



USING BLOOM'S TAXONOMY IN LEARNING

Why is it Needed

Bloom's Taxonomy is a set of hierarchical models used to classify learning objectives into levels of complexity and specificity. They are arranged in order of increasing awareness, thinking, reasoning and understanding.

It was developed to provide a common language for educators, trainers and facilitators to discuss and exchange learning and assessment methods. The goal of an educator/trainer/facilitator using Bloom's Taxonomy is to encourage higher-order thinking in their participants by building up from lower-level cognitive skills.

What is it

Bloom's Taxonomy is a powerful tool in the design of learning experiences because it explains the process of learning:

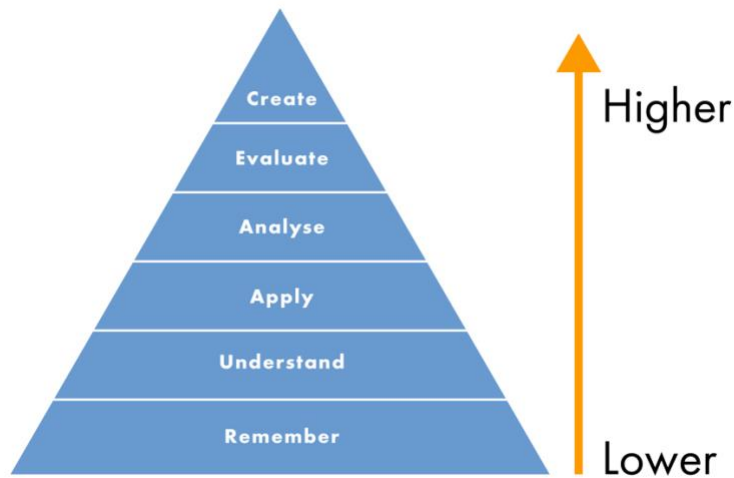
- Before you can understand a concept, you must know and be able to remember it.
- To apply a concept, you must first understand it.
- In order to evaluate a process, you must have analysed it.

What are the Six Levels of Bloom's Taxonomy?

Originally, the following levels were developed:

1. Knowledge – remembering, being able to recall, list and define. These are considered lower-level thinking skills.
2. Comprehension – understand, restate, describe, provide an example, summarise.
3. Application – apply, calculate, solve, operate, demonstrate – theoretical to practical.
4. Analysis – makes sense of how things are connected, analyse, compare and contrast.
5. Synthesis – design, invent, create, compose, rewrite, rearrange, plan; and,
6. Evaluation – rate, critique, make judgements appraise. This is considered higher-level thinking skills.

Over time and with new evidence, more refined models have become available and are widely used. These revised models more clearly show the bottom-up approach from lower-level thinking development to higher-order thinking skills and development.



Revised Blooms' Taxonomy Model

How is it Used

Each level allows educators, trainers and facilitators to develop learning opportunities with appropriately set objectives that start with lower-level thinking learning experiences and progressively developing experiences towards higher-level thinking skills.

So, as explained, before you can understand a particular concept, you must remember it. In order to evaluate a process, you must have analysed it. To create an accurate conclusion, you must have undertaken an evaluation. However, it is not necessary to always start with the lower-level skills and step up each time through the complete taxonomy. That approach would be quite tiresome, dull and perhaps boring for the educator/facilitator and the participants. Although there may be times when that process needs to be done. A better approach is to consider the level of the participants in the training/ session/course.

Examples

For example, are a lot of the participants new to Scouting and are they undertaking an Introductory Course? If so, many of the learning experiences may target lower-level Bloom's skills, because the participants are building basic knowledge and skills. However, even in this situation, it would be appropriate to develop experiences through learning objectives that move into the "Apply" and "Analyse" levels. Though going too far towards the top of the taxonomy pyramid too quickly is likely to create some unease and unachievable goals.



Another example, are most of the participants undertaking an Advanced Course where there are already well-developed knowledge, skills, attitudes and behaviours among the group? That is, the basics are solid in theory and practice. If so, then the “Remember” and “Understand” level experiences need not be too many. There will be a need to have a few, but realistically speaking, these more advanced adult participants should be able to master higher-level skills through appropriately set learning objectives. Providing experiences where there is a need to “Create” a solution to a particular problem should give a chance to develop higher-level skills, where both “Analyse” and “Evaluate” also feature. Having too many of the lower-level skills may cause boredom or lack of interest at this level of adult experience.

Visit also:

[Adult Training](#)

[A Taxonomy for Learning, Teaching and Assessing](#)

The following ‘Bloom’s Taxonomy Table’ can provide specific details.

Bloom's Taxonomy Action Verbs (Revised*)

Definitions	Remembering	Understanding	Applying	Analysing	Evaluating	Creating
Bloom's Definition	Exhibit memory of previously learned material by recalling facts, terms, basic concepts, and answers.	Demonstrate understanding of facts and ideas by organizing, comparing, translating, interpreting, giving descriptions, and stating main ideas.	Solve problems to new situations by applying acquired knowledge, facts, techniques and rules in a different way.	Examine and break information into parts by identifying motives or causes. Make inferences and find evidence to support generalizations.	Present and defend opinions by making judgments about information, validity of ideas, or quality of work based on a set of criteria.	Compile information together in a different way by combining elements in a new pattern or proposing alternative solutions.
Verbs	Choose Define Find How Label List Match Name Omit Recall Relate Select Show Spell Tell What When Where Which Who Why	Classify Compare Contrast Demonstrate Explain Extend Illustrate Infer Interpret Outline Relate Rephrase Show Summarize Translate	Apply Build Choose Construct Develop Experiment with Identify Interview Make use of Model Organize Plan Select Solve Utilize	Analyse Assume Categorize Classify Compare Conclusion Contrast Discover Dissect Distinguish Divide Examine Function Inference Inspect List Motive Relationships Simplify Survey Take part in Test for Theme	Agree Appraise Assess Award Choose Compare Conclude Criteria Criticize Decide Deduct Defend Determine Disprove Estimate Evaluate Explain Importance Influence Interpret Judge Justify Mark Measure Opinion Perceive Prioritize Prove Rate Recommend Rule on Select Support Value	Adapt Build Change Choose Combine Compile Compose Construct Create Delete Design Develop Discuss Elaborate Estimate Formulate Happen Imagine Improve Invent Make up Maximize Minimize Modify Original Originate Plan Predict Propose Solution Solve Suppose Test Theory

* Anderson, L. W., & Krathwohl, D. R. (2001). A taxonomy for learning, teaching, and assessing Abridged Edition. Boston, MA: Allyn and Bacon.