

## Re-Envisioning Bloom’s Taxonomy: Developing Critical Thinking in the Writing Center

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Rather than restricting assistance only to mechanical errors, tutorial sessions in the Kennesaw State University (KSU) Writing Center also involve questions and discussion intended to help students improve the thinking behind their texts. Through research and practice, tutors have discovered that re-envisioning Bloom’s Taxonomy can help them lead writers to new levels of critical thinking.

In the 1950s, Benjamin Bloom worked with a team of educational psychologists to classify educational objectives, which are intended to apply generally to multiple age groups and academic disciplines. The taxonomy identifies categories of intellectual maneuvers and arranges them in a hierarchy,

where the knowledge level is deemed the simplest and the evaluation level the most complex (Kraithwhol, 2002). Table 1 summarizes the taxonomy.

Many educators use Bloom’s taxonomy to design assignments and test questions, and at first, the taxonomy seemed to apply to tutorial work as an aid to understanding the cognitive demands of assignments placed on students. For example, if a student brings in an assignment that asks for a summary of an article, the tutor knows that the instructor is asking the student to identify main ideas and to express them in his or her own words; the instructor is looking for work at the comprehension level of Bloom’s taxonomy.

**Table 1.**  
*Categories of Bloom’s Taxonomy as Cognitive Objectives, and Their Definitions*

Cognitive Objective	Definition
Knowledge	Remembering learned information
Comprehension	Understanding what was learned
Application	Using what was learned in a new situation
Analysis	“Breaking down” learned information and understanding the relationships of the parts to each other and to the whole
Synthesis	Creating a new whole from existing parts
Evaluation	Using definite criteria to make value judgments for specific purposes

Note: Table 1 displays Cognitive Objectives in order from the simplest level to the most complex.

Even though Writing Center tutors generally do not create original writing assignments for students, Bloom's taxonomy is useful in providing another way to think and talk about student texts, and a vocabulary to diagnose them. In addition, although most tutors (both student and faculty) intuitively apply the essentials of Bloom's taxonomy, even without prior knowledge of the work, we have found that familiarity with Bloom's taxonomy increases our own awareness of what is asked of our student writers.

Considering that critical thinking "entails awareness of one's own thinking and reflection on the thinking of self and others as an object of cognition" (Kuhn & Dean, 2004, p. 270), tutors' increased awareness by way of Bloom can enhance their own critical thinking. As a result, tutors can be more effective in helping students with their texts. By understanding how categories of thinking are expressed in students' texts, tutors can direct their questions and discussion toward helping students work at the higher levels of the taxonomy that their assignments demand.

### **Bloom's Taxonomy as Reflected in Students' Texts**

Granello (2001) describes the use of Bloom's taxonomy in responding to student writing of literature reviews in a graduate-level counselor education program. She outlines the different cognitive levels that can be seen in students' texts and provides prompts – questions for teachers to ask – for shifting these writers to more appropriate (i.e., higher) cognitive levels. While Granello's explanation is specific to a particular pairing of students and assignments, her plan provides a framework for looking at a broader set of students and texts. We compared Granello's examples and questions to what we see in the KSU Writing Center and to what we find ourselves asking students repeatedly in our own efforts to help them improve their writing, regardless of their academic discipline. Table 2 contains what we think are useful descriptions of how cognitive levels can be reflected in students' texts and also the kinds of questions that can instigate a move to the next level of thinking.

**Table 2.**  
*Expression of the Categories of Bloom's Taxonomy in Student Texts, and Associated Questions to Prompt a Shift in Student Thinking*

Category	Expressed as...	To shift the thinking, ask...
Knowledge	Lists; reliance on long quotations; trouble paraphrasing; no distinction in relative importance of ideas.	Tell in your own words; how would you explain this to someone else?
Comprehension	More use of own words; still trouble understanding relative importance of ideas and sources; interesting but not directly useful information is included.	How does this information apply to the topic; can you give an example; how does this idea/statement/evidence support the thesis?

