

Lecturer takes laptops and smart phones away and musters student presence

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At a time when much of instruction is performed digitally and university lecture halls are often illuminated by a sea of laptops, it can be difficult to imagine that all instruction was recorded by pen and paper until about 20 years ago.

Digital technology constitutes a significant presence in education, with

many advantages—especially during these corona times, when a great number of students have been forced to work from home.

But [digital technology](#) in the classroom is not without its drawbacks. A lack of concentration and absence of attention among students became too much for one Danish lecturer to bear.

"The lecturer felt as if their students' use of social media on their laptops and smartphones distracted and prevented them from achieving deeper learning. Eventually, the frustration became so great that he decided to ban all screens in discussion lessons," explains Katrine Lindvig, a postdoc at the University of Copenhagen's Department of Science Education.

Together with researchers Kim Jesper Herrmann and Jesper Aagaard of Aarhus University, she analyzed 100 university [student](#) evaluations of the the lecturer's screen-free lessons. Their findings resulted in a new study that had this to say about analog instruction:

"Students felt compelled to be present—and liked it. When it suddenly became impossible to Google their way to an answer or more knowledge about a particular theorist, they needed to interact and, through shared reflection, develop as a group. It heightened their engagement and presence," explains Katrine Lindvig.

Without distraction, we engage in deeper learning

What explains this deeper engagement and presence when our phones and computers are stashed away?

According to Katrine Lindvig, the answer rests in the structure of our brains:

"A great deal of research suggests that humans can't really multitask. While we are capable of hopping from task to task, doing so usually results in accomplishing tasks more slowly. However, if we create a space where there's only one thing—in this case, discussing cases and theories with fellow students—then we do what the brain is best at, and are rewarded by our brains for doing so," she says.

Furthermore, a more analog approach can lead to deeper learning, where one doesn't just memorize things only to see them vanish immediately after an exam. According to Lindvig:

"Learning, and especially deep learning, is about reflecting on what one has read and then comparing it to previously acquired knowledge. In this way, one can develop and think differently, as opposed to simply learning for the sake of passing an exam. When discussing texts with fellow students, one is exposed to a variety of perspectives that contribute to the achievement of deep learning."

We're not going back to the Stone Age

While there are numerous advantages to engaging in lessons where Facebook, Instagram and text messages don't diminish concentration, there are also drawbacks.

Several students weren't so enthusiastic about hand-written note taking explains Katrine Lindvig.

"They got tired of not being able to search through their notes afterwards and readily share notes with students who weren't in attendance," she says.

Therefore, according to Lindvig, it is not a question of 'to screen or not to screen'—"we're not going back to the Stone Age," as she puts it.

Instead, it's about how to integrate screens with instruction in a useful way:

"It's about identifying what form best supports the content and type of instruction. In our case, screens were restricted during lessons where discussion was the goal. This makes sense, because there is no denying that conversation improves when people look into each other's eyes rather than down at a screen," Lindvig says.

Speaking to the value of screens, she adds, "When it comes to lectures which are primarily one-way in nature, it can be perfectly fine for students to take notes on laptops, to help them feel better prepared for exams. We can also take advantage of students' screens to increase interaction during larger lectures. It's about matching tools with tasks. Just as a hammer works better than a hacksaw to pound in nails."

More information: Kim Jesper Herrmann et al, Curating the use of digital media in higher education: a case study, *Journal of Further and Higher Education* (2020). [DOI: 10.1080/0309877X.2020.1770205](https://doi.org/10.1080/0309877X.2020.1770205)

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