According to Benjamin Bloom, there are 6 levels of understanding that we pass through as our intellect grows. They are remembering, understanding, applying, analyzing, evaluating, and creating. He laid these out in his famous Bloom’s Taxonomy.

Bloom’s taxonomy is a hierarchical arrangement of six cognitive processing abilities and educational objectives that range from simple to complex and concrete to abstract.
The taxonomy starts with the proposition that learning exists on a continuum that reflects degrees of understanding and learning.

### About Bloom’s Taxonomy

According Bloom’s taxonomy, students must first learn basic facts of a subject and gradually progress to more advanced levels of understanding that eventually lead to being able to produce original knowledge.

In addition to identifying the cognitive abilities at each level of understanding, the taxonomy also includes describing the affective and psychomotor processes that are involved at each level.

Although the taxonomy is named after Benjamin Bloom in the book *Taxonomy of Educational Objectives* (1956), the work was the result of a collaboration that included coauthors Max Englehart, Edward Furst, Walter Hill, and David Krathwohl. A revision was later produced in 2001.

### 6 Levels Of Understanding

1. **Remembering**

   This is the most fundamental level of understanding that involves remembering basic information regarding a subject matter. This means
that students will be able to define concepts, list facts, repeat key arguments, memorize details, or repeat information.

This is the first step of developing a comprehensive understanding of a subject, but it doesn’t not mean that the student has a very deep understanding. Producing a critical analysis or counterarguments are beyond the student’s ability at this level.

For example, a history teacher may assign a reading and give a lecture about a significant historical event. The material includes information about the key figures involved and outlining the chronological of events that took place.

For assessment, the exam asks students to answer questions about the dates of certain events and the names of the people associated with those events. In one section of the exam, students are presented with a blank timeline with some dates indicated. They have to write the name of the event that took place at that date and give the name of at least two people involved.

In another section of the exam, students answer multiple choice questions about the role of key figures. Other questions describe an event and then students must choose the name of the person associated with that moment.

At this level of understanding, students are expected to memorize information. This is a form of rote memory.

Synonyms For Remembering
<table>
<thead>
<tr>
<th>Action</th>
<th>Meaning</th>
<th>Action</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reiterate</td>
<td>Memorize</td>
<td>Duplicate</td>
<td>Repeat</td>
</tr>
<tr>
<td>Cite</td>
<td>Identify</td>
<td>Copy</td>
<td>Define</td>
</tr>
<tr>
<td>Find</td>
<td>Quote</td>
<td>List</td>
<td>Cram</td>
</tr>
<tr>
<td>Locate</td>
<td>Rote learning</td>
<td>Recall</td>
<td>Duplicate</td>
</tr>
</tbody>
</table>

### 2. Understanding

Understanding means being able to explain. This can involve explaining the meaning of a concept or an idea.

Students should be able to classify and categorize concepts based on descriptive terms or identify key features. If presented with a theory, students can describe the basic tenets and discuss the basic principles.

Although this level of understanding is more advanced, it is very descriptive. Students cannot produce an independent critical analysis of a theory or identify its strengths and weaknesses.

For example, in a psychology course, students might be asked to write a report on attachment. The report might include describing the basic characteristics of the different types of attachment and discussing in detail how attachments are formed.

Students should also be able to describe specific research studies in broad terms and explain the results well enough that another person could
understand. This involves the ability to paraphrase. Instead of just repeating information straight for a source document, students should be able to describe the study in their own words.

Another version of assessment could include responding to simple questions about the subject matter. The response should come in the form of writing a short answer consisting of several sentences that shows the student understands the subject and is able to describe it from memory.

However, students will not be able to conduct a comparison of different theories, or identify their similarities and differences. Although the student clearly understands the theories, that level of understanding is not deep enough for them to generate a critical analysis.

### Synonyms For Understanding

<table>
<thead>
<tr>
<th>Explain</th>
<th>Paraphrase</th>
<th>Report</th>
<th>Describe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summarize</td>
<td>Elucidate</td>
<td>Interpret</td>
<td>Discuss</td>
</tr>
<tr>
<td>Exemplify</td>
<td>Express</td>
<td>Respond</td>
<td>Reflect</td>
</tr>
<tr>
<td>Sum Up</td>
<td>Recap</td>
<td>Elaborate</td>
<td>Infer</td>
</tr>
</tbody>
</table>

### 3. Applying

Applying refers to the ability to use information in situations other than the situation in which it was learned. This represents a deeper level of
The key development is the ability to “apply” information. Understanding can be demonstrated by taking knowledge and using it in a variety of ways.

This can involve using knowledge of how to perform a specific mathematical calculation to solve a problem or illustrate how a principle in physics can be seen in everyday life.

Students can engage in problem-solving on their own and discover solutions independently.

For example, if a physics teacher were to provide students information regarding the weight of a rocket and the degree of force generated by the engines, students could calculate how far the rocket would travel.

They could extend that understanding by performing the same calculations for a rocket traveling under different conditions related to gravity, wind resistance, and other factors.

Similarly, students should be able to illustrate specific concepts with examples or demonstrate simple scientific principles with various objects. This could involve showing how the weight of an object will affect its momentum or alter the direction of another moving object.

The key development in the student’s cognitive processing is the ability to apply descriptive information to a variety of situations.
4. Analyzing

Conducting an analysis independently is the next level of understanding. This includes the ability to draw logical conclusions based on given facts or make connections between various constructs.

