

[See this page in the course material.](#)

Learning Objectives

- Identify different patterns of thought, such as those found in Bloom's taxonomy

What Is Thought?

"Cogito ergo sum." This famous Latin phrase comes from French philosopher René Descartes in the early 1600s. Translated into English, it means "I think, therefore I am." It's actually a profound philosophical idea, and people have argued about it for centuries: we exist, and we are aware that we exist, because we think. Without thought or the ability to think, we don't exist. Do you agree? Even if you think Descartes got it wrong, most would say that thought is intimately connected to being human and that, as humans, we are all thinking beings.

What, then, are thinking and thought? Below are some basic working definitions:

- **Thinking** is the mental process you use to form associations and models of the world. When you think, you manipulate information to form concepts, to engage in problem-solving, to reason, and to make decisions.
- **Thought** can be described as the act of thinking that produces thoughts, which arise as ideas, images, sounds, or even emotions.

Many great thinkers and theorists have dedicated their lives to the study of thought, trying to understand exactly how humans receive, absorb, generate, and transmit thought—and also how they learn. One such thinker was Benjamin Bloom, an American educational psychologist who was particularly interested how people learn. In 1956, Dr. Bloom chaired a committee of educators that developed and classified a set of learning objectives, which came to be known as Bloom's taxonomy. This classification system has been updated a little since it was first developed, but it remains important for both students and teachers in helping to understand the skills and structures involved in learning.

What Are Learning Objectives?

What exactly are learning objectives? You may have already noticed them at the beginning of each new section in this course. Learning objectives are *goals* that specify what someone will be capable of—or what someone will learn—as a result of a learning experience. These learning skills can be divided into three main categories or "domains": the **cognitive domain** (what you should know), the **affective domain** (what you should care about), and the **psychomotor domain** (what you should be able to do).

Since this section of the course is focused on patterns of thought, we'll start with the cognitive domain of learning.

The Cognitive Domain of Learning

The cognitive domain of learning is divided into six main learning-skill levels, or learning-skill stages, which are arranged hierarchically—moving from the simplest of functions like remembering and understanding, to more complex learning skills, like applying and analyzing, to the most complex skills—evaluating and creating. The lower levels are more straightforward and fundamental, and the higher levels are more sophisticated.^[1] See Figure 1, below.



Figure 1. The New Version of Bloom's Taxonomy

The following table describes the six main skill sets within the cognitive domain.

MAIN SKILL LEVELS WITHIN	DESCRIPTION	EXAMPLES OF RELATED
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THE COGNITIVE DOMAIN		LEARNING SKILLS (specific actions related to the skill set)
Remembering	When you are skilled in remembering, you can recognize or recall knowledge you've already gained, and you can use it to produce or retrieve or recite definitions, facts, and lists. <i>Remembering may be how you studied in grade school or high school, but college will require you to do more with the information.</i>	identify · relate · list · define · recall · memorize · repeat · record · name
Understanding	Understanding is the ability to grasp or construct meaning from oral, written, and graphic messages. <i>Each college course will introduce you to new concepts, terms, processes, and functions. Once you gain a firm understanding of new information, you'll find it easier, perhaps later, to comprehend how or why something works.</i>	restate · locate · report · recognize · explain · express · identify · discuss · describe · discuss · review · infer · illustrate · interpret · draw · represent · differentiate · conclude
Applying	When you apply, you use learned material (or you implement the material) in new and concrete situations. <i>In college you will be tested or assessed on what you've learned in the previous levels. You will be asked to solve problems in new situations by applying understanding in new ways. You may need to relate</i>	apply · relate · develop · translate · use · operate · organize · employ · restructure · interpret · demonstrate · illustrate · practice · calculate · show · exhibit · dramatize

	<i>abstract ideas to practical situations.</i>	
Analyzing	When you analyze, you have the ability to break down or distinguish the parts of material into its components, so that its organizational structure may be better understood. <i>At this level, you will have a clearer sense that you comprehend the content well. You will be able to answer questions such as what if, or why, or how something would work.</i>	analyze · compare · probe · inquire · examine · contrast · categorize · differentiate · contrast · investigate · detect · survey · classify · deduce · experiment · scrutinize · discover · inspect · dissect · discriminate · separate
Evaluating	With skills in evaluating, you are able to judge, check, and even critique the value of material for a given purpose. <i>At this level in college you will be able to think critically, Your understanding of a concept or discipline will be profound. You may need to present and defend opinions.</i>	judge · assess · compare · evaluate · conclude · measure · deduce · argue · decide · choose · rate · select · estimate · validate · consider · appraise · value · criticize · infer
Creating	With skills in creating, you are able to put parts together to form a coherent or unique new whole. You can reorganize elements into a new pattern or structure through generating, planning, or producing. <i>Creating requires originality and inventiveness. It brings together all levels of learning to theorize, design, and test new products, concepts or functions.</i>	compose · produce · design · assemble · create · prepare · predict · modify · plan · invent · formulate · collect · generalize · document combine · relate · propose · develop · arrange · construct · organize · originate · derive · write · propose

You can explore these concepts further in the two videos, below. The first is from the Center for

Learning Success at the Louisiana State University. It discusses Bloom's taxonomy learning levels with regard to student success in college.



[Video Link](#)

You can view the [transcript for "Bloom's Taxonomy" here \(opens in new window\)](#).

This next video, *Bloom's Taxonomy Featuring Harry Potter Movies*, is a culturally based way of understanding and applying Bloom's taxonomy.



[See this interactive in the course material.](#)

You can view the [transcript for "Bloom's Taxonomy feat Harry Potter" here \(opens in new window\)](#).

The Power of Thought

From Bloom's taxonomy of learning skills, you can see that thought and thinking can be understood as patterns—systems and schemes within the mind. There is order and structure in

the way we think and in the way we process and internalize information.

As we look at patterns of thought, we can also think about the power of thought. As a result of many amazing and potent research and discoveries, the scientific community is learning a great deal about how plastic, malleable, and constantly changing the brain is. For example, the act of thinking—*just* thinking—can affect not only the way your brain works but also its physical shape and structure. The following video explores some of these discoveries, which relate to all the thinking and thoughts involved in college success.



[Video Link](#)

You can view the [transcript for “The Scientific Power of Thought” here \(opens in new window\)](#).

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1. Wilson, Leslie Owen. "Anderson and Krathwohl - Bloom's Taxonomy Revised." *The Second Principle*. 2013. Web. 10 Feb 2016. [__](#)

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