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AI at university: an ally, a companion... or a cause for concern?



A recent investigation examines how physics students at the UAB use artificial intelligence. The research finds that there are five different profiles when it comes to interacting with AI, although most students have already integrated it into their academic lives. The study concludes that it would be appropriate to rethink the university's learning objectives and assessment methods.

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With tools such as ChatGPT, Gemini and Copilot becoming increasingly widespread, we often ask ourselves how university students actually use them and, above all, what this means for teaching staff. With this aim, in this study we examine how students in the Physics degree at the UAB use generative artificial intelligence (AI) across their academic work.

To gain the most accurate picture possible, we combined two phases: an initial data-collection phase aimed at the entire degree cohort, followed by a more in-depth qualitative phase. First, we collected 172 responses to a questionnaire (around 43% of the student body) between December 2024 and February 2025. We then organised a focus group with 11 students to explore in greater depth the motivations, doubts and emotions underlying the trends identified in the survey.

Regarding how AI is used in the physics degree, we observed very specific applications: asking for explanations, resolving questions, reviewing or generating code, summarising notes, simulating exam questions, translating or polishing texts, and obtaining an initial informational orientation when starting a task. In short, this academic relationship with AI tends to take on three main functions: tutoring (when students rely on it to understand what they cannot quite grasp on their own), dialogue (when they interact with the tool to compare and test ideas), and assistance (when they delegate a task they already know how to do).

An analysis that takes into account the diversity of applications and motivations shows that there is no single type of user. On the contrary, we identified five predominant usage profiles. Although the distribution of students across profiles may change over time, we believe the differences between them are clear enough for this typology to remain stable.

The largest profile includes students who use AI mainly to save time on repetitive tasks (coding, debugging, LaTeX), while at the same time expressing more caution and distrust than other profiles. The second most common profile includes those who make intensive and varied use of AI as a central part of their learning: they consult it to understand theory, perform calculations, prepare assignments, program, and also for more mechanical tasks such as formatting documents. Third, we found students who use it only occasionally, with a markedly utilitarian approach. The last two profiles are minority groups: the fourth includes students who use AI mainly to clarify concepts and explore ideas, as a support for dialogue and alternative explanations; and the fifth includes those who keep their distance and hardly use it at all, often for ethical reasons (environmental impact, opacity of training data, or reliance on proprietary software).

This mosaic of profiles and applications leads us to a clear conclusion: if AI is already part of everyday academic life, we need to rethink learning objectives and assessment methods. The results suggest that, despite reservations, students use AI as part of their learning process and not necessarily with the intention of committing academic fraud. Integrating it responsibly means, on the one hand, making the most of its potential to support personalised learning and, on the other, strengthening the critical perspective that many students already show: checking results, understanding limitations, avoiding dependency, and creating spaces for debate about ethical implications. Rather than framing AI in “all or nothing” terms, the profiles we have identified can help us design differentiated activities and support measures, aligned with the diverse ways of being a student at the UAB today.

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