# Laptop or not laptop ?

# Quelques avis d'enseignants

## The Case for Banning Laptops in the Classroom

### By Dan Rockmore

June 6, 2014 http://www.newyorker.com/tech/elements/the-case-for-banning-laptops-in-the-classroom

A colleague of mine in the department of computer science at Dartmouth recently sent an email to all of us on the faculty. The subject line read: "Ban computers in the classroom?" The note that followed was one sentence long: "I finally saw the light today and propose we ban the use of laptops in class."

While the sentiment in my colleague's e-mail was familiar, the source was surprising: it came from someone teaching a programming class, where computers are absolutely integral to learning and teaching. Surprise turned to something approaching shock when, in successive emails, I saw that his opinion was shared by many others in the department.

My friend's epiphany came after he looked up from his lectern and saw, yet again, an audience of laptop covers, the flip sides of which were engaged in online shopping or social-media obligations rather than in the working out of programming examples. In a "Network"-inspired Peter Finch moment, he quickly changed the screen of his lecture presentation to a Reddit feed and watched some soccer highlights. That got everyone's attention.

I banned laptops in the classroom after it became common practice to carry them to school. When I created my "electronic etiquette policy" (as I call it in my syllabus), I was acting on a gut feeling based on personal experience. I'd always figured that, for the kinds of computerscience and math classes that I generally teach, which can have a significant theoretical component, any advantage that might be gained by having a machine at the ready, or available for the primary goal of taking notes, was negligible at best. We still haven't made it easy to type notation-laden sentences, so the potential benefits were low. Meanwhile, the temptation for distraction was high. I know that I have a hard time staying on task when the option to check out at any momentary lull is available; I assumed that this must be true for my students, as well. Over time, a wealth of studies on students' use of computers in the classroom has accumulated to support this intuition. Among the most famous is a landmark Cornell University study from 2003 called "The Laptop and the Lecture," wherein half of a class was allowed unfettered access to their computers during a lecture while the other half was asked to keep their laptops closed.

The experiment showed that, regardless of the kind or duration of the computer use, the disconnected students performed better on a post-lecture quiz. The message of the study aligns pretty well with the evidence that multitasking degrades task performance across the board.

Pop quizzes, of course, are not the best measure of learning, which is an iterative and reflective process. Recent Princeton University and University of California <u>studies</u> took this into account while investigating the differences between note-taking on a laptop and note-taking by hand. While more words were recorded, with more precision, by laptop typists, more ended up being less: regardless of whether a quiz on the material immediately followed the lecture or took place after a week, the pen-and-paper students performed better. The act of typing effectively turns the note-taker into a transcription zombie, while the imperfect recordings of the pencil-pusher reflect and excite a process of integration, creating more textured and effective modes of recall.

These examples can be seen as the progeny of an ill-conceived union of twenty-first-century tools (computers, tablets, smartphones) with nineteenth-century modalities (lectures). I'm not discussing the "flipped classroom," wherein lectures are accessed outside of class on digital devices and the classroom is used as a discussion and problem-solving forum. Massive Open Online Courses (MOOCs) and other forms of online learning can release learning from the restrictions of time, space, and, to some degree, money. Nor am I surveying the wide range of software and apps that are available, many of which have ably engaged new learners and engendered new and creative habits of mind.

Common to all of these contexts is the human-machine interaction. Our "digital assistants" are platforms for play and socializing; it makes sense, then, that we would approach those devices as game and chat machines, rather than as learning portals. The specific form of attention that we bring to this environment may certainly constrain the way in which the information is presented. Design matters and is contingent and dependent on the medium of choice. The blurring of play and pedagogy, for example, is rife in the lower grades. There is no denying that the infusion of a sense of play into the learning process is valuable, but some of the intersections of this philosophy with the actual mechanics of computer-game design give pause. My children play math games that combine the speed of an active video game with the materials of basic arithmetic—rewarding fast play and correctness—but why is it so important that they solve math problems as if they were driving a digital sports car at high speed? What about the integration of digital reward systems, so prevalent in and important to the business models of online gaming, into learning? These games prime and then exploit the user's "compulsion loop," an acknowledged behavioral modality linked to addictive behavior.

While the departmental e-mail conversation that followed the cry of "Ban the laptops!" was largely one of agreement, there were a few voices suggesting some kind of mediated approach. One colleague is considering dividing the lecture hall into two groups—one of laptop users and the other of pencil or pen-and-paper-pushers, thereby at least keeping the acknowledged distraction of a nearby open laptop away from those who chose the old-school

method. Other colleagues have wished for a "kill switch" that would allow an instructor to disable the local wi-fi connection. This technology does, in fact, exist—just not here, not yet. There was also a voice pointing out that, for some kinds of classes, it's just not feasible within the class design and pedagogical goals, although this might also be more about the on-off kind of access we have to the Internet.

I had one small suggestion, which I will implement the next time I teach (and for that class, I will generally continue to have the laptops closed): I will require my students to read some of the studies I've alluded to in this post, to help them understand why I'm doing what I'm doing and to get them to think critically about the use of technology in their lives and their education.

