

Inreach to Improve Math Momentum

SCFF Project Update to ESSC
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Components of the Project:

1. Call Campaign reaching out to students unsuccessful in their math classes
2. Communities of Practice for math instructors teaching first transfer-level courses

Primary Goal of the Project:

Maximize student retention, in math classes specifically, but also the college as a whole

First Component: Call Campaign to Students

1. Initial “trial run” before start of SCFF Implementation
 - a. Conducted December 2019 and January 2020
 - b. Coordinated by Jin Tsubota with contacts made by math instructors, instructional assistants and student tutors
 - c. Funded by Guided Pathways
 - d. 277 out of 438 students contacted
 - e. Students contacted were those who ***withdrew*** during Fall 2019 (names received before grading deadline)
2. First round of SCFF Implementation
 - a. Conducted June and July, 2020
 - b. Coordinated by Jin Tsubota and all contacts made by two students tutors
 - c. All 823 students who ***withdrew*** or were ***unsuccessful*** during Spring 2020 were contacted

Call Campaign Successes

1. From Initial “Trial Run” (December/January)
 - a. Students who were contacted were informed about campus resources and were more likely to take advantage of Concurrent Support Courses
 - i. 11 out of 277 of those contacted enrolled
 - ii. 0 out of 161 of the students **not** contacted enrolled
 - b. Students who were contacted were more likely to be successful in their Spring math class: 41% vs. 33% (23/56 vs 12/36)
2. From First Round of SCFF Implementation (June/July)

*Most students seemed very grateful that we were reaching out because they felt like **we really listened to them and their needs**. I think talking to an equal - another student - about their concerns made them **more comfortable to share** while still feeling assured that their concerns will be heard by the administration. - Student Tutor*

Call Campaign Challenges - Persistence

2017-2018 Academic Year

- 65.4% of students who either withdrew from or failed their math class did not take a math class the following semester
- 29.8% did not take **any** class the following semester

Spring 2020 Semester

- Students who were called: 83.4% did not take a math class and 46.6% did not take **any** class
- Students who were **not** called: 79.5% did not take a math class and 39.8% did not take **any** class

Fall 2020 Semester

- 67.6% did not take a math class and 32.7% did not take **any** class

Possible Reasons for Lack of Persistence

Perhaps related to general decline in headcount at LPC

| | Fall 2017 | Spring 2018 | Fall 2018 | Spring 2019 | Fall 2019 | Spring 2020 |
|-----------|-----------|-------------|-----------|-------------|-----------|-------------|
| Total LPC | 9,372 | 9,153 | 9,314 | 8,737 | 9,061 | 8,590 |

Source: Institutional Research Dataset, Census, final count

Student Tutor:

*When asking the students about specific reasons for dropping their math course the answers most of the time were either "I dropped it because of **COVID and the sudden online shift**" or because "I felt I was **unprepared for the class** and that I need to sharpen my math skills before taking this course."*

Second Component: Communities of Practice

Initial Plans (from SCFF Application):

As professional development, part-time faculty will be engaged in a community of practice, regularly meeting both in person and online. They will be discussing topics such as habits of mind (soft skills), links between coursework and future careers, and growth mindset. They will be engaging together in active-learning materials as well as sit in on other classes. We would like 4 faculty each from Math 30, 39 and 40, and 2 each from Math 34 and 47.

Primary factors requiring flexibility and versatility with these plans:

1. COVID-19 pandemic
2. Math department's response to AB 705

Second Component: Communities of Practice

Adjustments made to the Communities of Practice Participants and Timeline:

1. Full-time faculty are also invited to participate
 - a. 9 full-time faculty participants
 - b. 16 part-time faculty participants
2. Implementation delayed by several weeks due to the pandemic
3. Emporium (self-paced, individualized teaching mode) faculty invited to participate
 - a. Primary mode for teaching students prerequisite material for first level transfer classes
 - b. Begins offering Math 40 in Fall, 2020
 - c. Plans to offer Math 30 and 39 in the future
4. Invited small number of other STEM faculty who work with similar math topics
5. Some work carried over into Summer 2020

Second Component: Communities of Practice

Adjustments made to the topics covered:

- Emphasizing online teaching:
 - Classroom management and engagement
 - Discussion of online tools available (e.g. calculators)
 - Proctoring exams and grading practices online
- Emphasizing retention
 - Use students' names and students use each other's names.
 - Provide early assessment and growth mindset feedback.
 - Provide frequent and early communication.
 - Develop an equity-minded syllabus with growth-mindset grading practices



Second Component: Communities of Practice

Future Plans and Next Steps

- SCFF Project will run through Spring, 2022
- From SCFF Application:

We plan to develop this program over the course of several semesters. The professional development, in particular, cannot be fully realized in one semester, and will require a significant amount of time for faculty to become well versed in best practices.

- Working to build a commitment to retention in math and campuswide
- Develop course materials that can be used long term

Conclusion

Greatest Challenge: Pandemic

(Second Greatest Challenge? AB 705)

However, we believe that the pandemic has made the two principal components of our SCFF project even more important:

1. Reaching out to students to offer support and encourage them to continue their studies
2. Providing professional development for math faculty so that instructors can promote retention in an online setting.