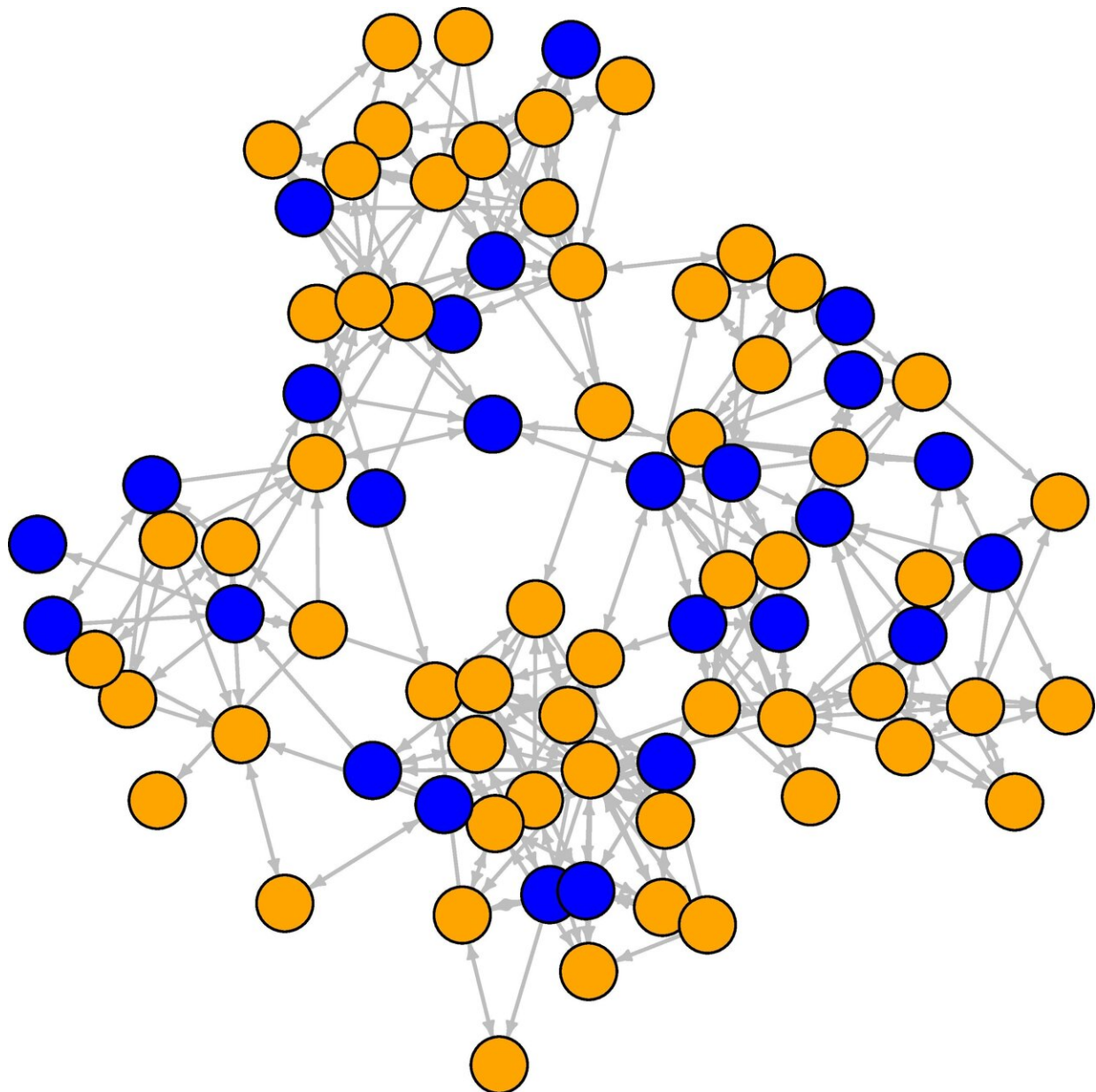


Social networks can support academic success

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The orange nodes are females, the blue nodes are males. Ties are directed friendship connections between students. Credit: © 2020 Dokuka et al.

Social networks have been found to influence academic performance: students tend to perform better with high-performers among their friends, as some people are capable of inspiring others to try harder, according to Sofia Dokuka, Dilara Valeyeva and Maria Yudkevich of the HSE University. Their paper was published in *PLOS ONE*.

