

# You've Heard It- Taking Notes By Hand Is Better Than Taking Notes On Your Laptop. But Why?

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College students are the future leaders of the world and need the most efficient way of being successful in school. In making digital devices their preferred reading and writing technologies, Gen Z has utilized technologies to expand their knowledge.

New technologies have provided students with resources that enhance their education. Numerous studies have shown that using digital devices are not beneficial for all learning tasks. Several researchers have found that when students take notes with pen and pencil, they retain information better.



Image of Data Science class at the College of Charleston in Charleston, SC

Pam A. Mueller and Daniel M. Oppenheimer compared students who take notes with pen and paper with those who type their notes on a computer. Mueller

discussed her research article “Corrigendum: The Pen Is Mightier Than the Keyboard: Advantages of Longhand Over Laptop Note Taking” on NPR in 2016.

Mueller shares that the students taking notes by hand were forced to be selective in what was written down because you can’t write as fast as you can type. Mueller and Oppenheimer highlight the fact that on application questions, students who took notes on their computer performed worse than those who took notes by hand. Further, those who took notes by hand and studied their notes did better than all other students. Overall, results from Mueller and Oppenheimer’s study show that longhand note takers performed better than those who take notes on a laptop. This experiment, however, is not the only study that represents this same conclusion.

Faria Sana, Tina Weston, and Nicholas J. Cepeda studied how multitasking on a laptop not only hinders students’ learning who use these devices, but it also interrupts the students that are around them.

They “found that participants who multitasked on a laptop during a lecture scored lower on a test compared to those who did not multitask, and participants who were in direct view of a multitasking peer scored lower on a test compared to those who were not”. Also, they stressed how multitasking harmed factual and application learning equally, which are critical points within a student’s education.

Although we understand the significant differences in academic achievement when students take notes and multitask on their laptops, it is important to consider the relationship between handwriting and memory, too. There must be consideration to the vital relationship between psychomotor action, memory retention, and handwriting. Timothy J. Smoker, Carrie E. Murphy, and Alison K. Rockwell expanded upon the investigation of the link between handwriting and memory.

In modern times, the movement towards electronic note taking has become more accessible, making it a motivating factor to show its downsides. Through their study, they found that “the increased kinesthetic information from handwriting” will never be obtained through typing notes. Recent examinations of imaging and memory performance show that handwriting allows people to remember certain words correctly when they are written rather than typing. Altogether, these experimenters hoped to provide additional support to the benefits of taking handwritten notes.

Dr. Brook Irving, a Visiting Assistant Professor in the Department of Communications at College of Charleston, was kind enough to give insight to her observations of notetaking. Irving shared she processes information more efficiently when she writes notes down, rather than typing it out. When Irving first began her teaching career, she used to see a difference, in that students who were taking notes by hand typically performed better on tests and papers. Irving stated that she “attributed that

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to what students were doing on their laptops, rather than a distinction between electronic and written note-taking”. Now, however, Irving expresses that she does not see a difference in student performance based on the method of notetaking. Despite not seeing a difference, Irving stresses that technology devices in classrooms can be distractions. She says, “smartphones are brutal. I see a major difference in the academic performance of students who are engaged in lectures whether it be on a laptop or paper versus those that spend their time trying to conceal their phone dependencies”.

Choosing to take notes on laptops may be quicker and more organized. Risking lower scores on tests, however, may not make quicker and organized notes

worth it. It is obvious that there is a connection between the formation of a letter and the brain. So why not do what's best for your grade and brain?