Students are now able to identify the strengths and weaknesses of a theory, as well as compare and contrast different theoretical perspectives.

When studying literary works, students should be able to identify specific passages or statements that reflect the author’s philosophical perspective.

They can also identify patterns and trends in data, construct charts and graphs that organize information in a logical manner, and describe how and why data is connected.
For example, students in a political science course may be asked to identify the key ideals of democracy and socialism, highlight the differences and similarities, and discuss the ramifications of each political system.

Similarly, in an art class, students should be able to look at two works of art and make a variety of comparisons. This can include differentiating the genre of two pieces, identifying the medium used, compare and contrast the techniques used by the artist and the different effects those have on the viewer.

At this level of understanding, students are now able to manipulate information, organize it in meaningful ways according to various criteria, and both differentiate and connect various concepts.

### Synonyms For Analyzing

<table>
<thead>
<tr>
<th>Compare</th>
<th>Contrast</th>
<th>Categorize</th>
<th>Organize</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distinguish</td>
<td>Correlate</td>
<td>Deconstruct</td>
<td>Find Patterns</td>
</tr>
<tr>
<td>Mind-Map</td>
<td>Integrate</td>
<td>Structure</td>
<td>Question</td>
</tr>
<tr>
<td>Discriminate</td>
<td>Connect</td>
<td>Classify</td>
<td>Inquire</td>
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</tbody>
</table>

#### 5. Evaluating

Evaluating means determining correctness. Here, students will be able to identify the merits of an argument or point of view and weigh the relative strengths of each point.
They can critique a decision or appraise the rationale given for a certain act. This level of understanding represents a significant advancement of cognitive processes. Now students are able to grapple with very abstract concepts.

This can be demonstrated by making arguments for or against a particular legal ruling, conducting a critical analysis underlying a socio-political philosophy, or discuss the various issues to consider in a moral dilemma.

For example, students in a law course may be asked to produce a legal brief regarding a controversial ruling.

This requires presenting the key elements of a case and critiquing the legal arguments presented by others. Ultimately, the student can produce a final judgement of the ruling and justify their position with facts and other legal precedents.

In another example, if presented with a debate topic, students should be able to take a position on the issue and support their view with logical arguments. They may cite facts or statistics that make their position stronger, while at the same time being able to pinpoint the weaknesses of the opposing side and support those criticisms with strong counterarguments.

The advancement here is the ability to critique, judge, and even criticize abstract concepts such as a theory, philosophy, or legal perspective.

Synonyms For Evaluating
<table>
<thead>
<tr>
<th>Find Strengths</th>
<th>Find Weaknesses</th>
<th>Judge</th>
<th>Defend</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prioritize</td>
<td>Critique</td>
<td>Pros and Cons</td>
<td>Create Hierarchies</td>
</tr>
<tr>
<td>Assess</td>
<td>Choose</td>
<td>Conclude</td>
<td>Debate</td>
</tr>
<tr>
<td>Justify</td>
<td>Argue</td>
<td>Value Judgement</td>
<td>Thesis Statement</td>
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6. Creating

The final level of Bloom’s taxonomy is when students can create something new. It is characterized by inventing, designing, and creating something that did not exist previously.

At this last level of cognitive ability, the student becomes the master. Instead of being a consumer of information, they are now producers.

This level requires the ability to use the features of all previous levels in a way that will then lead to producing something completely new.

For example, an individual may be able to author an original literary piece such as a novel or screenplay. Or, a person may invent a completely new way to analyze data by creating a new formula. Other examples include formulating a new theoretical perspective or inventing an original piece of machinery.
A less dramatic example would be in the case that a manager designs a detailed schedule to manage a project. The schedule will include assigning work teams based on abilities, allocating resources, anticipating problems, and developing contingencies.

This is the highest form of understanding that goes far beyond fundamental understanding and into the realm of creation.

**Synonyms For Creating**

<table>
<thead>
<tr>
<th>Invent</th>
<th>Develop</th>
<th>Construct (something new)</th>
<th>Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compose</td>
<td>Generate</td>
<td>Innovate</td>
<td>Formulate</td>
</tr>
<tr>
<td>Pioneer</td>
<td>Conceive</td>
<td>Theorize</td>
<td>Originate</td>
</tr>
<tr>
<td>Build (something new)</td>
<td>Hypothesize</td>
<td>Push boundaries</td>
<td>Propose (something new)</td>
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**Conclusion**

Bloom’s taxonomy of understanding gives educators a framework that is helpful in understanding the progression of student abilities and a way to organize assessment. Sometimes, we might also refer to it as the levels of knowledge. Teachers at different grade levels should develop lessons and assessment strategies that correspond to their students’ level of abilities.
As students move up the educational ladder from K1 to secondary school, and then further to university study and doctoral training, their cognitive abilities continuously evolve. They become capable of handling increasingly challenging educational tasks, starting from simply being able to list facts, to a level of development that can lead to the invention of a new piece of machinery or the creation of a literary work.

The taxonomy has been well-received in the education world and is still in use today by educators worldwide. Bloom’s original book has been translated into at least 20 languages. However, today, an alternative taxonomy called the SOLO taxonomy is increasingly used because it’s believed to present more measurable outcomes for teachers.

References


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**Chris Drew (PhD)**

Dr. Chris Drew is the founder of the Helpful Professor. He holds a PhD in education and has published over 20 articles in scholarly journals. He is the former editor of the *Journal of Learning Development in Higher Education*. 

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