

Autonomy boosts college student attendance and performance

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Credit: Helena Lopes from Pexels

A new paper from Carnegie Mellon University indicates that giving students more autonomy leads to better attendance and improved performance. The research was [published](#) in the journal *Science*

Advances.

In one experiment, students were given the choice to make their own attendance mandatory. Contradicting common faculty beliefs, 90% of students in the initial study chose to do so, committing themselves to attending class reliably or to having their final grades docked. Under this "optional-mandatory attendance" policy, students came to class more reliably than students whose attendance had been mandated.

Student choice in learning

The pattern has held true. In additional studies across five classes that included 60–200 students, 73%–95% opted for mandatory attendance, and at most 10% regretted their decision by the semester's end.

"Like Ulysses, students know they will face significant temptations. By making their attendance mandatory, they exercise [self-control](#) over their future behavior," said first author Simon Cullen, assistant professor in the Department of Philosophy and Dietrich College AI and Education Fellow.

"We are born curious, and we naturally enjoy mastering many challenging learning tasks, but controlling course policies like mandatory attendance can undermine that motivation."

The role of autonomy in academic success

According to Cullen, the findings challenge widely held beliefs about student behavior. He continues that many educators worry that given the choice, students would opt for the easiest path possible. However, this study paints a starkly different picture.

"Anytime in a class that you give freedom to choose, you give students the feeling of control over their education," said Danny Oppenheimer, professor in the Social and Decision Sciences and Psychology departments at CMU and co-author of the article. "It puts the learning in the students' hands and increases their motivation."

Preparing students for real-world challenges

A second experiment indicated that when given the option to switch to an easier homework stream at any time before midterms, 85%–90% of students chose to tackle the more challenging work. The "optional-mandatory homework" policy led students to spend more time on their assignments and to learn more over the semester compared to students who were compelled to complete the same work. Cullen gauged the improved understanding of the material by examining how well students did on the problem sets throughout the semester.

These findings suggest that the common practice of imposing strict rules on [college students](#) may be counterproductive. Cullen and Oppenheimer found that allowing students more autonomy could lead to better academic outcomes and prepare them more effectively for the real world.

"The thought was that giving them greater control over their own learning would prepare them for the real world," Cullen said. "Students can be driven to excel in our classes by the same sources of motivation that drive them to pursue countless projects and passions that require no external incentives. But only if we let them choose to learn."

Enhancing Engagement and Retention in Higher Education

The researchers note their findings also highlight a significant gap in current educational practices. Despite decades of research demonstrating the importance of autonomy to motivation, autonomy-promoting policies remain rare in higher education.

"It's as if we've been ignoring one of the most powerful tools in our educational toolkit," said Oppenheimer. "By harnessing students' intrinsic motivation to learn through increased autonomy, we achieve better results than through external pressure."

The researchers caution that their findings, while promising, have limitations. The study was conducted at a single university with a limited number of students, and more research is needed to determine if the results will replicate across different types of institutions and student populations. The authors are collaborating with a diverse set of institutions to test its broader applicability.

"We're super excited about these results, but we're also eager to see how our interventions work across a range of settings," Cullen said. "We're particularly interested in exploring how autonomy might benefit students from disadvantaged backgrounds and those with disabilities."

The study opens up new avenues for research and practical applications in higher education. The authors suggest that similar choice architectures could be applied to other aspects of college courses, such as deadlines, course materials and even exam formats.

"As colleges and universities grapple with issues of student engagement, retention and academic success, this research offers a fresh perspective," said Cullen. "By trusting students with more control over their education, institutions might not only improve [academic outcomes](#) but also foster a more positive and empowering learning environment."

More information: Simon Cullen et al, Choosing to learn: The importance of student autonomy in higher education, *Science Advances* (2024). [DOI: 10.1126/sciadv.ado6759](https://doi.org/10.1126/sciadv.ado6759)

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