

2. Does the organizer provide a means of relating unfamiliar material to familiar, existing knowledge?
3. Is the organizer learnable, i.e., is it easy for the particular learner to acquire and use?
4. Would the learner fail to normally use an organizing assimilative set for this material, e.g., due to stress or inexperience? (Mayer, 1979, p. 382)

Research on the advance organizer since Mayer's recommendations were published has resulted in greater emphasis on the learners' prior knowledge (e.g., Sui, 1986; Mannes & Kintsch, 1987). Learners must have necessary prior knowledge for the organizer to activate, and the organizer must draw explicit connections between old and new topics (West, Farmer, & Wolff, 1991). Synthesizing Ausubel's ideas with the results of more recent research, West et al. (1991) suggested the following procedures for constructing advance organizers:

1. Examine the new lesson or unit to discover necessary prerequisite knowledge. List.
2. Reteach if necessary.
3. Find out if students know this prerequisite material.
4. List or summarize the major general principles or ideas in the new lesson or unit (could be done first).
5. Write a paragraph (the advance organizer) emphasizing the major general principles, similarities across old and new topics. Examine examples in this text. Use them as models.
6. The main subtopics of the unit or lesson should be covered in the same sequence as they are presented in the advance organizer. (p. 125)

As can be seen in Step 5 and in the example provided in Box 4.1, West et al. have also emphasized the verbal (as opposed to visual) nature of advance organizers. Box 4.2, however, illustrates how visual material may serve effectively as an advance organizer. In this example are two diagrams I have successfully used to introduce different learning theories. These two metaphors tap what individuals know about black boxes and computers and map these onto the major concepts of behaviorism and cognitive information processing. In the former, for example, no reference is made to events or processes inside the learner. In the latter, by contrast, specific hypotheses are made to suggest that such processes are akin to what computers do with information.

Schema Signals. Like Ausubel, schema theorists recognized the importance of activating prior knowledge in learners as they engage in new learning. In reading, for example, comprehension and memory for what is read are facilitated when learners know and can access a relevant schema. This appears to

BOX 4.1 • Advance Organizer of the U.S. Government

Assume that Mr. Ames now completed their States. As a part of the government—executive, legislative, and judicial—organizer, these branches of the United States government. In our unit on the three branches in the federal government. The primary function of laws, whereas the main purpose of the courts is to protect citizens' rights under the Constitution. In the Kingdom, we will learn about the executive, legislative, and judicial, with

(From West, Farmer, & Wolff, 1991)

be true not only for subjects well. Many stories in Western culture, which include the structure, which includes the resolution of some problems and narrative schemas. Events (Kintsch, 1976, 1977) are often used to describe the structure of the text. (Kintsch, Johnson, & DeForest, 1985)

People may also describe scientific or technical articles. Most of the research articles are organized into the problem, introduction to the problem, investigation, results, and discussion. The structure of the text is often a listing, comparison/contrast, or solution (Armbruster, 1983). The structure of the text is often developed for various literatures.

In Chapter 3, the research on the organization to readers. Not only is the organization of the text an important information, but the organization of the text is also an important information. On the basis of the research, the organization of the text is qualified and expanded. The organization of the text is a structure of text material. The organization of the text is when the subject matter is understood more of what the text is about. (Varnhagen & Gold, 1985)