Overview

The Faculty Collaborative for Teaching Innovation works across program boundaries to support imaginative teaching informed by new technologies, deliberate course design, reflective teaching practices, and meaningful assessment of student learning.

The Collaborative has concluded its fourth year offering programs and professional development with support from the Provost's Office and President. This report focuses on six key programs of the Collaborative: (1) CAFÉ faculty lunch series, (2) Faculty Associates program, including the facilitation of Faculty Learning Communities, (3) Faculty Grant Program to fund innovative teaching and technology projects, (4) Digital Resources for Teaching (DRT) website, (5) Faculty Summer Teaching and Technology seminar, and (6) Support for Active Learning Classrooms.

CAFÉ

A centerpiece of the Collaborative is its successful lunchtime series, The CAFÉ, focused on faculty experimentation with new technologies and new forms of active and collaborative learning. Each session—developed, promoted and hosted by the Collaborative team—involves one or more faculty members sharing their experiences in supporting student learning in innovative ways.

During the 2015-2016 school year, approximately 250 faculty and academic staff attended discussions on the eleven different CAFÉ topics explored throughout the year. Of these, around half came to more than one CAFÉ. Faculty and academic staff represented many schools, department, and position types.

CAFÉ topics for 2015-2016 included:

- ❖ Active Learning and Active Learning Spaces
- ❖ Assignment Design 2.0: Blogs, Wikis & Podcasts
- ❖ Assignment Design 2.0: Beyond Text – Student-Created Digital Narratives
- ❖ Effective Use of Presentation Software
- ❖ Creating a Classroom Environment That Promotes Student Engagement
- ❖ Engaging Lectures, Engaging Students
- ❖ On the Road Again: How We Are Using Camino in Our Classes
- ❖ What I Did with my Collaborative Grant for Enhanced Teaching with Technology
- ❖ Why is "Backward Design" so Useful When Planning Instruction

Faculty Associates Program

The Faculty Associates work with co-directors (in 2015-16, Elsa Chen, Interim Associate Vice Provost for Faculty Development; Christine Bachen, Director of Assessment, and Nancy Cutler, Deputy CIO for Academic Technology) to support faculty excellence and innovation in teaching. In addition to providing individual or program-level consultation, each associate contributes to specific Collaborative programs or on joint programs with Faculty Development and the Office of Assessment.

In 2015-16, the Collaborative launched a faculty learning community initiative, a form of professional development recognized to foster faculty experimentation, innovation, and change in practice. Faculty associates from the Collaborative offered four faculty learning communities, groups of approximately 10-12 faculty members from different disciplines who came together regularly around a common interest or problem to deepen their knowledge, expertise, and practice. In addition, faculty associates—along with other several other colleagues at the university—facilitated ongoing informal mentoring groups with new faculty.

2015-16 Faculty Associates

Tim Healy, Professor of Electrical Engineering in the School of Engineering. Tim served as the liaison between the Faculty Collaborative and the STEM Steering Committee as the campus moves toward a new STEM community.

Pedro Hernández-Ramos, Associate Professor of Education in the School of Education and Counseling Psychology. Pedro coordinated the CAFÉ series and facilitated a faculty learning community on "Learning modalities and the design of learning experiences."

Tracey Kahan, Professor of Psychology in the College of Arts and Sciences. Tracey worked with Faculty Development to develop resources and programming that support Associate and Full-Professors, as well as faculty transitioning into phased or full retirement.

Barbara Kelley, Senior Lecturer in Communication in the College of Arts and Sciences. Barbara worked with Faculty Development to provide resources and support for lecturers and adjunct faculty.

Tonya Nilsson, Lecturer in Civil Engineering in the School of Engineering. Tonya coordinated a team of interdisciplinary faculty to develop and submit an NSF grant that proposed a new faculty development model for STEM faculty. She facilitated a two-quarter faculty learning community on "Designing and implementing effective active learning."

