Session 6

The Bloom's Taxonomy of Cognitive Learning: Updated

A. Introduction

Image 1: What is UNICEF doing to increase access to early learning among children in the Philippines? (Source: Bayaya/UNICEF Philippines, 2015: Online)

In the early 20th century, educators experimented with various strategies for stating and implying their lessons' overarching goals. Before the turn of the 21st century, objectives were more commonly known as aims or purposes. By the middle of the 20th century, educational reformers were using the term "objectives," which refers to the specific learning outcomes that should be evident in classrooms, to explain what instructors should teach more precisely. One of the most influential models of those results was Bloom's taxonomy.

Besides contributing to the field of cognitive taxonomy, Bloom's work also represented a significant shift in how educators saw the role of inquiry in the classroom. The taxonomy's initial layout aimed to facilitate discussion amongst teachers about how they may assess their students' learning.

In our first lecture, where we discussed the cognitive domain of learning, we recognized that Dr. Benjamin Bloom used active verbs to explain how students use each ability. The original version of Bloom's Taxonomy contains the following skills, from basic to complex: knowledge, comprehension, application, analysis, synthesis, and evaluation.

In 2001, academics rethought Bloom's taxonomy after noticing a shift in how teachers communicated their aims for the classroom (Navarro, Santos & Corpuz, 2019). Bloom's original methods and strategies were used to develop the updated taxonomy. The new taxonomy features a knowledge component and a cognitive dimension. The knowledge dimension can be divided into four sub-dimensions: factual, conceptual, procedural, and metacognitive.

In this lecture, we will be probing more deeply into the integration of cognitive and metacognitive talents of students toward the development and assessment of analytical and critical thinking skills.

Session 5 Conclusion

Analytical and critical thinking skills are foremost in training students to learn. As they are prepared for a more responsive and productive life ahead of them, they are exposed to reasoning, problem-solving, and creative work. Higher-order thinking questions and activities are the primary tools to assess their cognitive abilities.

B. Session Objectives

After this session, you are expected to:

1. Discuss the teaching-learning process in light of the updated Bloom's Taxonomy of Cognitive Skills;
2. Define the hierarchy of the cognitive skills with their corresponding performance indicators; and,
3. Determine observable learning outcomes across the cognitive abilities.

C. Session Content

1. The Updated Bloom's Taxonomy of Cognitive Skills

Bloom's Taxonomy is an attempt to categorize the different levels of learning, from retaining information to applying what was learned in novel ways. The premise is that education unfolds linearly. It's essential to fully grasp an idea before putting it into practice. To fully get a topic, one must first be able to recall important background information. It would have been best to assess the problem's context thoroughly before coming up with a solution.

Building the taxonomy was done to provide educators with standardized vocabularies so they could have more precise conversations about curricular and evaluative issues. The language teachers used to express what they expected of their students was exceedingly vague and could not be quantified in any way. For instance, some educators think that their students should comprehend what they are learning, while others want their students to absorb the information they are taught, and yet others want their students to understand the center, essence, or core of the material. They are synonymous in terms of meaning.

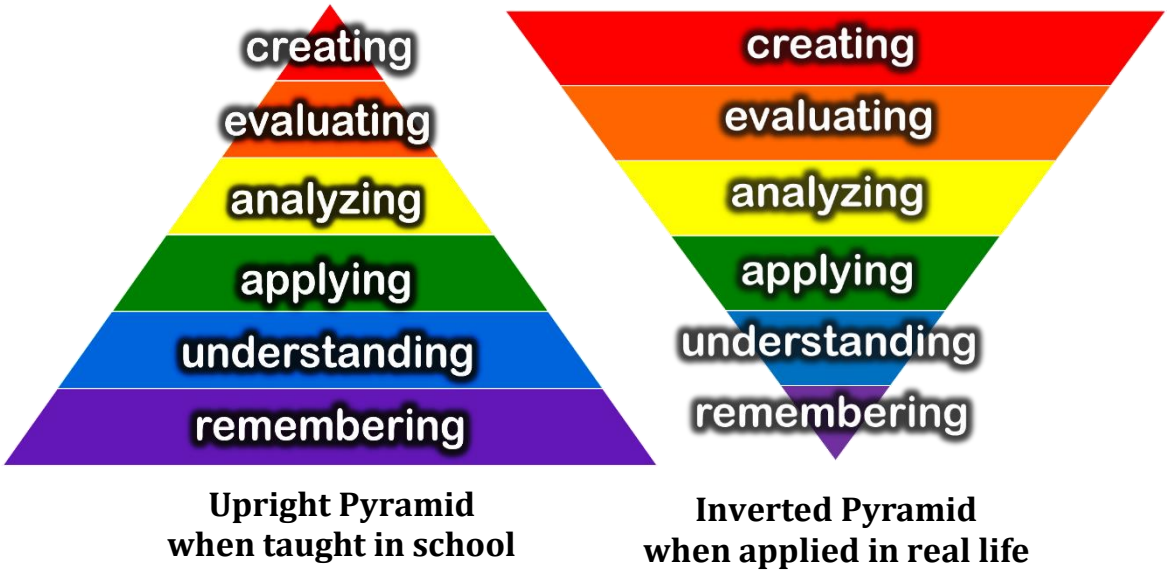
Teachers can use Bloom's Taxonomy to plot student progress during a single class or an entire semester. Trainers can use the taxonomy to determine what each level of the taxonomy entails and set concrete learning objectives for each group. Teachers can encourage their students to take greater ownership of their education by helping them develop attainable goals. The taxonomy can also be used to judge students' progress fairly. If students need to know only the most fundamental concepts and terms, an essay might not be the most effective assessment form. The evaluation phase, where they are tasked with forming a judgment, is, nonetheless, a suitable setting in which to do so. Teachers can use Bloom's taxonomy to evaluate their students' development. It aids educators in assessing each student's proficiency level so that appropriate work can be given.

