

# If You Are Going to Take Notes, Do It By Hand

You are better off taking notes by writing them rather than typing them.  
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I just finished my 23<sup>rd</sup> year of teaching at universities. There have been several changes in the way students approach their classes in that time. The most noticeable is that when I started teaching, students took notes in notebooks, but now almost every desk has a laptop on it when I give a lecture.

There seem to be a lot of obvious benefits to taking notes on a computer. For one, it is easy to save the notes in a place where you can find them later. For another, you will be able to read your notes later. My own handwriting is terrible, so it is nice to have a tool that will allow me to read my notes later.

Before we go out and encourage every student to bring a laptop to class, though, it is worth checking out a study by Pam Mueller and Danny Oppenheimer in the June, 2014 issue of [Psychological Science](#).

They compared college students' performance on tests following exposure to material. The students were assigned either to take notes longhand or using a laptop. In these studies, the laptops were set up so that students could only take notes on them. Of course, in the real world laptops can provide a variety of distractions.

In the first study, students watched a TED talk. (For those of you who have been living under a rock, TED talks are lectures on a variety of topics that last about 15 minutes.) They took notes during the talk. Then, they engaged in other activities for about 30 minutes. Finally, they were given a quiz about the lecture. The quiz contained both factual questions and conceptual questions that required some [understanding](#) of the subject matter.

Students did about equally well on the factual questions regardless of how they took notes. However, the students did much better on the conceptual questions when they took notes longhand than when they took them using the laptop.

The experimenters compared the content of people's notes to the transcript of the lecture the student heard. When people typed their notes on a laptop, they were much more likely to copy what people said directly rather than writing their impressions of it. That is, people writing out their notes had to think more deeply about the content of what they heard than those people who were just typing.

The experimenters expanded on this finding in two other studies. In one study, they instructed people using the laptops to take good notes rather than just transcribing what they heard. Even when people were given these instructions, they still had a greater tendency to type what they heard than people who were taking notes longhand. As before, the people who used the laptops did more poorly on a test of conceptual knowledge than those who took notes by hand.

In a third study, students were tested one week after hearing the initial lecture. In this study, students had a chance to read over their notes before taking the test. The idea was that if students took really detailed notes on the laptop, then perhaps those notes would be more valuable a week after the lecture than they were immediately afterward.

In this study, participants who reviewed their notes still did better if they took notes longhand than if they took notes on the laptop. Interestingly, in this study, the students did equally poorly regardless of the type of notes they took if they were not able to study their notes before taking the test.

Putting all of this together, it suggests that there is real value in having to think about the material in the process of taking notes. It is because handwriting is slow and effortful that people have to think more clearly about what they want to write down rather than copying down what is being said by rote. In addition, there is real value to studying later. Just taking good notes is not enough to be able to remember the information later. It is also important to go back over your notes and make sure that you think about the information again after being exposed to it the first time.