National Institute for Student Success at Georgia State Awarded $7.6M to Study Benefits of AI-Enhanced Classroom Chatbots

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Georgia State, Morgan State and the University of Central Florida will pilot chatbots designed to support students in critical undergraduate math and English courses.

ATLANTA — The U.S. Department of Education (DOE) has awarded the [National Institute for Student Success](#) (NISS) at Georgia State University a $7.6 million grant to study how chatbots can improve student outcomes in foundational college math and English courses.

Building on previous studies that demonstrate AI-enhanced chatbots increase grades and retention rates among lower-income and first-generation students, the NISS will deploy chatbot technology in first-year math and English courses at Georgia State and its associate degree-

granting institution Perimeter College, and at partner schools [Morgan State University](#) in Maryland and the [University of Central Florida](#).

The DOE's highly competitive Postsecondary Student Success Program supports innovative approaches with the potential to improve national student outcomes. The NISS grant will fund the piloting and scaling of text-based chatbots in critical first-year courses at the partner universities as well as support an evaluation team of national scholars to assess the work.

The goal of introducing chatbots into these courses, according to Tim Renick, the founding executive director of the NISS and the project lead for the grant, is to provide more personalized and timely supports for the students in the courses. The chatbot is designed to complement the efforts of course instructors —answering basic student questions about course material, reminding students of upcoming assignments, and offering encouragement and tips when they struggle.

"Because of their schedules, students with jobs and families currently are less likely to attend after-class tutoring and study sessions," Renick said. "The chatbots we are developing can support students 24/7, answer questions after hours and keep students on track in these challenging courses."

Georgia State's use of artificial intelligence-enhanced chatbot technology dates to 2016, when it piloted a program aimed at reducing "summer melt," a term describing the phenomenon of high school graduates accepted to college failing to register for fall classes. By communicating with students over the summer through text message reminders and two-way question-and-answer capabilities, Georgia State reduced summer melt from 19 percent to 9 percent, according Renick.

During the first summer, the Pounce chatbot interacted with incoming first-year students 185,000 times, an impossible feat for even the most robustly staffed admissions office.

Georgia State has since expanded the use of the Pounce chatbot for enrollment-related communications to around 40,000 students on its Atlanta and Perimeter College campuses, and in 2021 developed a course-related Pounce, designed for students in first-year political science and economics courses critical to many majors.

[Lindsay Page, the Annenberg Associate Professor of Education Policy](#) at Brown University, designed and led experimental studies to assess Georgia State's use of the Pounce chatbot. All of these trials have shown the benefit of chatbot communication for students. For example, the studies focused on course [chatbots in political science and economics](#) found that receiving direct text messages about class assignments, available academic supports and course content increased the likelihood students would earn a course grade of B or higher and reduced the likelihood of students dropping the course.

"We are grateful to have this opportunity to build on our strong research-practice partnership with the NISS and Georgia State," said Page, who will lead a team of scholars from Brown, Harvard, Stanford and the Brookings Institution to evaluate the implementation and impact of the newest classroom chatbots. "This project will provide a unique opportunity to dramatically scale course-specific chatbots to additional academic subjects, students and campus contexts, and to deeply investigate how best to incorporate these tools in service of improved learning outcomes for students."

The NISS and its partners at Morgan State and the University of Central Florida hope to show that chatbots integrated into core math and English courses result in higher grades in those foundational courses, setting students up for better performance in later courses and, ultimately, a degree.

"Far too many of our students find themselves struggling in gateway math and English courses," said Dr. Ryan Maltese, Associate Vice President for Student Success and Retention at Morgan State. "By incorporating faculty-driven assistive technology directly into the classroom, our students will be able to engage their course materials at any time, in digitally native spaces that they have come to expect as a part of their everyday lives. Morgan State University is proud to be a partner in this innovative work that will help shape the future of higher education, and we look forward to working with our colleagues at GSU and UCF on this trailblazing initiative."

"Student success is a top priority at UCF, and we're excited to elevate our use of this promising technology to positively impact student outcomes," said Dr. Ryan Goodwin, Interim Chief of Staff and Assistant Vice President for Strategy and Innovation at the University of Central Florida. "We are

excited to work with our partners at Georgia State University and Morgan State University at the forefront of the student success movement to make an even greater impact on our students."

Performing well in their first college math and English courses has an outsized impact on a student's later academic success, according to Renick. A student who passes the courses during their initial 12 months at Perimeter College, for example, is nine times more likely to graduate.

"It's not just because they are required courses," Renick said. "It's because the skills that students are learning in those courses are disproportionately impactful on how they'll do in subsequent courses. If you can strengthen your composition skills by getting a good grade in an introductory English course, then you're more likely to do well in your history class or your psychology class."

By fall 2024, researchers will begin piloting the chatbots in courses at each location with the aim of demonstrating the effectiveness of the tool across a variety of demographic profiles served by each institution.