

calculation. Since correlatively subsumed details should have modified the learner's overall understanding of the concept, forgetting them to this degree would be a true loss of knowledge.

Finally, it is important to note the difference between forgetting after rote learning and forgetting after meaningful learning. Despite the fact that information in both cases becomes irretrievable, there is still a net gain in the cognitive structure following meaningful learning. The concept or proposition that provided anchorage for meaningful learning is generally more differentiated than it was previously. Thus, as Ausubel (1963b) put it, there is "memorial residue of ideational experience," which enables the concept or proposition to be "more functional for future learning and problem-solving occasions" (p. 218).

Readiness for Learning

In the generally accepted sense of the term, learning readiness refers to a learner's developmental level of cognitive functioning. It is this cognitive maturity that is assumed to determine the extent to which learners are capable of learning at various levels of abstraction within a subject matter discipline. While not discounting the impact this type of readiness may have on learning, Ausubel (1963b) and Ausubel et al. (1978) emphasized readiness as a function of previously acquired subject matter knowledge. "If [Ausubel] had to reduce all of educational psychology to just one principle, [he] would say this: The most important single factor influencing learning is what the learner already knows. Ascertain this and teach him accordingly" (Ausubel et al., 1978, p. 163).

Readiness in this sense, then, depends upon both the substantive content in the learner's cognitive structure and its organizational properties. In the first place, experts in a subject matter simply have a lot more extant knowledge than do novices in the subject. The idea that extensive background knowledge facilitates subsequent learning has been consistently demonstrated (e.g., Ausubel & Fitzgerald, 1961, 1962; Tobias, 1976; Glaser, 1984). But the organization of knowledge also influences subsequent learning.

If cognitive structure is clear, stable, and suitably organized, accurate and unambiguous meanings emerge and tend to retain their dissociability strength or availability. If, on the other hand, cognitive structure is unstable, ambiguous, disorganized, or chaotically organized, it tends to inhibit meaningful learning and retention. (Ausubel et al., 1978, p. 164)

It follows from the previous argument that learners with poorly organized cognitive structures in a subject matter should be aided in learning by materials that make clear similarities and differences among concepts to be