The Case Against Multitasking

Chronicle Vitae Luminary Series

By Autar Kaw | January 8, 2014 (Revised September 14, 2023)

Despite overwhelming evidence that proves that doing more than one complex task is detrimental to student learning, I continue to hear anecdotal evidence perpetuating the myth of multitasking. I have had a few students try to convince me that they belong to the tiny minority of supertaskers and that my ban on using cell phones and laptops in lecture classes is archaic. And recently, even some university administrators eager to understand and align with the millennial generation are joining forces to spread the myth of multitasking.

Many tend to think that they can multitask. They believe that with ubiquitous digital technologies, our brains are adjusting to multitasking, if not evolving. However, they get defensive when asked to show any evidence-based research to back up their claims. If I ask the same individuals if they would even think about texting and driving, they claim that it is not the same as when they are lecturing or doing their homework in the classroom. Yes, the detrimental consequences of multitasking during learning are not as immediate as while driving, but they do exist. If you drink alcohol more than usual, you will not feel the consequences immediately. But, after a while, your liver will complain, and its damaging influence on your personal health and professional life will come forth.

Multitasking rations and switches our attention, makes us unable to differentiate between relevant and irrelevant items in an overloaded information world, and weakens our thinking skills. According to David Meyer at the University of Michigan, lower-order thinking skills have been found not to suffer in some experiments. Still, when subjects were asked questions on higher-order thinking or asked to apply what they had learned to other contexts, multitasking students did not do as well. Also, using newly learned knowledge and skills has been coded differently in the brain if learned while multitasking, adversely affecting their use and recall even in a non-multitasking activity such as an in-class test.

Multitasking in the classroom becomes more troublesome as students are introduced to the topic for the first time. Unlike experts but as novices, students require paying full attention, as our working memory is limited. Using part of the

working memory for comprehending an unrelated task, such as sending a text message or replying to a Facebook status update, will simply overtax the limited working memory.

One should not confuse multitasking with using several related sources to complete a specific complex task in the classroom, at work, or at home. A student interpreting and writing a report on a laboratory experiment may simultaneously refer to a textbook, talk to their group partners, and look for relevant information on the internet. This activity should be encouraged as our brain is also served well when we find patterns and integrate related information.

I believe that the ability to focus will be one of the primary traits employers will start looking for in a college graduate. New bad habits also die hard, and we are responsible as educators to steer our students on the right path. Even if we discourage complex multitasking in the confines of a classroom lecture, we are taking a small step in nurturing a focused citizen and an emotionally intelligent one.