

Attention, Students: Put Your Laptops Away

RACHEL MARTIN, HOST:

When you take notes on the puzzle or maybe when you sit down in class, do you pull out your laptop, or do you pull out a piece of paper? A researcher at Princeton University says it matters which one you choose because you'll learn more if you write your notes by hand - a lot more. Pam Mueller joins us now to explain why. Thanks so much for being with us.

PAM MUELLER: Thanks for having me.

MARTIN: Your study shows that writing notes by hand makes you focus your attention in some way that just typing it doesn't.

MUELLER: So when people type their notes, they have this tendency to try to take verbatim notes and write down as much of the lecture as they can. The students who were taking longhand notes in our studies were forced to be more selective because you can't write as fast as you can type. And that extra processing of the material that they were doing benefited them.

MARTIN: That's so interesting. So you're saying that if you're typing notes, you're really, like, taking dictation, whereas if you're doing it by longhand, there's no way you can keep up that way. And so you're inevitably synthesizing information and that's a kind of learning?

MUELLER: Exactly, particularly when you're asked a question that involves conceptual understanding of the material. We found that on factual questions, the students did approximately equivalently. But when it came to the deeper understanding of material, that's where the longhand note takers really shown.

MARTIN: Do you want to out yourself? Are you a longhand note taker or were you, in college, a computer note taker?

MUELLER: So when I was in college, nobody really had a laptop.

(LAUGHTER)

MARTIN: (Imitating whispers) Me either. But we won't tell.

MUELLER: (Laughter) When I was in law school, it was a huge debate about laptop versus longhand. And I wished maybe that I'd taken longhand notes there.

MARTIN: But what about for all the college students out there in the throes of exams, probably right now, who are frantically taking notes? Is it just unrealistic to think that people would switch it up and go old school?

MUELLER: I think it is a hard sell to get people to go back to pen and paper. But they are developing lots of technologies now like Livescribe and various stylus-and-tablet technologies that are getting better and better. And I think that could be sort of an easier sell to college students and people of that generation. I think that these results resonate a lot with people who are a little older. But as we showed in our studies, even when we told people they shouldn't be taking these verbatim notes, they were not able to overcome that instinct. So that frantic note taking you were talking about is actually really, really bad.

MARTIN: Pam Mueller is lead author of a study about note taking. Pam, I've been listening carefully and writing things down, all in longhand of course. Now this means I need to work on my penmanship, by the way.

MUELLER: Yeah, it helps if the notes are comprehensible later. But even if they're not, the content is in your brain better than it would be otherwise.

MARTIN: Pam Mueller, also known as Dr. Mueller, thanks so much.

MUELLER: Good to talk with you.

Copyright © 2016 NPR. All rights reserved. Visit our website [terms of use](#) and [permissions](#) pages at www.npr.org for further information. NPR transcripts are created on a rush deadline by an NPR contractor. This text may not be in its final form and may be updated or revised in the future. Accuracy and availability may vary. The authoritative record of NPR's programming is the audio record.