

This is an excerpt from my forthcoming book, *Essential Learning Theories and Their Applications*, published by Rowman and Littlefield.

AUSUBEL'S THEORY OF MEANINGFUL VERBAL LEARNING

Andrew P. Johnson, Ph.D.

Minnesota State University, Mankato

www.Readocity.com

AUSUBEL'S THEORY OF MEANINGFUL VERBAL LEARNING THEORY

David Ausubel's theory of meaningful verbal learning emphasizes the importance of structure and connecting new information to known. Whereas Bruner recommended discovery learning, Ausubel identified reception learning using expository teaching as the most effective method to use in helping students construct new knowledge (Ausubel, Novak, & Hanesian, 1978). Highlights and implications of his theory are described below.

- **Meaningful verbal learning.** According to Ausubel, *meaningful verbal learning* is when new knowledge is received directly from the teacher in a form in which it can be received by students (Ausubel, Novak, & Hanesian, 1978). Here, the structure of what is to be learned is clearly evident and students are able to see how new knowledge connects to what they already know. The teacher's job then is to use expository teaching (below) to present this new information in ways that enable learners to see the structure and making these connections.

- **Expository teaching.** *Expository teaching* is when the content to be learned is presented to students in its final form using direct instruction (Good & Brophy, 1995, LeFrancois, 1994). This is a transmission approach to teaching that is highly teacher-centered and lecture oriented. According to Ausubel, expository teaching is the most effective method to use for meaningful verbal learning (Ausubel, Novak, & Hanesian, 1978).

- **Students' knowledge.** The most important factor influencing students' learning new knowledge is the quantity, clarity, and organization of their present knowledge (Ausubel & Robinson, 1969). The new must connect to the known for meaningful verbal learning to occur. Thus, when teaching new concepts or skills, teachers need to have a sense of what students already know.

To illustrate, often college textbooks are selected by professors. By nature of their profession, professors have a vast body of knowledge related to their specialty area. It is easy to forget what it is like to grasp some of the concepts in their field for the first time. Thus, many college textbooks, including those in educational psychology, present too much information at too high a level for students encountering these concepts for the first time. The result is that there is often just as much rote learning as meaningful learning. This why this book strives to include just the essential elements of each of the learning theory.

- **Organized bodies of information.** For meaningful verbal learning to occur, new information must be organized hierarchically so the structure is readily apparent (Ausubel & Robinson, 1969). The structure of this new information serves two purposes: First, it acts as a scaffold to organize and hold information as students are creating or expanding cognitive structures. Students are able to see the hierarchical nature of the new information and its relationships to existing cognitive structures. Second, the structure of the new information serves as a scaffold for encoding and retrieving. Even if details are forgotten, students will be able to retrieve the basic structure and remember key ideas associated with the structure.

- **Advanced organizers.** Learning experiences should begin with an advanced organizer (see below).

Advance Organizers

Advanced organizers are any form of visual, verbal, or written material that depicts the structure of the content to be learned. It provides an overview of what is to be learned in advance of the learning episode. According to Ausubel (1977), the advance organizer has three main purposes:

- **Highlight key points.** Advance organizers can be used to direct students' attention to the important parts of the upcoming lesson. This gives students the big picture and enables them to put new facts and concepts in a meaningful context.

- **Activate relevant knowledge.** Advance organizers can also be used to remind students of the relevant knowledge they already know. This helps students make the connections between the known and the new.

- **Show relationships.** Finally, advance organizers can be used to show the relationship between important points described in the upcoming input. Put another way, advanced organizers are designed to show students the superordinate, ordinate, and subordinate relationship between key concepts.

Advance organizers take a variety of forms including: (a) an outline; (b) a quick verbal overview that identifies the main points to be learned; (c) a picture or graphic that shows the concept's ordinate, superordinate, and subordinate parts; (d) a semantic map or concept map, (e) concrete models; (f) analogies; (g) a discussion of the main themes or ideas; (h) a set of defining attributes or higher order rules; (i) Venn diagrams or comparison charts, and (j) a short abstract or summary of material to be learned or read. Again, to be effective, learners should be able to clearly see the structure of the material to be learned (Johnson, 2017).

Lectures: The Importance of Expository teaching

Expository teaching is a teacher-centered form of direct instruction in which students receive information directly from a teacher using lecture (Johnson, 2017). Effective expository teaching is one of many pedagogical strategies that all teachers should possess. As well, it is appropriate for use at all levels as long as the duration is developmentally appropriate. Eric Jensen (2005) identified the appropriate duration for lecture at five levels:

- Grades K-2 is 5-8 minutes.
- Grades 3-5 is 8-12 minutes.
- Grades 6-8, is 12-15 minutes.
- Grades 9-12 is 12-15 minutes.
- Adults is 15-18 minutes.

This does not mean that lesson should not go longer than the durations identified above. Instead, lessons using lecture should consist of small bits of direct instruction that are briskly-paced with some sort of a pause and process activity between (Johnson, 2016).