Tracy Ruscetti, Lecturer in the Biology Department in the College of Arts & Sciences. Tracy is working with the Collaborative to help individual faculty develop assessment strategies for courses. She also coordinates meetings with a cohort of new faculty and co-led a faculty learning community on "Freeing class time by developing effective online content ("flipping the classroom").

Tim Urdan, Professor in the Psychology Department and Liberal Studies Program in the College of Arts & Sciences. Tim provided consultation on using multiple sources of evidence in the evaluation of teaching, worked on a number of programs for faculty new to SCU, and facilitated a multi-disciplinary faculty learning community in winter quarter on "Assessing learning in your class: From tests to projects and everything in between."

Faculty Grant Program

Each year teams of faculty may apply for grants to conduct projects that explore pedagogical designs that incorporate technologies to enhance student learning, and that provide data on student learning. Faculty are encouraged to think broadly about projects that will have an enduring impact on an area of the curriculum within a program, major or the Undergraduate Core, or on our broader understanding of how to transform student learning.

As part of the grant, faculty conduct an assessment of the efficacy of their project and share their results with faculty in a CAFÉ the following year. Faculty are encouraged to consider projects that will lead to conference presentations or publications in either their discipline or other venues appropriate for higher education. In 2015-16, the following projects were funded.

- ❖ Janice Edgerly-Rooks, Jim Grainger, Dawn Hart, David McMillan, Christelle Sabatier, and Justen Whittall (Biology): Developing an Introductory Biology Toolkit—a Collaborative Approach.

- ❖ Drazen Fabris (Mechanical Engineering), Aaron Melman (Applied Math), & Maria Pantoja (Computer Engineering): Online Matlab/Octave Tutorial to Help Students with Programming Assignments (Quiz, Progress Report, QA Forum).

- ❖ Frank Farris & Corey Irving (Math/Computer Science Department): A WeBWorK Problems Database to Achieve Deeper Understanding in Mathematics Courses by Emphasizing Meaning.

- ❖ Laura Doyle, Ed Maurer & Tonya Nilsson (Civil Engineering: Can an Inverted Classroom Increase Performance and Student Engagement in Engineering Statics?

- ❖ Phyllis Brown (English), John Farnsworth (Environmental Studies), & Theresa Conefrey (English): Exploration of a Pedagogical Designs that Incorporate Technologies to Enhance Student Learning and Provide Data on Student Learning.

- ❖ Michelle Burnham (English), Tom Farrell (Library), Natalie Linnell (Math & CS), & Nicholas Tran (Math & CS): Creating Annotated Editions of Old and Rare Books from the SCU Digital Collections

- ❖ Tracy Ruscetti & Christelle Sabatier (Biology): Comprehensive Analysis of Quantitative Reasoning Skills in a Single Course to Inform Curriculum Reform at the Department Level

- ❖ Jessica Kuczenski (Civil Engineering): Personalized Development and Electronic Portfolios

The findings of three projects, "Can an Inverted Classroom Increase Performance and Student Engagement in Engineering Statics?," "Comprehensive Analysis of Quantitative Reasoning Skills in a Single Course to Inform Curriculum Reform at the Department Level," and "Exploration of a Pedagogical Designs that Incorporate Technologies to Enhance Student Learning and Provide Data on Student Learning" were presented at national conferences in the summer of 2016.

DRT (Digital Resources for Teaching)

DRT provides ideas, examples, and inspiration for interested faculty who aim to strengthen their existing curriculum as well as incorporate innovative teaching methods and assessment methods into their current practices. DRT aims to help faculty improve their planning, teaching, and assessing skills while introducing them to new concepts within these elements. Hosting a variety of resources and articles that not only explain specific concepts, but also how and why that concept should be incorporated into a course, DRT is intended to enhance faculty teaching and student learning. In the 2015-16 year, we migrated the DRT resources to the new SCU website, and updated and expanded the entries.

