

Suggested Readings

- Ausubel, D. P., Novak, J. D., & Hanesian, H. (1978). *Educational psychology: A cognitive view*. New York: Holt, Rinehart and Winston.
- Anderson, R. C., Spiro, R. J., & Anderson, M. C. (1978). Schemata as scaffolding for the representation of information in connected discourse. *American Educational Research Journal*, 15(3), 433-440.
- Educational Psychologist*. (1988). Special Issue: Learning mathematics from instruction, 23(2).
- Johnson-Laird, P. N. (1983). *Mental models*. Cambridge, MA: Harvard University Press.
- Sweller, J., van Merriënboer, J., & Paas, F. (1998). Cognitive architecture and instructional design. *Educational Psychology Review*, 10(3), 251-296.

Reflective Questions and Activities

1. Consider the tacit assumptions about knowledge and knowing that theorists make in this chapter. To what epistemological tradition do they seem to fit most appropriately? What evidence supports your position?
2. How is Ausubel's conception of cognitive structure similar to or different from the models of long-term memory presented in Chapter 3? To illustrate your answer, select a concept (or set of concepts) that might be the focus of instruction. Indicate how, once learned, it would be represented in memory, according to Ausubel versus information-processing theorists.
3. How do notions about schemata and mental models differ from the models of memory proposed by information-processing theorists? What kinds of learning performances are accounted for by each?
4. Describe a possible study that investigates the differential effects of instruction designed from the perspectives of meaningful reception learning versus information processing. What variables might be important to examine? What differences might you expect between the two perspectives on those variables?
5. How would a schema theorist analyze a situation in which learners are experiencing difficulty achieving some instructional goal? What recommendations might be suggested for ameliorating the situation?
6. Select an instructional goal that involves the learner developing a mental model. Describe what instruction you would design to ensure that learners acquired the desired model.
7. Many current textbooks on learning mention Ausubel's work only briefly. Take a position on the probable impact of his ideas on educational theory and practice. In your opinion, does his theory of meaningful reception learning provide new or additional insights into learning and/or instruction?

