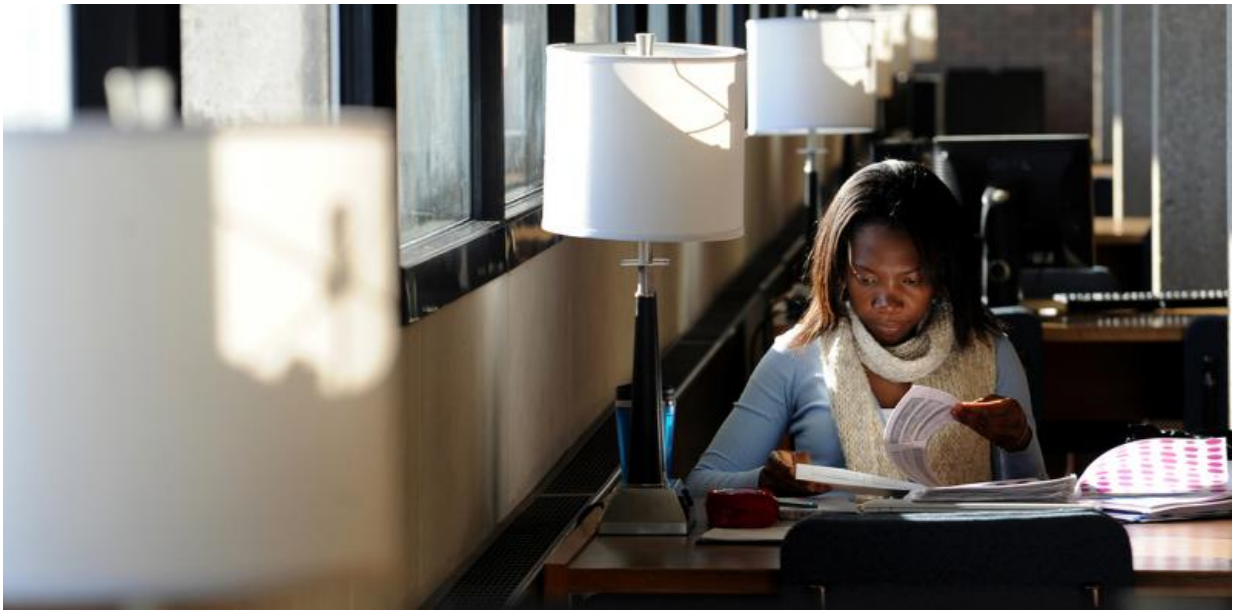
Illusions influence our predictions about how well we'll remember in the future

June 6 2017, by David J. Frank And Beatrice G. Kuhlmann



OK, I've got this. Credit: Illinois Springfield, CC BY-NC-ND

Every day we make decisions based on how we think our memory works. A student decides how long to study for an exam. A shopper decides whether or not to make a grocery list. An FBI director decides whether to write the contents of a concerning conversation in a memo or to trust he would never forget such critical details.

Yet too often we find ourselves wishing we had studied harder or written

down a detail we were previously convinced we would remember. Why does this happen?

The answer may lie in the study of metamemory illusions – situations that lead people to consistently overestimate or underestimate their future memory of something. The way information is presented influences how well people predict they'll remember it. In our research, we test how subtle cues, such as volume, influence people's judgments about memory.

Easy to take in, easy to remember?

Psychologists have identified several factors that make people incorrectly gauge how good their memory will be. For example, people overestimate their memory for information presented at a loud volume. Similarly, people judge information presented in very large or very clear font as more memorable than information presented in small or difficult-to-read font.

However, volume, font size and font clarity actually have little to no effect on memory. What each of these factors share is that they presumably make the information easier to process – literally easier to hear or read. This led to the theory that people unknowingly base their memory judgments on how easy it was to process the information when they learned it. The idea is that if you don't have to strain in the first place to read a nicely laid out chunk of text, for instance, you expect that it will be easy to recall later.

It's not necessarily a bad idea to use ease of processing as a shortcut to determine how well you're learning. The two often do go hand-in-hand, with many of the factors making something easy to process also related to memory.

For example, when someone reads a book a second time, she can read it faster and with less effort; there's an increased ease of processing. Repetition – reading the book a second time – also improves memory for the book's contents. Thus, the increased ease of processing coincides with an increase in memory, in this case. But it's the repetition and not the ease of processing itself that improved memory.

Likewise, if new details fit with what someone already knows, it makes processing the new information easier and also makes recalling it easier. Thus, ease of learning is often, but not always, a good indicator of future memory.

Investigating the illusion

However, recent research challenges the idea that people rely on ease of processing to judge their future memory. Researchers found that many people believe that volume and font size affect memory without actually hearing or reading the words beforehand. According to this view, ease of processing in the moment is not related to memory judgments at all – those judgments simply reflect people's general beliefs about how memory works. That is, people predict that they will remember more loud words because they believe that volume actually affects memory.

So do people base their memory judgments off of ease of processing or beliefs about memory? To test these two different theories, we devised a study to pit them against each other.

We told 136 college students they would hear a series of words, some loud, others quiet. Before playing any words, we asked students to guess the percentages of loud and quiet words they would remember. When students indicate they'll recall more loud words, it suggests a general belief about volume affecting memory.

Then students heard each word, one at a time. Immediately after the actual experience of hearing it (at whichever volume), they rated how likely they were to remember each word.

We found that students who already believed beforehand that loud words would be remembered better fell victim to the illusion: they gave much higher future-recall ratings to each loud word after it was presented. However, many students who did not believe that volume had any effect on memory still fell victim to this illusion – but to a lesser extent. Thus, it appears that people use a combination of both preexisting beliefs and ease of processing when making memory judgments.

So what do our results say about the accuracy of people's memory predictions?

Understanding that volume itself will not influence memory helps people make realistic predictions. Even if you realize that, though, processing ease still induces an illusion.

Since ease of processing often does indicate better later memory, it's not completely wrong to rely on it.

But be wary whether the processing ease comes from the information itself, indicating your high level of learning, or comes from arbitrary external factors like volume. If you're an FBI director, or anyone else needing to remember something really important, take some extra time learning it or write it down, just to be safe.

This article was originally published on The Conversation. Read the original article.

Provided by The Conversation