For example, Mr. Gonzalez was teaching a unit on birds to his 1st grade class as part of the science curriculum. He wanted his students to have some basic knowledge related to birds. A lesson plan was used to organize the information he would teach in the learning episode. This lesson plan enabled him to see the structure and sequence of the information he would provide. Before the lesson, he put a diagram with labels on the board to use as an advanced organizer. He used expository teaching and lots of pictures to give information to his students in two to five minute teaching episodes. Each lecture episode was followed by a very short activity where his

students physically mimicked some aspect of the bird information he was teaching. His science class consisted of two of these teaching episodes followed by a longer activity related to birds.

Professor Nelson gave a lecture on cognitive learning theorists in her university educational psychology course. She put an outline on the board before the class to use as an advanced organizer. She quickly went over the advanced organizer before the class. Her students were able to see the structure and sequence of the material she would be teaching that day. The advanced organizer also acted as a scaffold to enhance her students' ability to encode and retrieve this new information. Her lecture was well-planned and replicated the structure of the advanced organizer. During the lecture she set a timer for 15 minutes. Every 15 minutes, she paused briefly and ask students to do something like, "*Share an interesting or important idea with a neighbor,*" or "*Write down one idea that seems to stand out,*" or "*Share with a neighbor an ideas how this might be like something else you know,*" or "*Describe an example of this you have encountered.*" These brief breaks enabled students to pause and process this new information, to hear the thoughts of others, and to make connections to what they know or had experienced.

COMPARING DIRECT INSTRUCTION AND DISCOVERY LEARNING

Is expository teaching using direction instruction more effective than discovery learning? In the book, *Visible Learning and the Science of How We Learn* (2014) authors John Hattie and Gregory Yates compared discovery learning with direct instruction and concluded that direct instruction is effective and discovery learning is not. This chapter will end with a critical examination of this claim.

A Meta-Analysis

First, the comparison of discovery learning and direct instruction was a result of a meta-analysis. One of the limitations of a meta-analysis when used in education is that there are a number of unaccounted variables and thus, a certain lack of validity. For example, when comparing discovery learning and direct instruction we do not know how achievement was defined in the various studies as well as what was measured and how it was measured. We also do not know how discovery learning and direct instruction were defined and implemented in these studies. And finally, we know nothing about the teachers, students, the comparison groups, and their environments. Indeed, this is why John Hattie stated in an earlier book that a meta-analysis and effect size should be a place to begin the discussion, but not an endpoint for making decisions (Hattie, 2012).

Putters and Drivers

To say that direct instruction is more effective than discovery learning misses the point: They are both pedagogical strategies used for different purposes. To use a golfing analogy, this would be like saying that a driver is more effective than a putter. While the ball may go further when hit with a driver, trying to putt with it would be ineffective.

Method or Strategy

In their comparison, Hattie and Yates did not differentiate between a method and a strategy. A method in education usually refers to a defined process or specific set of techniques that are used exclusively in a prescribed fashion for all instruction in a particular subject area. A pedagogical strategy is a specific teaching technique that is adopted and adapted for selective use in all subject areas for a specific purpose.

Direct instruction and discovery learning, when effectively implemented, are both pedagogical strategies, not methods of instruction. Neither of these strategies should be utilized

exclusively as the sole means of instruction for teaching anything for any population. There are instances when each is the most effective strategy to use. As well, it is not an either/or assertion. Often discovery learning and direct instruction are included in the same lesson.

Master Teachers and Golfers

Master teachers have a variety of pedagogical strategies in their teaching toolbox. They know when to use each and for what purpose. Indeed, the effectiveness of any strategy is dependent on how it is used and for what purpose. Just as golfer has many clubs and knows how and when to use each, effective teachers know how to use both direct instruction and discovery learning.

REFERENCES

- Ausubel, D.P. (1977). The facilitation of meaningful verbal learning in the classroom. *Educational psychologist*, 12, 1162-178.
- Ausubel, D., Novak, J., & Hanesian, H. (1978). *Educational Psychology: A Cognitive View* (2nd Ed.). New York: Holt, Rinehart & Winston
- Ausubel, D.P., & Robinson, F.G. (1969). *School learning: An introduction to educational psychology*. New York, NY: Holt, Rinehart and Winston
- Bigge, M.L., & Shermis, S.S. (1992). *Learning theories for teachers* (5th ed.). New York, NY: HarperCollins.
- Bruner, J. (1966). *Toward the theory of instruction*. Cambridge, MA: Harvard University Press
- Bruner, J. (1977). *The process of education*. Cambridge, MA: Harvard University Press.
- Good, T.L., & Brophy, J. (1995). *Contemporary educational psychology* (5th ed.). White Plains, NY: Longman.
- Hattie, J. (2012). *Visible learning for teachers: Maximizing impact on learning*. New York, NY: Routledge.
- Hattie, J. and Yates, G. (2014). *Visible learning and the science of how we learn*. New York, NY: Routledge.
- Johnson, A. (2017). [*Teaching strategies for all teachers*](#). Lanham, MD: Rowman and Littlefield.
- LeFrancois, G.R. (2006). *Theories of learning* (5/e). Belmont, CA: Thompson/Wadsworth.
- Morris, J. (1978). *Psychology and teaching: A humanistic view*. New York, NY: Random House

VIDEO MINI-LECTURES

[Advanced Organizers for Lessons, Lectures, and Pre-Reading](#)

[Expository Teaching](#)

[Elements of Direct Instruction](#)

[Direct Instruction: A Tool, Not an Approach](#)