



College-Prep Hacks: Note Taking for College Success

If you've been on the receiving end of a text from a teenager, it's likely you've had to navigate the sometimes cryptic vernacular that's been widely adopted to streamline communication. As our lifestyle continues to dictate efficiency, this new form of shorthand has made its way into our text messages, email and sometimes even our speech. So it's no surprise that handwriting has fallen out of favor; even the humble grocery list has been upgraded from scribbles on the back of an envelope to Evernote. It starts early -- in the public school setting many children are only exposed to handwriting in those first few grades, with a focus instead on computer keyboarding to support the Common Core curriculum.

However, despite the widespread integration of technology in modern education, recent studies are making the case for going back to the basics. In a study out of Princeton, researchers found that in the context of note taking, those who used handwriting in lieu of typing not only had better memory retention but increased comprehension as well. Another study found connections between handwriting and brain development.


The implications of this are especially significant for college-bound students, who are suddenly thrust into a situation where "microcommunication" doesn't translate to the rigorous coursework that requires both effective note taking and the ability to compose thoughtful and cohesive long-form writing.

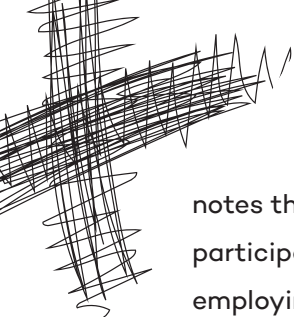
In this highly competitive environment, many students are seeking out strategies that can help them succeed and as studies have shown, handwriting may very well be the best first step.

Handwriting and Effective Note Taking

While laptops in college classrooms are a common sight, many professors aren't particularly fond of their use, arguing that they can be distracting, with students tempted to multitask during class rather than focusing on the lecture being presented. However, even with these distractions tempered, note taking on a laptop may just not be as effective as handwritten notes. One school of thought is that laptop note takers tend to take notes verbatim, given the speed of keyboarding vs. handwriting. This kind of note taking removes the thought process that goes into summation-style notes or concept mapping. To test this theory, Pam Mueller, a researcher at Princeton in the psychology department, conducted three experiments with college students to compare taking notes on a laptop versus writing longhand and the effects on academic performance.¹

In the first study, participants were presented a lecture and told to use their usual note taking strategies. When tested on conceptual application, laptop note takers scored significantly worse than their counterparts using handwritten notes. While those taking longhand notes took fewer





notes than laptop users, they showed increased comprehension of the material. In a second study, participants were specifically told not to take verbatim notes. Even with this directive, those employing longhand tested better for comprehension. In the third study, participants were offered an opportunity to review their notes before being tested on the lecture. With the addition of review time, researchers were seeking to test whether verbatim notes would be more effective when students were allowed time to review. Even with the inclusion of time to review, the longhand note takers scored better than laptop note takers when allowed to study notes prior to being tested both via factual and conceptual testing. In each study conducted, those using handwritten notes achieved greater success than laptop note takers.

Handwriting and Brain Development

Another study from Virginia Berninger, a professor in the Educational Psychology department at the University of Washington, which was published in *Developmental Neuropsychology*, found that in children grades 1-5, when testing three modes of writing (printing, cursive and keyboarding), there was little correlation between the three modes and in fact, each had its own distinct neuropsychological predictors. The belief is that handwriting differs from typing because it requires executing sequential strokes to form a letter. The act of typing on a keyboard only involves choosing a letter represented by a specific key. The act of these finger movements which are required when printing or writing cursive, activate those same parts of the brain that manage our thought process, language and memory. In a trial involving slightly older grades, the children were found to not just produce more words, but also produce more ideas when writing by hand rather than typing.

Tools for Success

Regardless of major, most college students will find themselves taking notes in class and ideally, referring to them later as they prepare for tests or draft a writing assignment. Despite what we now know about handwriting vs. typing, the idea of pen and paper may still feel outdated. The good news is that there are tools available that allow longhand note taking with the benefits of digital storage and sharability. Take for example the Bamboo Spark, which is a smart notebook that allows users to capture notes with pen and paper—and with the Bamboo Spark app—store them digitally so they can be accessed later for editing on your smartphone, tablet or laptop. With a free Inkspace account, students can save their handwritten notes as plain text, saving the time it would normally take to retype notes. Bamboo Spark makes collaborating and sharing simple, plus you can also easily search through past notes to review, add or edit. The Bamboo Spark app is compatible with most note-taking apps, so you can seamlessly access notes in Evernote or even save files to Dropbox.



In a [recent blog post](#), five students share how they use the Bamboo Spark, including blogger [Sarah](#), who says: “This is a great feature when it comes time to writing an essay, because you can use your notes as an outline to get you started.”

Want more info on the benefits of the Bamboo Spark? [Watch this video](#)

Right now, you can get the Bamboo Spark Learning Hack Bundle for only \$129.95. Included with the [Bamboo Spark: FREE 3pk Paper | 3pk Ink Refills | 3pk Closure Bands + Free S&H](#).

As our modes of communication continue to evolve, handwriting may seem like a relic from the past, studies show it is a way to get ahead.



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¹ The Pen Is Mightier Than the Keyboard: Advantages of Longhand Over Laptop Note Taking <http://pss.sagepub.com/content/25/6/1159.full?keytype=ref&siteid=sppss&ijkey=CjRAwmlURGNw>

² Early Development of Language by Hand: Composing, Reading, Listening, and Speaking Connections; Three Letter-Writing Modes; and Fast Mapping in Spelling https://www.researchgate.net/publication/7381720_Early_Development_of_Language_by_Hand_Composing_Reading_Listening_and_Speaking_Connections_Three_Letter-Writing_Modes_and_Fast_Mapping_in_Spelling

