Lightening the Cognitive Load: Maximizing Learning in the Legal Writing Classroom

By Rosa Kim

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In recent decades, educators have been examining the ways in which cognition and instruction are connected, so that teaching, and therefore learning, can be more effective. The findings of cognitive scientists and educational psychologists on how people learn are fascinating and informative for teachers at all levels. The legal academy has been relatively slow to examine these findings, as the goal of a law school education seems attenuated from such matters of basic science, and because there is an assumption that law students should have figured out how to learn by the time they get to law school. Some of the key findings indicate, however, that understanding the principles should inform how law teachers teach, and how students can maximize their learning in the law classroom.

The traditional first-year law school curriculum is designed to impart a great deal of new information, in addition to exposing students to a new way to think. Combined with the abundance of technological tools and distractions for present-day law students, who are “digital natives,” the likely result for many students is a clear case of cognitive overload. Moreover, the processing of information in a multitasking context tends to be more superficial, thus impeding the students’ ability to engage in in-depth analysis. Since the first-year curriculum is not likely to change drastically and technology is not going anywhere, the challenge for law teachers is twofold: help manage the cognitive overload in the classroom by using techniques and tools that maximize learning, and help students become aware of their learning so that they can achieve the levels of learning required in law school and as lawyers.

Legal Writing Classroom

A basic concept of cognitive science is that the human brain has limitations in learning and retaining new information. The “working memory” is only capable of holding four to seven pieces of information at the same time, and acts as a bottleneck that channels all new information processed in the brain. While we have a vast capacity to retain information that has already passed through the working-memory channel to the long-term memory, new information taxes the working memory and can result in cognitive overload when too many pieces are competing for the limited space.

There is little doubt that law school learning taxes the working memory and stretches its limits. Even if some students are able to take in the new information, the ability to process complex concepts is compromised when the working memory is overtaxed. The digital native law student’s working memory is not just taxed by property, torts, contracts,
and CREAC, but in another significant way. The student must control and manage the deluge of information available through a variety of electronic and digital media and tools, a sort of “multimedia multitasking.” According to cognitive theorists, such multitaskers are likely to lack the ability to focus deeply and engage in complex analysis. Multitasking, namely doing more than one thing at a time, actually means that the person is task switching. The research is clear that task switching results in loss of time and attention, and negatively affects the ability to learn complex information.

The digital native student in the legal writing classroom is a multitasker by definition—typing, texting, checking e-mail, surfing the Internet, listening (we hope), and processing. There is no doubt that these students are forced to exercise more discipline to ward off distraction. Professors can limit the use of technology in the classroom, but the reason for doing so should focus primarily on the harm it does to learning, not that it is annoying and disrespectful to the professor, which it definitely can be.

What can legal writing teachers do to help manage cognitive overload in the classroom and help students learn at a deeper level so that they can be effective lawyers? Knowing that new information must compete for limited working-memory space, the way we impart information to our students should include teaching techniques that reduce cognitive load and promote effective learning. There are two simple guidelines that can help accomplish this important goal; while they are not novel ideas, revisiting them in light of their connection to cognitive load is surprisingly instructive. First, when teaching a new concept, relate new information to data that is already learned and stored in the long-term memory. Making connections to information that does not have to compete for space in the working memory helps the information “stick” better. Because information is organized in the long-term memory by “schema,” or clusters of information, the working memory can handle more information that is added to existing schemas.

Teaching a new skill or idea as a variation of one already taught is an approach that lends itself easily to the first-year legal writing curriculum, in which students typically learn to draft an objective memorandum during the fall semester, then a persuasive memorandum in the spring. When teaching how to draft a rule persuasively, for example, the professor can have students focus first on an objective statement of a rule from the fall memo fact pattern, which the students know very well, then devise a new scenario, such as one party filing a trial motion, that requires framing the rule persuasively. By relating the new skill of persuasive rule formulation to familiar information that is previously mastered, the professor is imparting new information while helping to manage the students’ cognitive load.

The second guideline for promoting learning while reducing cognitive load is to be thoughtful about how and when to use multimedia tools for teaching. While there are findings that confirm the effectiveness of multimedia teaching, the research suggests that people process complex concepts more readily if they receive information both

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7 See Claudia Wallis, genM: The Multitasking Generation, TIME, (Mar. 27, 2006), available at http://www.time.com/time/magazine/article/0,9171,1174669,00.html. Students need to be made aware that the skills required of a lawyer far surpass the ability to find facts and information using the Internet. As one author sums it up, “You can’t Google context.” See Annie Murphy Paul, Your Head is in the Cloud, TIME, (Mar. 12, 2012), available at http://www.time.com/time/magazine/article/0,9171,2108404,00.html. In fact, employer comments and feedback have emphasized this deficiency in the ability to focus deeply in new associates. See Amy Vorensberg and Margaret Sova McCabe, Practice Writing: Responding to the Needs of the Bench and Bar in First-Year Writing Programs, 2 Phoenix L. Rev. 1, 10 (Spring 2009).

8 Anne Enquist, Multitasking and Legal Writing, 18 (1) Perspectives: Teaching Legal Research and Writing 7 (Fall 2009); see also Jacobson, supra note 6, at 435–41.