Summer Technology Seminar

In June, 2016, the Collaborative offered two three-day seminars on Enhanced Teaching with Technology to a broad cross-section of 33 faculty members. The interactive seminar, this year led by Amy Eriksson (Communication), Tim Urdan (Psychology), Tracy Ruscetti (Biology) and Christelle Sabatier (Biology), is designed for faculty interested in renovating, refreshing, or refashioning their course/s to integrate excellent teaching practices and effective use of technology. The seminar incorporates a backward design approach to course planning. Faculty focus on the creation of clear and meaningful learning objectives, design of assessments to determine whether students meet those learning objectives, and discuss how to foster learning and engagement in their classrooms. The seminar includes exploration of technological tools to support faculty work on assignments and activities, content delivery, student engagement, and evaluation of student learning.

As in previous years, faculty feedback about the seminar was very positive. As one faculty member commented, "I really enjoyed the opportunity to work closely with some of my colleagues while focusing on teaching. It was nice to have so much experience in one room at the same time. It was also nice to get so many great, fresh ideas about how I want to approach teaching and course planning in the future." Survey comments from faculty confirm the effectiveness of the seminar's emphasis on backward design, development of learning objectives, and refining assessment approaches in an environment in which theory is connected with education technology tools. Participants have the opportunity to explore ideas and practices with a variety of instructors—as noted by one participant, "each with a different presentation style and set of skills." Another benefit, according to the same participant, is "having so many ed tech staff on hand to answer individual technology issues, and to familiarize us with their different areas of ed tech expertise. Faculty leave the seminar ready to implement new approaches into their courses for the next academic year. One faculty member wrote of

plans to: "Mak[e] sure that objectives and assessments correspond, including more formative assessments and other activities to gauge student engagement with material, adding videos to supplement assignment descriptions, including more opportunities for reflection, attending to motivation and learning principles to keep more of the students engaged more of the time."

Support for Active Learning Classroom Spaces

The Collaborative for Teaching Innovation supports the development of classroom spaces that support active learning pedagogies through their design and intentional inclusion of education technology tools from writeable walls to multiple projectors to enable group work and effective sharing of work products. In 2015-16, the technology was upgraded in existing pilot classrooms, such as Alumni Science 220. In this classroom, for example, additional projectors and screens were added with Apple TVs for mobile sharing, along with a new control system.

During the spring of 2016, in anticipation of SCU's first SCALE-UP classroom (Student-Centered Active Learning Environment with Upside-down Pedagogies), the Collaborative sponsored a visit from Dr. Robert Beichner, an Alumni Distinguished Undergraduate Professor in Physics from North Carolina State University. SCALE-UP is a national project to create innovative spaces that support collaboration, interactivity, and hands-on learning. While originally designed for large enrollment classes, they benefit student learning in classes of any size because the pedagogy encourages active, collaborative, and project-based learning. Dr. Beichner presented at a CAFÉ and held two hands-on workshops for interested faculty. The Collaborative will sponsor other professional development opportunities in the new SCALE-UP classroom in Alameda Hall in 2016-17.

Concluding Notes.

Consistent with its mission, The Faculty Collaborative for Teaching Innovation has supported imaginative teaching informed by new technologies, deliberate course design, reflective teaching practices, and meaningful assessment of student learning through a variety of programs, workshops, web-materials, and individual consultations. We prioritize equity-minded, evidence-based practices that foster student learning for students of all backgrounds and all disciplines, and provide professional development opportunities for faculty of all position types at Santa Clara. Assessment of our programming and resources is ongoing as we try to anticipate the needs and interests of faculty at all stages of their careers and rely on our assessment to refine and expand our offerings.

The Collaborative continues to build on its connections with other units as well, including the Library and the Hub, to better advance our common goal of providing Santa Clara students with a transformative education. Finally, the Collaborative itself—as an organizational entity—has continued to receive interest and attention at national levels. In August, 2016, one of the Collaborative co-directors (Christine Bachen) gave a presentation entitled, "Creative Collaboration across Units: How to do More with (Relatively) Less," about the development of the Collaborative at the Teaching and Learning National Institute at Evergreen College in Olympia, Washington. Collaborative leadership also hosted visitors from other campuses who were interested in our organizational model and programming.