College students spent 37 minutes, on average, surfing the net in class -- and their grades suffered for it, according to a Michigan State University study. Credit: Michigan State University

Warning: Surfing the internet in class is now linked to poorer test scores, even among the most intelligent and motivated of students.

Michigan State University researchers studied laptop use in an introductory psychology course and found the average time spent browsing the web for non-class-related purposes was 37 minutes. Students spent the most time on social media, reading email, shopping for items such as clothes and watching videos.

And their academic performance suffered. Internet use was a significant predictor of students' final exam score even when their intelligence and motivation were taken into account, said Susan Ravizza, associate professor of psychology and lead author of the study.

"The detrimental relationship associated with non-academic internet use," Ravizza said, "raises questions about the policy of encouraging students to bring their laptops to class when they are unnecessary for class use."

Funded by the National Science Foundation, the findings will be published online soon in the journal Psychological Science. The article is titled "Logged in and zoned out: How laptop internet use impacts classroom learning."

The research was conducted in a one-hour, 50-minute lecture course with 507 students taught by Kimberly Fenn, MSU associate professor of psychology and study co-author. In all, 127 students agreed to participate in the study, which involved logging onto a proxy server when the students went online. Of those participants, 83 checked into the proxy server in more than half of the 15 course sessions during the semester and were included in the final analysis.

Intelligence was measured by ACT scores. Motivation to succeed in class was measured by an online survey sent to each participant when the
semester was over.

Interestingly, using the internet for class purposes did not help students' test scores. But Ravizza said she wasn't surprised. "There were no internet-based assignments in this course, which means that most of the 'academic use' was downloading lecture slides in order to follow along or take notes."

Previous research, she added, has shown that taking notes on a laptop is not as beneficial for learning as writing notes by hand. "Once students crack their laptop open, it is probably tempting to do other sorts of internet-based tasks that are not class-relevant."

In her courses, Ravizza said she has stopped posting lecture slides before class. Instead, she waits until the week before the exam to upload them so there is no reason for students to bring a laptop to class.

"I now ask students to sit in the back if they want to bring their laptop to class so their internet use is not distracting other students," she said.