9 Merritt, supra note 5, at 46–47.

10 Id. at 47.

11 Another effective option is to introduce new concepts by relating them to everyday life, allowing the working memory the “space” it needs to process the information. While many legal writing professors naturally engage in techniques that relate new information to already mastered or familiar material, being mindful of the benefit of “chunking” on managing the students’ cognitive load should help renew the commitment to using them.
visually and aurally. It follows that legal writing professors should incorporate more visual images and less text to illustrate an idea, for example when using PowerPoint® as a teaching tool. A PowerPoint slide that is crowded with text only is an example of an ineffective teaching tool because the audience is forced to read text and process it while listening to the professor’s comments. A well-chosen, simple image in conjunction with narration that associates the concept will be far more effective in helping the student grasp and retain the concept. A simple example of combining visuals with narration in the legal writing context would be to use a graphic to illustrate the hierarchy of common law authority, e.g., primary versus secondary law, binding versus persuasive, rather than simply explain what each type of authority is. The following two images of PowerPoint slides illustrate the difference between a text-heavy slide and one that utilizes a visual image:

Moreover, entertaining students with fun media tools, e.g., YouTube clips, music, and photos, can be effective, but only when the chosen piece is directly and specifically related to the concept being taught. Otherwise, it takes up precious working memory and serves as a distraction to learning.

**Promoting Metacognition to Maximize Learning**

The second challenge for legal writing professors to ensure that students are maximizing learning in the law classroom is to promote metacognition—to help students become aware of their own learning process. Metacognition has been defined as “one’s own knowledge concerning one’s own cognitive processes.” There have been several excellent studies of metacognition as it relates to how effectively students learn in law school. The basic point is that when students are made to be aware of their own learning—what helps and hinders it—they become active learners. The goal for legal writing professors in utilizing active learning strategies is to maximize students’ ability to not only understand concepts, but also the skills required for the practice of law. Legal writing professors can begin promoting self-awareness in our students by sharing knowledge

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**Hierarchy of Legal Authority**

- **Primary authority** = the law
  - statutes, constitutions, cases, regulations
- **Secondary authority** = commentary on the law
  - Law reviews, restatements, treatises, hornbooks
- **Binding authority** = primary law from same jurisdiction
- **Persuasive authority** = secondary authority or primary law from different jurisdiction

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12 Merritt, supra note 5, at 47.

13 Id. at 51-54.

14 Id. at 45-46.


17 In a presentation to Suffolk Law faculty entitled Teach Law School Students HOW to Learn: Metacognition is the Key! in May 2012, Dr. Saundra McGuire, Asst. Vice Chancellor for Learning, Teaching, and Retention at Louisiana State University, shared her experiences in using metacognition strategies with students at her institution, and suggested that similar strategies would be beneficial to law school students. Professor McGuire illustrated the different levels of learning goals using the pyramidal classification known as Bloom’s Taxonomy. See Benjamin S. Bloom, et al., *Taxonomy of Educational Objectives: The Classification of Educational Goals, Handbook I: Cognitive Domain* (Longmans, Green 1956). Although the levels and their descriptions were updated in the 1990s, the original pyramid’s six levels of learning objectives, from lowest to highest, are Knowledge, Comprehension, Application, Analysis, Synthesis, and Evaluation.

18 Boyle, supra note 15, at 5-6.
about cognitive theory, the limits of the working memory, and the negative impact of “multimedia multitasking” on deep learning. The message is that the levels of learning required to succeed in law school and in the practice of law cannot happen without effective management of cognitive load and awareness of one’s own learning. A simple visual image of the Bloom’s Taxonomy pyramid is an excellent vehicle for showing students that the levels of learning they should aspire to in law school occupy the top two levels—synthesis and evaluation:

Promoting learning at the highest levels can be achieved through helping students become expert learners. If we set as our teaching goal converting students into experts of the material they are learning, we need to explore ways to facilitate that process. Learning at the highest levels can occur when students are challenged to become experts in a topic. One example of achieving this goal is to assign students to be in charge of teaching or presenting on a topic, as the preparation and level of understanding required to teach someone else forces learning at the highest level. For example, once students have found relevant cases for their persuasive memoranda, assigning one or two cases to each student to be in charge of understanding and explaining how they will be used for the persuasive memorandum is a simple but effective way to encourage learning at the highest level. Rather than simply cold calling students or even putting them on call for a given class, assigning students the job of being the designated expert can enhance their learning beyond what is normally possible in the law classroom.

The good news is that legal writing professors are already at the forefront of the legal academy in engaging and assessing our students to promote metacognitive strategies and active learning. This is an objective all law teaching should take into account when considering how we can best serve our students. The work of cognitive scientists has shed further light on the physiology of how human beings learn and has made it possible for us to share this information with our students. Applying that knowledge to the legal writing classroom involves making teaching choices that can help lighten the cognitive load for our students and, at the same time, encourage learning at the highest levels.

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19 Bringing awareness to students about their learning styles—visual, auditory, or kinesthetic—can help both the professor and the students learn more effectively. See Boyle, supra note 15, at 6-7.

20 This is yet another example of a technique many legal writing professors already employ, but doing so with an understanding of the importance of encouraging learning at the highest levels of Bloom’s pyramid makes the technique even more worthwhile.

“Assigning students the job of being the designated expert can enhance their learning beyond what is normally possible in the law classroom.”