University of California, Merced: Summer Edge Program Pilot

In Summer 2021, the University of California, Merced (UCM) implemented a pilot program called “Summer Edge” to try out a new model for college readiness preparation for incoming first-year students. Students who signed up to participate in the program did not earn undergraduate credit. Their primary incentive for completing the pilot was to improve their knowledge and be more prepared for their college-level pre-calculus class. They were also given the option to retake the UCM math placement exam so that they could place into calculus.

Previously, UCM offered an in-person Summer Bridge program that was effective in preparing scholars for university studies, but it had a high cost per participant and was not able to easily serve students who needed to work or provide family care at home during the summer. The new Summer Edge pilot program was designed to leverage online learning (including the NROC EdReady mathematics platform) to provide a less expensive, scalable, and accessible summer preparation option for students.

STRUCTURE

The UCM Summer Edge pilot program was structured as follows:

- 6-week summer program, fully online
- Offered Mathematics Readiness and Writing Readiness (students could choose to take either or both subjects)
- Weekly College Readiness workshops featuring speakers from various campus units addressing topics such as time management, study skills, inclusivity, library skills, mental well-being, etc.
- Expected workload of roughly 6 hrs / week each for math and writing, plus an hour per week for the College Readiness component
- Students able to retake the university mathematics and/or writing placement exam at the end of the program

The Mathematics Readiness portion of the program leveraged the EdReady platform. For each week of the mathematics program, content included:

- Math Tools & Skills – A recommended section of EdReady math content for the students to work through
- How to Learn Math – A couple short videos on math mindset and study techniques from Stanford University’s [open MOOC course](#)
- Calculus Preparation Concept – A video and short problem set on a topic that calculus instructors report as challenging for students (e.g., creating functions for word problems, combining functions, creating models for applications, extracting data from functions, and understanding rates of change)

The Summer Edge pilot students accessed the aforementioned mathematics content asynchronously online and then had one-hour Math Pod meetings twice a week with a group of 20 students led by an
undergraduate peer learning assistant (LA). The LAs used the EdReady dashboards to identify topics the students were ready to learn but had not yet mastered, and then created practice sets for the students to work on collaboratively during the Math Pod sessions. The LAs also utilized the EdReady dashboard to reach out to individual students to praise them for their progress, offer help on items students were struggling with and motivate those who were less active. The instructor for the program developed the course structure, selected the EdReady topics, and trained and supported the LAs. Most of the student contact and engagement was done through the peer LAs, making the program very scalable for future implementation.

OUTCOMES

UCM had 124 students participate in the Summer Edge pilot. The pilot student group included 66% first-generation, 60% Pell-eligible and 73% URM students. Seventy percent of the students engaged with EdReady and improved their mathematics skills, which is noteworthy given the only incentive to participate in the program was the learning itself. From the pilot cohort, 22 students opted to retake the mathematics placement exam at the end of the program, and placed into calculus.

Through an end-of-program survey, 92% of Summer Edge pilot student participants responded with an 8-10 rating related to their satisfaction level with the program (on a 10-point scale, with 10 as the highest value). Student comments reflecting on the program included:

- “Even though I am good at Math, I needed to brush up on some of the topics. I think I will be better prepared to handle the Math classes in the fall.”

- “I appreciated being able to do the program since I did not really want to have a big break between high school and college in case I forgot everything.”

- “I feel that the program helped to solidify my dream of going to college even though I was questioning whether I should or not. I can see that there are options for me now and that I can apply myself to get through my classes even when there are pressures and self-doubt.”

UCM is planning on using propensity score matching to look at the first-semester grades for Summer Edge pilot student participants versus a demographically similar group of non-participant students. We hope to see overall performance gains for the Summer Edge students, with particular success in math and writing courses. We will also be looking at first-year student survey outcomes to see if the summer experience impacted student sense of belongingness, their study skills, and their academic self-agency.

Based on the success of the pilot, UCM plans to scale-up the Summer Edge program to serve upwards of 1,000 incoming students each year. We are also planning a Winter Edge program to help serve students who will be taking their first college math course in the spring semester.

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