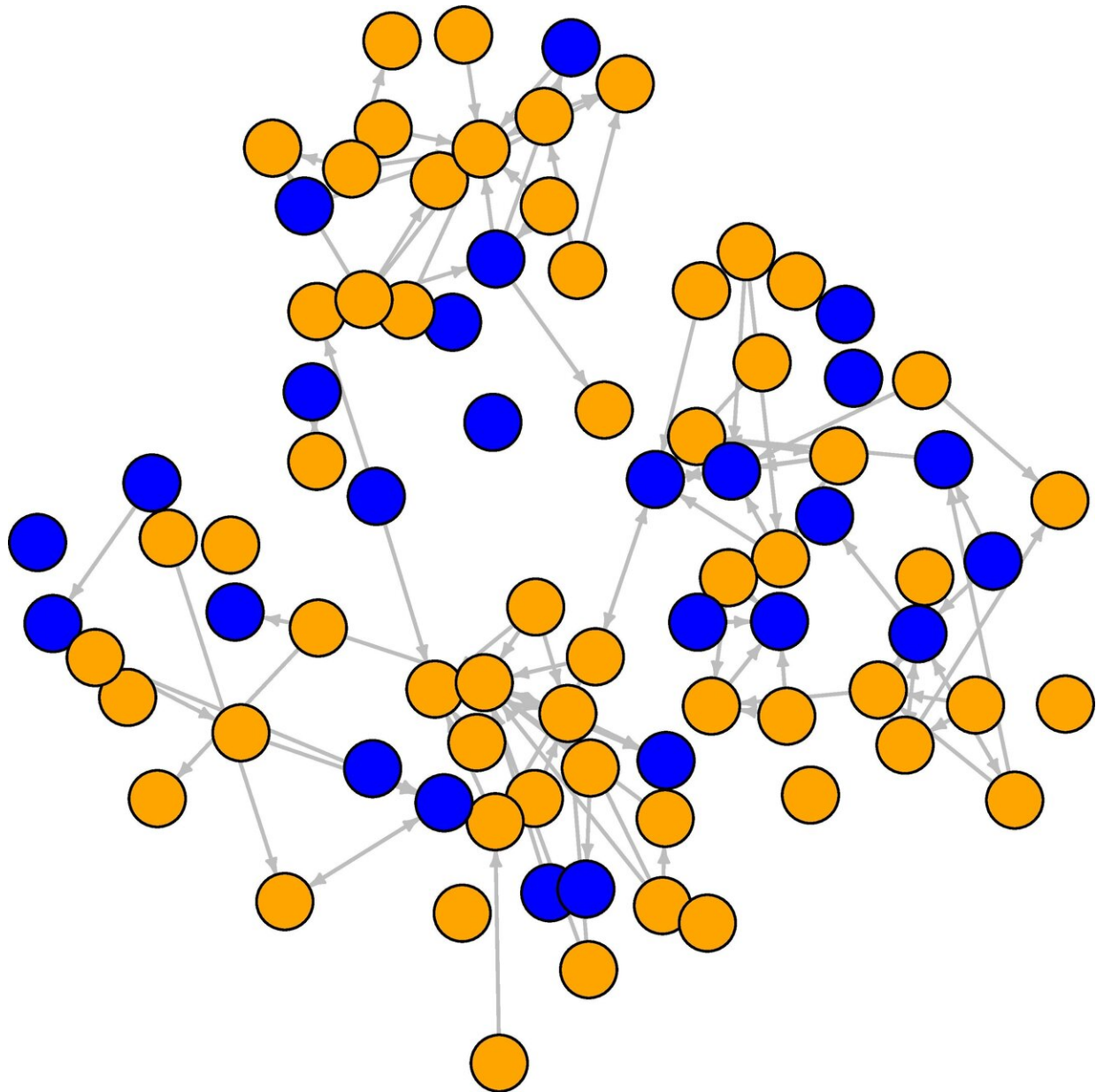
Most researchers in educational sciences recognize four factors affecting [student academic performance](#): the family's socioeconomic status, the [time](#) spent on independent learning and preparation for classes, the time spent working on a job or practicing a hobby and the university or school environment.

However, recent empirical studies indicate that the role of the social environment may be underestimated, as classmates can greatly influence one another's behavior and [academic success](#).

Most studies question the role of social environment. Yet the value of many such studies is limited due to serious design flaws—such as viewing a random group of classmates as one's social network or assuming that a student's position in his or her social network is static. Rather than being random, one's social [network](#) is a product of conscious and dynamic choice. Social networks, particularly among college freshmen, can change considerably over time—e.g., a student can break up with an underachieving [friend](#) and seek the company of A-graders.

Using 2013-2014 data on the social networks of 117 first-year students of the Faculty of Economics at a Russian university, researchers examined whether academic performance plays a role when students

choose their friends and tutors among classmates. They also examined how friends and tutors influence each other's performance during their studies.



The orange nodes are females, the blue nodes are males. Ties are directed study assistance connections between students. Credit: © 2020 Dokuka et al.

They analyzed the data using stochastic actor-based modeling to address the dynamics and other nuances of social group members' behavior.

According to the authors, in choosing friends, students do not usually consider academic performance, but over time—often in the middle of the academic year—all members in a peer group tend to perform at about the same level.

"With the use of data on the dynamics of friendship, assistance and academic performance networks, we monitor essential differences in the functionality of these connections. We have proven that asking for help with studies does not lead to growth in performance. However, friendship with those who get good grades does," said Sofia Dokuka, Research Fellow at the HSE Institute of Education.

Thus, most students who surrounded themselves with high-achievers improved their performance over time. The opposite was also true—those who befriended underachievers eventually experienced a drop in grades.

According to the authors, while underachievers have a stronger influence on their networks, high performers tend to gain popularity and expand their influence over time, particularly by helping other students with their studies.

Men were found to have larger networks than women, and all students were more likely to be friends with those whom they had known before college, classmates of the same gender, and members of their study group.

More information: Sofia Dokuka et al, How academic achievement spreads: The role of distinct social networks in academic performance diffusion, *PLOS ONE* (2020). [DOI: 10.1371/journal.pone.0236737](https://doi.org/10.1371/journal.pone.0236737)

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