UNIVERSITÉ DE GENÈVE

PRESS RELEASE

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Online courses reinforce inequalities

Gifted students improve their grades when they take online courses, whereas students in difficulty do not.

With the global student community taking online courses as a result of the anti-Covid-19 measures, a study led by the University of Geneva (UNIGE) reveals that online courses deepen inequalities between gifted and less gifted students by 5%. The results of the study, which was based on data collected in 2016-2017 prior to the anti-Covid lockdown initiatives, are published in the *Journal of the European Economic Association*. They indicate that this learning gap between different student profiles is mainly due to their behaviour and motivation. The study gives higher education establishments worldwide practical ways to deal with lockdown or the chronic lack of space in lecture theatres, including via co-educational curricula.

To gain insight into the impact of online courses on the success of university students (and to measure the interest they generate), 1,459 first-year students at UNIGE took part in a study run by UNIGE's Geneva School of Economics and Management (GSEM). Students were randomly offered online courses (while others, as a check, were not) to study their eight compulsory programmes covering subjects such as mathematics and economics. The content of the courses was then linked to specific exams in order to assess their level of knowledge. Every student had the opportunity to attend face-to-face classes if they wanted to. The data for the study was collected before the Covid-19 health crisis.

The inequality gap is widening

The results of the study show that online courses improve exam results for high-potential students by 2.5%. At the same time, however, the results for students with learning difficulties decrease by 2%. "Access to online education seems to widen the gap between gifted and less gifted students," begins Michele Pellizzari, GSEM co-director and co-author of the study. "That's a fact that universities around the world need to take note of, as the coronavirus is accelerating the shift to online learning."

The study found that students adopt different patterns of behaviour when it comes to online course options depending on their learning abilities. When the weather is bad, for example, students who have the best results often choose to study by themselves at home, while students who are not so well equipped go the extra mile to attend face-to-face classes. Furthermore, students with high potential choose streaming when it is offered, while students in difficulty once more prefer in-person classes. The authors argue that these different behaviours create educational inequalities when streaming is introduced.

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High resolution pictures

Limited appetite

In overall terms, if university students have the choice, they prefer to attend face-to-face classes. They only opt for the online solution when confronted with unexpected situations caused by illness or even bad weather. Accordingly, offering streaming courses only reduces face-to-face participation by 8%. “That means these figures,” continues the researcher, “don’t solve the current problems of overcrowded lecture theatres in higher education.”

The study helps to show the impact of e-learning on results as well as emphasising its limits. This data is useful for higher education institutions around the world given the current health crisis and shortage of classroom space. The article also offers effective blended learning solutions, where streaming complements face-to-face teaching. “At the same time, more data is needed so we can draw definitive conclusions about 100% online courses,” concludes Professor Pellizzari.

This study was carried out in collaboration with the EPFL and the University of St. Gallen.

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