

Ins and Outs of Cramming

Europe's first universities appeared in the 12th century. The final examination originated at about the same time, and no doubt, the first students to take finals were also the first students to cram for them.

Both the final exam and cramming retain some of the flavor of their medieval origins: the final bears obvious resemblances to the Inquisition and the torture rack; the all-night vigil evokes images of burning the mid-night oil, and candles at both ends.

Though the preponderance of professorial opinion and scientific study through the centuries has been anti-cramming—and occasionally scholars express wonder at the persistence of the custom—the purpose of cramming is quite obvious. Without it, student life as we know it today could not exist. Cramming separates the diligent from the casual student and enables the latter to have fulfilling and amusing college careers, while the studious consistently make the grades.

Even conscientious scholars cram occasionally—or at least, they claim to be cramming, even though everyone knows they have been reading two chapters a night since the first day of class and typing their lecture notes onto 3 x 5 cards. "Cramming" means different things to different folks.

Let's define the terms. *Cramming* refers to any last-minute, last-ditch effort to master an abundance of new material. The word "new" is key. For the purpose of this treatise, cramming is different from *final reviewing*, any last-minute, last-ditch effort to organize and brush up on previously learned material. An *all-nighter* is any last-minute, last-ditch effort of studying or term-paper writing, as a result of which the effortee sleeps less than four hours. (For our purposes, you need not actually see the rosy-fingered dawn to qualify; it's the thought, or lack of it, that counts.)

Now with a firm grasp on the definitions, let us state unequivocally the facts of the matter:

1. Cramming, despite its usefulness as a social institution, is useless as a means of passing final exams.

2. Final reviewing, on the other hand, is an extremely useful study tool that works with moderate to high success.

3. All-nighters are a common and harmless tool for writing term papers, but all-nighters and exams go together like oil and water.

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defined, we offer you no encouragement, only a sincere "good luck" and a prayer that your departure from the university will be as painless and trauma-free as possible, under the circumstances. Sorry, kid, it just doesn't cut the mustard. Here's why.

The Mechanics of Memory

The brain seems to have two memory systems, short-term memory and long-term memory. Information in short-term memory has this nasty habit of dissolving into nothingness in 24 hours or less. Also, short-term memory has a space shortage. When some new information comes in and there's no room, some of the old information gets bumped out, never to be seen or heard from again.

Cramming information into short-term memory obviously won't do. The more you learn, the more you forget. The more you forget, the less you know. So why study?

Your only hope is to arrange a fast transfer from short-term memory to long-term memory, a permanent storage vault with unlimited space capacity. The way to do that, apparently, is to rehearse the information several times. This labels it as something you intend to keep. But if you're pushed for time, the transfer may not reach long-term memory in time. The scientific evidence indicates it takes awhile for long-term memory to consolidate new input. Some of the evidence suggests that sleep helps the consoli-

dation (a point which has a bearing on the wisdom of all-nighters). Some scientists theorize that dreams are the transfer itself—instant replays of the day's short-term memory holdings, broken down in smaller bits and on their way to cold storage in long-term memory.

Most cramblers never get the material past short-term memory; it may or may not hang around there long enough to do any good on the test.

Several other facts about learning work against cramming. One is the problem of interference—when you learn something new, it may cause you to forget something old. If you study all night and then stop to talk to a friend on your way to class, the conversation is new input that may interfere with what you just memorized—especially if it's still bouncing precariously in short-term memory. Another fact is that it's far easier to relearn something you already knew once than to start from the beginning.

For many students the difference between a cram and a review is a good set of lecture notes. Even if you don't look at your notes until just before tests, the concentration and effort you exerted to listen and then write down what you heard—in your own words—means you learned it. Every word may not be in long-term memory, but a large chunk of it probably is, just waiting for you to pluck it out.

The most "scientific" way to study, then, would be to review your notes and books the very last thing at night. Then go directly to bed (no interference) and "sleep on it." That should consolidate the new information into long-term memory. In the morning recite once or twice to be sure it's all there.

The professorial wisdom on cramming is summed up by this advice from a campus psychologist: "I'm for cramming at the beginning. If you really want to learn well, read the material three or four times at the start of the quarter. If you learn it well then, you'll only have to review it."

In the best of all possible worlds, every student would follow this sage advice. But then, in the best of all possible worlds, every college student would study for the pure joy of seeking knowledge and final exams would be unnecessary. ■

Staff writer Don Akchin had a successful college career and promptly forgot everything.