

To boldly go where their parents did not go before



First-generation students have to overcome obstacles other students don't. Every academic can help.

The academic year is starting in the Northern Hemisphere, and millions of students are heading to university for the first time. For many of them this is not their only academic first – they are first-generation students whose parents do not hold at least a bachelor's degree. The transition from school to university is never easy, but first-generation students face social and academic obstacles their continuing-generation peers do not.

Here, we will use the United States as a test case, because a larger body of research exists than for other regions. First-generation experiences vary around the world and so will the specifics of the additional learning curve they have to master – the so-called hidden curriculum – but it still exists.

Although first-generation students are [more likely to be from historically marginalized groups](#) than their continuing-generation counterparts, their overall number is far from marginal – [nearly half](#) of all new students in the US are first-generation. First-generation students make up around [two-thirds](#) of students at institutions with open admissions but [only a quarter](#) at highly selective ones.

High tuition fees cause some of this discrepancy but cannot fully explain it, as highly selective institutions also have more financial aid programmes¹. But their admission practices are more involved with expectations that go beyond academic achievement. Without foreknowledge of favoured extracurricular activities and application styles, it is hard to succeed, and many aspiring first-generation students do not have the necessary support at home or at school and are [less likely to seek the help of career planning services](#).

Rachel Gable followed two cohorts of first- and continuing-generation students at two US legacy universities, recording their experiences in her book *The Hidden Curriculum*¹. All students reported having to acclimatize to campus life, but first-generation students generally struggled more with finding a sense

of belonging at their new institution, often identifying with their subject rather than their peers. They also had to learn certain behaviours that their fellow students did not.

Many of the first-generation students Gable interviewed had a hard time adapting to a way of working that was markedly different from expectations at their schools. For example, being expected to do additional research on a reading assignment beyond the set text or working in groups, which several of them initially perceived as a form of cheating. Similarly, asking for help from their lecturers, teaching assistants or even their fellow students was challenging, not only because it may feel like gaining an unfair advantage, but also because they often didn't know how to approach faculty or more privileged peers.

A particular challenge for first-generation students was speaking in class. Some were told that they had great ideas but needed to learn how to express them properly to make a valuable contribution. To many, this felt like having to constantly prove their worth – and their right to be at a high-profile institution – just to feel normal. Looking back, they saw a positive aspect emerge from this challenge, as it helped them find their voice. Interestingly, none of the continuing-generation students in Gable's study reported an experience of personal growth around verbal contributions.

Outside of class, [fewer first-generation students](#) join an extracurricular club at their university or hold a formal leadership position associated with these activities. They are also less likely to participate in a research project, do a paid internship or study abroad. In fact, many first-generation students are surprised that such high-impact projects are offered at all, particularly when it comes to spending some time studying in a different country. The experiences gathered by participating in these activities are rightly taken into account by many employers or by academic institutions selecting students for higher degrees.

These examples illustrate that first-generation students face difficulties beyond financial burdens. As a result, [only a third of graduates](#) are first generation despite making up half of new starters. But they are more likely to succeed at highly selective universities

(76% graduation rate) than at open-admission colleges (21%), which may hint at a solution – institutional support.

Most universities have introduction programmes to help new students find their feet, but they rarely include advice about the right way to communicate with faculty members or in class and often assume knowledge of how university works, leaving first-generation students behind. Support such as changing course structures to provide more time for skills training in the first year of a course must happen at a department or university level, but every educator can do their bit.

As a lecturer, you can start a course by explaining how and in what cases you are happy to be contacted. Lay out the ground rules for communication in your class and don't tolerate ideas being dismissed because of unusual presentation and encourage students to work in groups. It is important to not rely on putting this information in the syllabus. Not everyone knows how to use one.

In smaller groups, share your own journey with your students and find out about their background in an appropriate way and with genuine interest. If you have openings for research students, advertise them widely. Academics who started as first-generation students [stress the importance of mentoring](#) – especially by fellow first-generation academics – throughout their career. Even a continuing-generation mentor who is willing to listen and support will improve a first-generation student's experience.

If, dear reader, you haven't noticed this issue in physics it may be because first-generation students seem to shun the sciences. In Gable's study, only 4% of first-generation students graduated in non-medical STEM subjects, compared to 17% of continuing-generation students¹. Thus outnumbered, the few first-generation physics students may not readily speak up, but they are there. Some of us *Nature Physics* editors used to be them.

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References

1. Gable, R. *The Hidden Curriculum: First Generation Students at Legacy Universities* (Princeton University Press, 2021).