**Table 2 (continued).**

Category	Expressed as...	To shift the thinking, ask...
Application	Connects ideas and evidence clearly to the topic; still relies on analysis of others; magazine information is considered equal to original research.	What ideas do these sources (or paragraphs) have in common; can we outline the information by idea instead of by source?  What else might be important about the topic; what else would you like to know; is the evidence given about (and by) the source convincing?  Which evidence is most convincing; why; how can we decide/support/choose one side of the argument over the other; who said this; can you use this information to say something new?
Analysis	Doesn't rely only on other authors' conclusions; themes and ideas of other writers are identified but not linked across sources.	
Synthesis	Text is organized by ideas instead of by source; still problems reconciling conflicting information.	
Evaluation	Shows understanding of the relative value of different sources and ideas (and shades of gray).	

Because the questions are intended to help students cross a bridge in their thinking, the questions in the third column are shifted to span the categories in the taxonomy.

Of course, many assignments are complex and reflect demands at multiple levels of the taxonomy. Also, Bloom's taxonomy itself represents an ordered progression that might not exist in every situation, and the hierarchical structure suggests that some levels are more valuable than others, when really it may be that some levels are precursors to others. Also, the shift to other categories of thinking might not be as linear as Table 2 implies. However imperfect Bloom's taxonomy may be, the ability to identify and readily apply useful strategies or tools to help students with their texts becomes even more important when individual Writing Center

tutors work, each day, with students whose writing skills vary considerably and who bring a daunting range of assignments to the Writing Center.

### **Diversity of Students at KSU and the Writing Center**

During a typical day, a Writing Center tutor will work with students from the first year composition program, including students who are either traditional (right out of high school) or non-traditional (returning after a period of years). Tutors may also work with upper-level students and graduate students from a range of disciplines and students whose first language is not English.

One challenge that faces the Writing Center tutor at the beginning of a session is to get an immediate sense of whether the

student actually knows where the problems with his or her text lie. While students may have the perception that they need help with one specific writing skill, students' writing issues can range far and wide. Writing Center tutors will address many facets of writing, including the basics such as grammar and mechanics, organization, paraphrasing and documentation, focus, and choosing relevant sources.

In addition, some students' texts can be more difficult than others to place precisely in any one category of Bloom's taxonomy. For a student whose first language is not English, the tutor must consider that the student's comprehension and cognitive abilities may be at higher levels than are expressed through the student's written English. Graduate students visiting the KSU Writing Center bring cognitively demanding assignments that include exacting requirements concerning format and documentation. And, while the first-year composition student often brings concerns about "flow" and punctuation, the demands of their assignments often require that the tutor address higher cognitive levels as well. Using Bloom's taxonomy to work with this diversity of students and texts can become a decidedly less sure-handed practice than a tutor might prefer, yet the multi-level expression in many texts, especially those of some international and non-traditional students, can be addressed successfully through the taxonomy.

### **A Case Study**

To illustrate how Bloom's taxonomy might actually apply in a tutorial situation – as well as in the classroom – consider an informal case study of a non-traditional student at KSU. The case was followed by co-author Leslie Wolfe-Cundiff who teaches freshman composition and works in the Writing Center as a faculty tutor.

The case study student is Evelyn (not her real name), a 63-year-old woman who had not previously attended college. Evelyn was a student in English 1101 (first semester composition) and visited the Writing Center a half-dozen times during the semester for advice on everything from word processing to the mysteries of MLA documentation. Widowed a few years ago, her primary reason for attending college was simple and compelling: to help get some structure back in her life. She had been a businesswoman, housewife, and mother. She and her husband had owned their own business for many years, but she had never gotten around to college. So, later in life than usual, she entered college full of enthusiasm, eager to learn, and full of worldly wisdom.

