

## Quiz: Chapter 1 and Chapter 2

CSC131 The Beauty & Joy of Computing

27 August 2018

Learn something about the authors of the books that we will be reading. Come to class prepared to share what you have learned in a sentence or two about each author.

- Peter C. Brown
- Henry L. Roediger III
- Henry L. Roediger III
- Mark A. McDaniel
- Mark A. McDaniel
- Benedict Carey
- Benedict Carey

### Questions on readings in *Make It Stick*

1. “Illusion” is an important word in *Make It Stick*. In just a few words, against what are the authors warning us? *Make It Stick*: p. 15, 16, 17, 21

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Reading a text over and over again is a poor way of learning. Rereading will lead to a familiarity with the text. On each successive reading, a reader will more quickly recognize words and phrases, but this kind of knowledge is not the same as the kind of knowledge needed to call up and use the most important ideas that the text contains.

2. Who is Matt Brown? What happened to him? Make It Stick: p. 1, 2

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Matt Brown is a pilot. When he was flying an airplane from Texas to Kentucky, he saw an indication of dangerously low oil pressure in one engine. An examination of what Matt Brown needed to know in that emergency and how he had learned what he needed to know will help us in our efforts to become better learners.

3. What are “three immutable aspects of learning,” according to the authors? Make It Stick: p. 2

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- (a) To learn, we must remember.
  - (b) We will need to learn at every stage of our lives, in school and out of school.
  - (c) We can learn more about how to learn. Some of the most effective ways of learning will not feel natural or obvious.

4. Do the authors believe that different students have different learning styles? Make It Stick: p. 4

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Different students do prefer different ways of learning. However, students learn more when they make use of a variety of modes than they do when they restrict themselves to what they perceive to be their best way of learning.

5. What alternative to “massed practice” do the authors offer? Make It Stick: p. 4

- *interleaved practice* means alternating study of two or more subjects
- *spaced out practice* means choosing two or more periods of study (with a passage of time between periods) over a single, long period of study

6. The authors identify several academic fields in which research is teaching us more about how people learn. What are some of these academic fields?  
Make It Stick: p. 8

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- cognitive psychology
- educational psychology
- developmental psychology
- neuroscience

7. Why might students prefer trying to learn by reading a text repeatedly?  
Make It Stick: p. 15, 16

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A student will commit phrases to memory. This accomplishment will give a feeling of progress and success. However, the ability to recall phrases from a textbook might not be enough to score well on an examination or to make good use on the job of what the authors of the textbook hoped to teach.

8. Does school ever end for pilots? Be specific. What is Matt Brown's experience? Make It Stick: p. 20

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Pilots continue training throughout their careers. Matt Brown practices in a simulator every six months. Tests during these periodic returns to training require him to demonstrate his skills and help him strengthen those skills.

9. In the first chapter, the authors give readers a preview of what is to come. They mention an officer in the United States Army. She has a favorite phrase that she uses to describe her approach to learning. What is that phrase? Make It Stick: p. 21

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“Shooting an azimuth” is a phrase that Second Lieutenant Kiley Hunkler favors. She learned the phrase during her military training, where it meant periodically finding a high point on land during a cross-country hike from which she could look ahead and verify that she was still headed in the right direction. She now uses the phrase to also describe her habit of testing herself periodically to check her progress and adjust her approach.

10. Dr. Mike Ebersold does not just treat injured Midwestern hunters. He also once treated which American president? Make It Stick: p. 24

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Dr. Mike Ebersold once cared for Ronald Reagan after Reagan suffered injuries while riding a horse.

11. Dr. Ebersold compares himself to a race car driver and to the quarterback on a football team. In what way? How is surgery like the two sports? Make It Stick: p.27

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Success in surgery, like success in an athletic competition, sometimes requires quick reflexes. The surgeon and the athlete must respond quickly.

The fast pace of events does not allow a slow, deliberate, self-conscious recall of each step needed to solve a problem.

12. The authors concede that cramming has a value. What is gained by cramming? Make It Stick: p. 31

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Cramming produces short-term gains. A student who crams can do well on an examination that immediately follows the study, but will not do well when asked to recall the information at a later date.

13. What does Professor Andrew Sobel think of quizzes? What about pop quizzes? Make It Stick: p. 37, 38

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Professor Sobel has replaced mid-term and final examinations with shorter and more frequent quizzes. He announces the schedule of quizzes. He does not favor surprise quizzes.

Since he made these changes, he has seen that students are attending class more faithfully. More students are enrolling in his class. Students are writing better answers to his questions.

14. How has Principal Roger Chamberlain responded to charges that his approach substitutes rote learning for learning that enables students to evaluate claims, generate their own arguments, and apply knowledge in unfamiliar contexts? Make It Stick: p. 44, 45

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The form of teaching and learning that he has promoted in his school gives students the foundation that they need to evaluate claims, generate their own arguments, and apply knowledge in unfamiliar contexts. As he sees it, we do not have a choice between learning facts or learning how to connect facts. Instead, the one kind of learning must precede the other kind.

15. Name one technique for study that the authors share in Chapter 1 or Chapter 2 and that you could begin using right away. reflecting on what we have read, quizzing ourselves on what we have read

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Here are several ideas that we can push ourselves to pull from our memories what we have learned from our reading:

- We can pause during our study to reflect on what we have read. Write a summary. Find your own words.
- We can pause during our study to quiz ourselves. Write your own questions and answers.