The Academic Studies Centre for teaching & learning in English in higher education at Universidad del Rosario

USING BLOOM'S TAXONOMY FOR CRITICAL THINKING SKILLS

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Bloom's taxonomy: Critical Thinking Skills

One of the most challenging skills to be thought at any educational level is critical thinking, provide students with enough tools not only to replicate information but to construct knowledge requires lots of planning and feedback. This article will provide an overview about Bloom's taxonomy and the questions we need to take into account when preparing a class for critical thinking skills.

Bloom's Taxonomy is a method created by Benjamin Bloom (1965) to categorize the levels of reasoning skills that students use for effective learning. There are six levels of Bloom's Taxonomy: knowledge, comprehension, application, analysis, synthesis, and evaluation. Each one of the categories aims to construct one level of abstraction more complex than the other.

In 2001, a group of cognitive psychologists, curriculum theorists and instructional researchers published in 2001 a revision of Bloom's Taxonomy with the title A Taxonomy for Teaching, Learning, and Assessment. This updated version points to a more dynamic conception of classification. Remember, understand, apply, analyse, evaluate and create where organized and included action words to recognize cognitive processes by which students come across and work with knowledge.

In general, both teachers and students should avoid test and assessment that merely attempt recalling information but incorporate higher levels to create real critical thinkers.
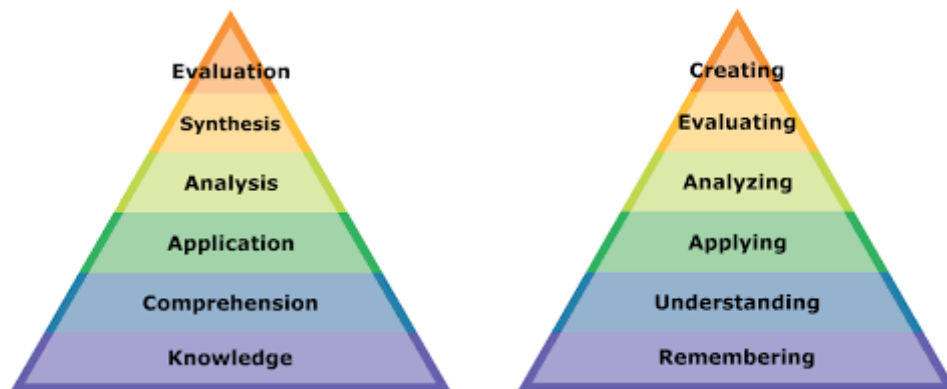
Bloom's Categorization 1965   Revised Categorization 2001

Knowledge:

In the knowledge level of Bloom's Taxonomy, questions are asked merely to test whether a student has gained specific information from the lesson. Dates, events, places and the wh- questions are displayed at this level. For example, students should match the words to their definitions.

Some common examples are:

Who were the main…?

Which one…?

Why did…?

Comprehension:

The comprehension level of Bloom's Taxonomy has students go past simply recalling facts and instead has them understanding the information. With this level, they will be able to interpret the facts. You are probably recognising comprehension questions when you use words like describe, contrast, discuss, predict, or paraphrase.

Some common examples for this category are:

How would you rephrase the meaning?

What facts or ideas show…?

What is the main idea of ……?

Which statements support…?

Which is the best answer…?

Application:

Application questions are those where students have to actually apply, or use, the knowledge they have learned. They might be asked to solve a problem with the information they have gained in class being necessary to create a practical solution.

For example, a student might be asked to solve a legal question in Government class using the Constitution and its amendments. You are probably writing application questions when you use words like complete, solve, examine, illustrate, show, etc.

Some common examples for this category are:

What would result if…?

Can you make use of the facts to…?

What elements would you use to change…?

What facts would you select to show…?

What questions would you ask during an interview?

Analysis:

In the analysis level, students will be required to go beyond knowledge and application and actually see patterns that they can use to analyse a problem. For example, an

English teacher might ask what the motives were behind the protagonist's actions during a novel. This requires students to analyse the character and come to a conclusion based on this analysis. You are probably writing analysis questions when you use words like analyse, explain, investigate, infer, etc.

What conclusions can you draw . . . ?

How would you classify . . . ?

How would you categorize . . . ?

Can you identify the different parts . . . ?

Synthesis:

With synthesis, students are required to use the given facts to create new theories or make predictions. They might have to pull in knowledge from multiple subjects and synthesize this information before coming to a conclusion. For example, if a student is asked to invent a new product or game they are being asked to synthesize. You are probably writing synthesis questions when you use words like invent, imagine, create, compose, etc.

What changes would you make to solve…?

How would you improve…?

What would happen if…?

Can you elaborate on the reason…?

Evaluation:

The top level of Bloom's Taxonomy is evaluation. Here students are expected to assess information and come to a conclusion such as its value or the bias behind it. For example, if a student is completing a DBQ (Document Based Question) for an AP US History course, they are expected to evaluate the bias behind any primary or secondary sources in order to see how that effects the points that the speaker is making. You are probably writing evaluation questions when you use words like select, judge, debate, recommend, etc.

How would you evaluate…?

How would you compare the ideas…? the people…?

How could you determine…?

What choice would you have made…?

Following these guidelines teachers will help develop critical skills to students who have the capacity to think and act creatively, to meet challenges positively and effectively, and show initiative and enterprise in how they think and learn. Thus, create a real impact on various aspects of society such as social and economic development.

Adapted from

https://cft.vanderbilt.edu/guides-sub-pages/blooms-taxonomy/

https://www.thoughtco.com/blooms-taxonomy-in-the-classroom-8450