We're not all that far along in understanding how learning, teaching, and technology interact in the classroom. Institutions should certainly enable faculty to experiment with new technology, but should also approach all potential classroom intruders with a healthy dose of skepticism, and resist the impulse to always implement the new, trendy thing out of our fear of being left behind.

## Why I'm Asking You Not to Use Laptops

August 25, 2014 by Anne Curzan (professor of English at the University of Michigan)

#### http://chronicle.com/blogs/linguafranca/2014/08/25/why-im-asking-you-not-to-use-laptops/

At a teaching workshop last week, a new faculty member asked me how I felt about students using laptops in the classroom. I replied, "I ask students not to use laptops in my classroom— unless a student tells me they need or strongly prefer a laptop to take notes (for any reason), in which case we make that work." She looked relieved to have this endorsement of a learning zone with fewer electronic distractions.

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I am <u>far from alone</u> in asking students not to use laptops (or phones) in class. Some of my colleagues, though, seem surprised that I don't get pushback from students about this policy. I like to think it has something to do with my taking the time to explain my laptop policy for the class and then working hard to keep up my end of the contract.

Let me explain.

On the first day of class, students and I spend the first 30-40 minutes learning something new about how language works (in order to set the tone for the class), and then we go over the syllabus. When we get to the laptop policy, I pause and say, "Let me tell you why I ask you generally not to use laptops in class." And here's the gist of what I say after that:

First, if you have your laptop open, it is almost impossible not to check email or briefly surf the Internet, even if you don't mean to or have told yourself that you won't. I have the same impulse if I have my laptop open in a meeting. The problem is that studies indicate that <u>this</u> <u>kind of multitasking impairs learning</u>; once we are on email/the web, we are no longer paying very good attention to what is happening in class. (And there is no evidence I know of that "practice" at doing this kind of multitasking is going to make you better at it!)

Now I know that one could argue that it is your choice about whether you want to use this hour and 20 minutes to engage actively with the material at hand, or whether you would like to multitask. You're not bothering anyone (one could argue) as you quietly do your email or check Facebook. Here's the problem with that theory: From what we can tell, you are actually damaging the learning environment for others, even if you're being quiet about it. <u>A study published in 2013</u> found that not only did the multitasking student in a classroom do worse on a postclass test on the material, so did the peers who could see the computer. In other words, the off-task laptop use distracted not just the laptop user but also the group of students behind the laptop user. (And I get it, believe me. I was once in a lecture where the woman in front of me was shoe shopping, and I found myself thinking at one point, "No, not the pink ones!" I don't remember all that much else about the lecture.)

In addition, I can find your multitasking on a laptop a bit distracting as the instructor because sometimes you are not typing at the right times; I am not saying anything noteworthy and yet you are engrossed in typing, which suggests that you are doing something other than being fully engaged in our class. And that distracts my attention.

There's also the issue of the classroom environment. I like to foster a sense of conversation here, even in a class of 100 students. If you are on a laptop, I and your peers are often looking at the back of your computer screen and the top of your head, rather than all of us making eye contact with each other. Learning happens best in a classroom when everyone is actively engaged with one another in the exchange of information. This can mean looking up from your notes to listen and to talk with others, which means you may need to make strategic decisions about what to write down. Note-taking is designed to support the learning and retention of material we talk about in class; note-taking itself is not learning. And speaking of what you choose to write down ...

A <u>study</u> that came out in June—and which got a lot of buzz in the mainstream press suggests that taking notes by hand rather than typing them on a laptop improves comprehension of the material. While students taking notes on a laptop (and only taking notes—they were not allowed to multitask) wrote down more of the material covered in class, they were often typing what the instructor said verbatim, which seems to have led to less processing of the material. The students taking notes by hand had to do more synthesizing and condensing as they wrote because they could not get everything down. As a result, they learned the material better.\* I think there is also something to the ease with which one can create visual connections on a handwritten page through arrows, flow charts, etc.

I figure it is also good for all of us to break addictive patterns with email, texting, Facebook, etc. When you step back, it seems a bit silly that we can't go for 80 minutes without checking our phones or other devices. Really, for most of us, what are the odds of an emergency that can't wait an hour? We have developed the habit of checking, and you can see this class as a chance to create or reinforce a habit of not checking too.

Of course, if you need or strongly prefer a laptop for taking notes or accessing readings in class for any reason, please come talk with me, and I am happy to make that work. I'll just ask you to commit to using the laptop only for class-related work.

There is legitimate disagreement in academe about no-laptop policies (see, for example, a <u>critique</u> of such policies by Dennis Baron, who writes a blog about language and technology). And obviously, different classes have different technology needs. For the classes I teach, I come down on the no-laptop side unless we need access to computer software or the Internet to do a class activity together (in which case students with laptops can share with those without them). In the end, though, we as instructors need to take responsibility for ensuring that class time is well used if we're asking students to be fully present. As I say to students, it is a contract. I am asking them to come to every class, to do the assigned reading and any other assignments ahead of time, and to engage fully in the classroom conversation without multitasking on their laptops or phones. My end of that contract is that I will do everything in my power to make it worth their time to be there.