2. Bloom's Taxonomy of Cognitive Skills Indicators

Better learning is equated with teaching using a relevant assessment that properly and orderly addresses the six learning/thinking skills. It is an essential basic competency for a teacher to master the distinction of these skills and translate them into designing a curriculum and learning activities suited to the needs and interests of the students concerning the expected learning concepts in class. It is, therefore, a prerequisite for a teacher to determine appropriate learning objectives and outcomes to be assessed toward optimal learning.

The diagram below explains their hierarchy to guide teachers chronologically in facilitating learning through relevant assessment tools.

Modified Bloom's Taxonomy of Learning Outcomes
(Anderson in Navarro, Santos & Corpuz, 2019)



Upright Pyramid when taught in school

Inverted Pyramid when applied in real life

HIGHER-ORDER LEARNING/THINKING SKILLS:

Creating - Building a structure or pattern from diverse elements; putting parts together to form a whole, with emphasis on crafting a new meaning or structure

Evaluating - Making judgments about the value or significance of ideas or materials

Analyzing - Separating concepts into component parts so that the organizational structure may be understood; distinguishing between facts and inferences

LOWER-ORDER LEARNING/THINKING SKILLS:

Applying - Using a concept in a new situation or employing its function in normal activities; giving examples of a learned concept that reflect its characteristics

Understanding - Comprehending the meaning, translation, interpolation, and interpretation of instructions and problems; stating a problem in one's own words

Remembering - Recalling previously learned information, no more, no less

Examples of situations and learning outcomes in every learning/thinking skill:

The underlined words provide distinctive signs of the particular cognitive skill.

A. Remembering

- Cherry <u>enumerates</u> the parts of a lesson plan as previously studied in class.
- Peter <u>recalls</u> the countries in Southeast Asia.
- Lester <u>specified the exact</u> places they visited in their Boy Scout camping.

B. Understanding

- Gina personally defines "technology" as a creative way of doing things.
- After learning the pattern, Homer expects that paper will turn black when burned.
- Chuck narrates what he did and experienced in the camp.

C. Applying

- Alice gives a very relevant example of the behavior of a good student, as discussed in Values Education.
- Jason is confident using isopropyl alcohol to clean CD lenses, which he learned from the internet.
- Bong can make a square knot by imitating the procedure he saw in the demonstration.

D. Analyzing

- Fred describes the violations in playing *sepak takraw* after examining the rules and parts of the game.
- Nida compares the properties of acids and bases to how they react to some materials.
- Peter identifies the differences between the square knot and the twisted knot.

E. Evaluating

- Bryan explains that conserving water is vital for health and wealth.
- In a debate, Belle defends that the K-12 program is very advantageous in the improvement of skills and competencies of the students before college.
- Paul explains why a square knot is better than a twisted knot in making a basket.

F. Creating

- Emily does a new pork barbecue recipe using papaya extract as a natural meat tenderizer.
- Irma uses recycled tetra-packs of juice drinks as alternative materials in making bags and baskets.
- The boys make their own version of a basket using recycled materials in square knots.

D. Conclusion

Bloom's Taxonomy of Cognitive Outcomes guides teachers in designing teaching-learning activities according to the hierarchy of thinking. Following the system teaches learners to develop their thinking skills gradually. The teachers are directed to state learning outcomes and derive assessment tools based on the taxonomy to assess learning systematically.

E. References

Bayaya, J. & UNICEF Philippines (2015). *What is UNICEF doing to increase access to early learning among children in the Philippines?* [Online Image] [Accessed on September 27, 2023] https://medium.com/@unicefphils/what-is-unicef-doing-to-increase-access-to-early-learning-among-children-in-the-philippines-b96b1d7c8a5d

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