Her first essay that semester – an analysis of an editorial – was, in Bloom's taxonomy terms, a first-level effort: Knowledge. The instructor assigned students to choose an editorial from a reputable publication and analyze it for audience, argument, and evidence. Not only was Evelyn's essay about an analytical feature piece instead of an editorial, illustrating Evelyn's lack of discernment (believing that publication automatically gave it credence), but her essay also exhibited most of the limitations outlined in Bloom's taxonomy, repetition of information and little attempt at paraphrasing.

Evelyn took advantage of the convenience of on campus tutoring and, seeing the value in one-to-one consultation over her own writing. Her classroom instructor tutored her twice and noted her progress through the Writing Center reports on visits when other tutors saw her. Through the course of the semester, she made what the instructor considered good progress – from basic knowledge level to developing in areas of application, two levels up.

As a knowledge-level student, Evelyn was new to research. At first she

didn't venture outside her textbooks. However, after a library orientation session she began to explore the library, opting for the tactile sense of "real books" as opposed to the experience of cyberspace. However, recognizing that Internet research would prove invaluable in her college career, she and the instructor spent part of one tutoring session evaluating a single website. Learning to evaluate sources is an important step out of the knowledge level and into comprehension.

On her way through comprehension, Evelyn began using more of her own words instead of relying on long quotations, but she was still not selective enough with information. For Evelyn, that meant leaving out important facts and including irrelevant ones – typical traits of a student at the comprehension level. On the other hand, she learned when she needed to question her own judgment on pertinent sources.

After one class discussion, Evelyn was concerned about paraphrasing and brought all of her research into the Writing Center where during an hour-long session she and the instructor discussed ways she could integrate it into her paper. She was having a particularly hard time with the conclusion of this paper, an editorial essay, because as she and the tutor discovered together, she had not thoroughly articulated her own opinion. Once she spelled it out, the conclusion came naturally and even included a snappy quotation from a newspaper article.

At that point, she had stepped up to the application level. Good connections between her topic and the ideas and evidence in her research came more easily, and her ability to evaluate the relevance of a particular piece of information improved. However, typical of writers at this level, she was still not able to make consistent distinctions about the quality of information she read.

Observing Evelyn's development as a writer through the lens of Bloom's taxonomy provided testimony that the process is not necessarily a linear progression. Evelyn's example shows that abilities can be gained in an organic, connected way, more as an interlinked web of maneuvers than a stepwise series (see Air War College, 2004). While still developing application-level skills, Evelyn began looking beyond the material to her own understanding – an ability that surfaces in the next level, analysis.

In Evelyn's case, Bloom's taxonomy turned out to be a highly useful assessment tool and a means to help map the writing issues that could be anticipated. With its application and with the support of the Writing Center, the instructor could evaluate the student's situation, assess her writing, and move swiftly to ask questions that would ultimately help advance the student's abilities to the next level. As a result, through the taxonomy's clear benchmarks, student, instructor, and tutors were able to celebrate the student's writing successes.

## **Conclusion**

As an educational tool for designing assignments and test questions, Bloom's taxonomy has proved valuable to educators for nearly a half century. However, in using Bloom's taxonomy outside assignment-writing and applying it in a tutorial setting, tutors at the KSU Writing Center find that it helps tutors focus questions in a way that may help students raise the level of their cognitive thinking. In the informal writing center environment, Bloom's Taxonomy may also help tutors encourage students to approach their texts with a deeper awareness of the complexities – and joys – involved in the writing process.

## References

- Air War College. (2004). Bloom's taxonomy. Retrieved October 13, 2004 from <http://www.au.af.mil/au/awc/awcgate/edref/bloom4.htm>
- Granello, D. (2001). Promoting cognitive complexity in graduate written work: Using Bloom's taxonomy as a pedagogical tool to improve literature reviews. *Counselor Education and Supervision, 40*, 292-307.
- Krathwhol, D. (2002). A revision of Bloom's taxonomy: An overview. *Theory into Practice, 41*, 212-218.
- Kuhn, D., & Dean Jr., D. (2004). Metacognition: A bridge between cognitive psychology and educational practice. *Theory into Practice, 43*, 268-273.

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