### **Banning laptops in the classroom**

Jan 14, 2013 7:15 pm by Dennis Baron

http://illinois.edu/blog/view/25/87314

The new semester is starting, and a colleague proudly announced on Facebook that he is banning laptops, tablets, and cell phones in his classes because students are using them to go on Facebook. Other colleagues, who seem always to be trumpeting their support for the digital revolution on their own Facebooks, promptly "commented" their own plans to institute classroom bans on these attention-sapping devices. So much for the myth that professors trend left.

Yes, digital devices can be misused in class. Although many students take notes with them or use them to fact-check the lecture, others shop online, read the news, look at porn, or worse yet, from the academic perspective, buy their assignments from online term paper mills. Surely they can wait till after class to do that.

Such unwelcome multitasking is why it's common for teachers to ban internet devices from classrooms. In 2008, the <u>University of Chicago Law School</u> shut down its classroom wifi to try to regain students' attention, a policy which remains in effect today—and if students at Chicago, where fun goes to die, are slacking off, imagine the toxic effect of mixing in-class wifi with smartphones at a real party school. But notebooks can be misused too—my own college notes from the pre-digital '60s consisted of cartoons and doodles, not high-minded thoughts—and no one's proposed banning notebooks.

I've been using educational technology as a way hide my inattention ever since I can remember. First I brought a book from home and hid it behind a bigger textbook, pretending to read the assignment but instead immersing myself in *Treasure Island* or something equally transgressive. Then there was the weekly radio-hour in fourth grade. FM was going to revolutionize education, but radio offered us a much-needed rest period: the teacher read quietly at her desk and the rest of us daydreamed while a voice droned from a large black box wheeled to the front of the room.

Filmstrips were even better for those of us with rich interior lives or a strong need to nap, because the teacher had to turn out the lights to show them. The only thing that woke us from our reveries while "watching" filmstrips was when the film jammed, overheated, and melted in a spectacular hallucinogenic onscreen display. Lots of oohs and aahs then. Normally I don't police my students' in-class activity, but a couple of years ago I did ask a student to stop doing paper-and-pencil homework for another class while seated right in front of me, because I found it distracting. "But I'm multitasking," he cheerfully insisted, adding, "I have to do this so I can pay attention to you." The other students chimed in. "We have to multitask to pay attention," they insisted. "It's a generational thing."

So I took out my iPhone and began texting while I continued with the lesson. The students became visibly upset—it was fine for them to divide their attention between me and what was really important, but teachers had to stay on task. It was part of the social contract. "Besides," the student working on his chem assignment quipped, "You're not really multitasking. You're texting too slow." And he was right about that.

I don't text in class any more. But like many teachers I know, I can natter on about the subject matter while carrying on a completely unrelated interior monologue. Pretending to pay attention is one of the most valuable skills I learned as a student.

It's another commonplace to compare schools to prisons. As I once wrote,

Both schools and prisons have populations who would rather be elsewhere; both regulate the mental and physical lives of their inmates in minute detail; and regardless of their mission to provide education and rehabilitation, both have crowd control as their primary day-to-day objective.

Banning laptops in class offers one more parallel between education and the criminal justice system, because digital devices are often banned in courtrooms for a variety of reasons: they have cameras, a common courtroom taboo; they permit jurors or potential jurors to find out about or discuss the case on their own, another court taboo; and judges don't understand how these newfangled gadgets work. Here's an explanation I never would have thought of: announcing a new ban on smartphones, tablets, and laptops in the Cook County Criminal Courts, Chief Judge <u>Timothy Evans</u> said,

We understand this may be an inconvenience to some, but our primary goal is to protect those inside our courthouses and perhaps save lives in the process.

None of my colleagues mentioned the intriguing possibility that banning digital devices could protect our schools and save lives (perhaps it won't be long before the NRA trots out that argument). Yet I find it odd that teachers, whose main job is communication, should want to ban technologies which facilitate communication. Isn't that why we all get upset when we read about internet censorship in China?

But what am I thinking? One Fall, long before the digital age began, the cafeteria in the Student Union at my university banned reading at the lunch tables. Each table had a little card with a stylized graphic of a book inside a barred red circle, and text that advised no reading would be allowed between 11 and 2 so people could eat their lunch untroubled by disruptive readers. When I pointed out that this might seem antithetical to the university's educational mission, the no-reading program was quickly dropped. Now the cafeteria has free wifi, and its management is happy if students sit and laptop all day long, buying the occasional snack or soda. My colleagues can set whatever rules they want in their classrooms, but since I can't conduct a class without my laptop, I'm going to let my students bring their MacBooks, smartphones, and tablets too. Plus in my experience, it's harder for students to fall asleep over their keyboards than over their notebooks. And staying awake in class, whether at the University of Chicago or at a party school, must be a prerequisite for learning anything at all. And even if you're not learning, you could always send a tweet.