

Bloom's Taxonomy Meets Bereishit (Genesis)

by Nancy Messinger

What's in a question, you ask? Everything. It is the way of evoking stimulating response or stultifying inquiry. It is, in essence, the very core of teaching.
 John Dewey

Educating by asking questions and seeking answers is a Jewish tradition going back to talmudic times. Asking questions to develop critical thinking is a skill which can be learned. By becoming aware of the levels of questioning in the cognitive domain a teacher can learn the skill of questioning on various levels. By understanding the power of questions and the answers they elicit a teacher can review material, challenge student thinking, and make learning relevant.

Benjamin Bloom and a nationwide group of educators in the 1950's developed a *Taxonomy of Educational Objectives (Handbook I: Cognitive Domain, David McKay, NY, 1956)*. The authors were employed as writers of college examinations, and their purpose was to develop a system that could be used to classify educational objectives in the cognitive domain. They defined six stages of thinking that encompassed intellectual objectives in education.

One of the ways each category was defined was by using examples of questions that required students to engage in a specified kind of thinking (Sanders, Norris, *Classroom Questions*). This taxonomy has become a model for the thinking skills process. Thus, while originally designed as a system for classifying educational objectives at various levels of cognitive functioning, the taxonomy has been used to plan curricula, construct tests, create individual and group activities, and especially, to develop questions.

A taxonomy is a classification system that is arranged as a hierarchy. It involves the relationship of one category to

another. Bloom's Taxonomy, as it is commonly called, has its levels arranged in terms of cognitive complexity. The higher the level, the more complex or demanding the task for learning; from the more observable and concrete to the more abstract, from working with the known to inventing new solutions (Jacobson, David, *et. al., Methods for Teaching: A Skills Approach*).

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Also, there are both simple and complex questions which can be designated within each category, and each level involves all the tasks of those below it (Sanders, *op.cit.*).

LEVELS OF THE TAXONOMY

The first level of the taxonomy is Knowledge. All the other levels are based on this level. It requires the student to memorize or recall information. The information called for has not been applied to examples or to new situations. Interestingly, it has been found that there is a predominant emphasis upon knowledge questions in today's classrooms.

The second level of questions is that of Comprehension. In this level the learner is asked to "make sense" out of material presented to him or her by changing it in some way. Questions which ask the student to summarize the material or to put

something into his or her own words exemplify this level.

The third level of the taxonomy is that of Application. At this level students are asked to apply an already learned rule or process to solve a new problem. Students should get credit for the process of working on the problem, whether or not the correct answer is reached.

Analysis is the fourth level of the taxonomy. This level involves the division of a complex situation into its component parts, making explicit the relations among them. Analysis involves all the skills mentioned previously. It is more than comprehension. It demands that a student think critically and in depth. It requires a student to reach conclusions, to identify causes or to find supporting evidence.

Synthesis is the process of putting together elements and parts so as to form a new whole. Creativity is the essence of Synthesis, the fifth level of the taxonomy. Students are challenged to develop original work, to think creatively, to make predictions and to solve problems.

Evaluation is the highest level of the cognitive domain, and it is the most complex learning task. The student is challenged to make judgments about the value of material, methods and ideas for given purposes. The questions have no single correct answer and ask the student to offer an opinion on an issue, based upon established criteria and one's personal values.

CRITICISMS OF THE TAXONOMY

There have been criticisms of the use of this taxonomy. Some educators have criticized the division between levels as being too vague, since some questions fall into more than one category. Critics also claim that the separation of the cognitive domain from the psychomotor and the affective areas can cause an overemphasis on the intellectual. However, the development of this

taxonomy was never intended to negate the importance of the affective or psychomotor domains. It was intended to help teachers challenge children to use all of the possible thinking processes from simple to complex.

