is completed just as in reception learning.

Reception learning occurs in expository instruction rather than discovering it for oneself. Principles (often with a definition of these principles) and people's definition and examples are expected to understand and facilitate discovery learning, which they derive their own.

Although discovery learning (e.g., in laboratories) is discussed in Chapter 7 and Chapter 8, it does not constitute an efficient learning method in a democratic discipline" (Ausubel, 1961, p. 10).