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In her article, "Coordinating Mind and Hand: The Importance of Manual Drawing and Descriptive Geometry Instruction in a CAD-Oriented Engineering Design Graphics Class," the author, Diana Bairaktarova, recommends that instruction in descriptive geometry and manual drawing should be included in undergraduate engineering curricula. With advances in technology, it is too easy to simply jump onto the computer and skip over the manual steps of sketching. There are many advantages of sketching by hand, but for me, the biggest advantage of hand sketching is that it provides me time to think about the problem I am working on and to explore a variety of possible solutions. I find that if I just jump onto the computer, I explore fewer alternatives.

Another practice that is being lost due to technological advances is taking notes by hand. My students rarely take notes in class or on pre-lesson materials. All too often when I say, "You'll want to write this down" or "this will be on the exam," I see students pull out their phones to take a picture of the information or they type the information verbatim onto their laptop. This past semester, I made an extra effort to help my students take notes on their prelesson materials that consists of a combination of videos and readings, with mixed success. For the first two weeks of class, I devoted the first 10 minutes of each class period to a note review where students compared their notes with their neighbors. Another class period early in the semester I gave students credit if they showed me the notes they took on that day's pre-lesson material. Additionally, I allowed students to use the notes they took on short readiness assessment quizzes, which I gave almost every class period. While a number of students took notes and continued to do so throughout the semester, many did not after the first couple of weeks of class. Somehow, we need to help train and encourage our students to take the extra time to sketch and take notes by hand to help them connect their hand and mind.