Bloom's Taxonomy has been used extensively in this way. It has been applied to writing goals and objectives, as well as questions. It has been used to evaluate student progress, as well as to diagnose and remediate learning problems. It has facilitated communication among educators, providing a common basis for discussion and comparison. It challenges educators to review their teaching and to strive to develop lessons to challenge students' thinking beyond the memory and comprehension levels.

We, as Jewish educators, can use the taxonomy as a guide to formulate our classroom questions, while recognizing the importance of the affective area in the learning process. As we become adept at using questions at all levels of the taxonomy, we can feel secure that we are challenging our students to use all of their thinking skills.

To see how the taxonomy can be implemented, practice writing questions on different levels—for your lessons, homework assignments, and exams. Evaluate the results and reap the rewards. What follows is an example of how one can apply the taxonomy to a lesson in Bible:

SAMPLE CLASSROOM QUESTIONS FOR TEACHING BIBLE

The following questions are based upon *Genesis 25:19-34, Parashat Toldot*.

I. Knowledge

The student recalls or recognizes information.

- A. Who are the main characters in this story?
- B. What information does the Torah tell us about each one?
- C. Where are the exact passages that describe each character?

II. Comprehension

The student changes information into a different symbolic form or language.

- A. Put the following descriptions into your own words:
 - 1. "a mild man, who stayed in camp"
 - 2. "had a taste for game"

- B. Draw a picture of one of the brothers as described in the text.
- C. Make a family tree for Rebecca.
- D. Explain verse 23 in your own words.

III. Application

The student is asked to apply a rule or process to a new problem. (In this level there is usually only one correct answer.)

- A. Using the Hebrew text, write three sentences in the chapter in modern Hebrew grammatical form.
- B. Complete this analogy: Rebecca is to Jacob as _____ is to _____.

IV. Analysis

The student is required to look at component parts and the relations between them.

- A. Identify Jacob's motives in his desire for the birthright.
- B. Why did Esau trade his birthright?
- C. What conclusions can you draw about Jacob's character from the information in our chapter?

V. Synthesis

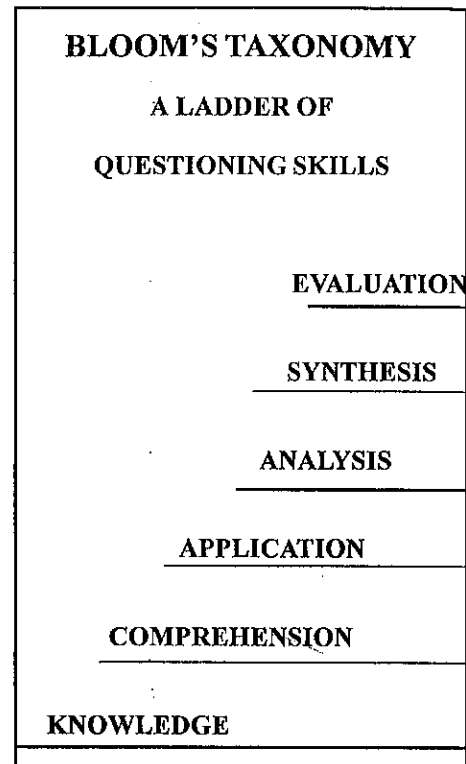
The student is encouraged to seek original solutions, develop original work and to think creatively.

- A. Write an original dialogue that might have taken place around the campfire (chapter 25: 29-34).
- B. Create your own title for this story.
- C. Imagine that you were able to interview the brothers at verse 34. Write three questions you would ask each one.

VI. Evaluation

The students is required to judge the merit, material, methods or ideas and asked to offer any questions you would ask each one.

- A. Judge Esau's actions in Chapter 25. Write a paragraph containing your judgment. Do you think Esau has grounds to recover his birthright—why or why not?
- B. With whom do you identify in this story and why?
- C. "Favoritism by a parent will probably lead to sibling rivalry." Do you agree or disagree and why?



From the lowest level, knowledge, to the highest, evaluation, each level of the taxonomy builds on the next in describing types of questions.

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