Provost update: Technology and Teaching Intersect

At San Jose State, in the heart of Silicon Valley, we are turning to technology to support student success in many ways. New technology has evolved and expanded the way we teach classes. It is allowing us to use data and predictive analytics to make informed decisions about what resources are needed to improve graduation and retention rates. It is opening up new opportunities for students and faculty to engage together in research.
As Provost, I am encouraged by our staff and faculty who have been early adopters of new technologies and serve as examples for the campus. They have found innovative ways to use the assets we have available to take students beyond the boundaries of the traditional classroom. We have faculty members who are redesigning their courses to use new applications that increase student engagement and real-time assessment. Others use telepresence and WebEx to connect with long-distance research partners or bring guest lecturers into their classrooms remotely. Still others are incorporating new software tools into their curriculum to ensure students have the skills they need to land internships in their fields.

Academic Technology, IT Services, and the Center for Faculty Development have been integral in supporting students, staff and faculty as we adopt new technologies. They coordinate group workshop and training activities such as the recent Adobe Day, where 50 staff and faculty members learned how to use new software programs at the company’s downtown office. IT Services also hosts IT Open Forums several times a year, where all students, staff and faculty are invited to learn about the ways in which technology and higher education intersect. [Dates of upcoming forums are available online](https://mail.google.com/mail/u/0?ui=2&ik=43258bacd0&view=pt&search=inbox&th=153ae0f092520651b&siml=153ae0f092520651b).

Academic Technology and ITS staff are collaborating more closely since ITS joined the Academic Affairs Division in the fall. I am enthusiastic that their joint efforts will greatly benefit us all, especially as student success continues to be a top priority on campus.

I encourage those of you who are interested in learning more about the existing technology resources we have on campus to connect with Academic Technology, IT Services and the Center for Faculty Development, or to consult with them when you discover new resources that could benefit the greater campus community. I look forward to seeing the innovative ways we can collaborate to improve student success, support RSCA and educate the future workforce of Silicon Valley.

Andy Feinstein
SJSU Enhances Social Work Education in Vietnam

When a team of San Jose State University faculty members embarked on a three and a half year grant with the United States Agency for International Development to strengthen undergraduate social work education in Vietnam, they knew they would need to find a way to communicate across more than 7,000 miles and a 14-hour time difference.

“The technology was written into the grant,” said Alice Hines, principal investigator and director of the Social Work Education Enhancement Project (SWEEP).

In Vietnam, the field of social work is relatively new so universities have not
been prepared to train the number of practitioners needed for the expanding sector. The SWEEP grant connected SJSU, USAID, eight Vietnamese universities, government ministries, community agencies and Cisco Systems in a project aimed at improving the administration of social work programs, faculty capabilities in teaching and research, social work curriculum and network communications among the universities through the use of technology.

During the grant period, Vietnamese university presidents, government leaders and faculty members visited SJSU to participate in workshops and training sessions designed for leaders and faculty fellows. The Vietnamese educators learned about the social work infrastructure in the Bay Area, how SJSU teaches social work curriculum and how to incorporate technology into their classes. The leaders and fellows received training from Cisco, SJSU’s IT Services, the Lucas College and Graduate School of Business, and the Center for Faculty Development.

When the leaders and fellows returned to their home universities in Vietnam, they used WebEx and Telepresence to connect between the universities within their native country as well as with SJSU students and faculty members.

“We connected once a month with WebEx,” Hines said. “It enabled them to form a cohesive leadership group.”

Debbie Faires, the director of online learning for the School of Information, said it took some trial and error for participants to become comfortable with WebEx and Cisco Telepresence, especially in dealing with internet connectivity in rural areas or with audio background noise.

“With experience, people learned how to mute their microphones or telephones to improve the meeting for everyone,” Faires said.

The team also used Google Sites to create a website in English and Vietnamese as an archive of all presentations and documents. The site will remain active as a resource for the Vietnamese universities.

“My favorite part of the project was making new connections with many new colleagues in Vietnam and here at SJSU,” Faires said. “This was a remarkable project which has successfully impacted social work education throughout Vietnam. It was amazing to be part of the team that helped to shape these changes.”
While SJSU’s role in SWEEP ends in March, the Vietnamese university leaders will continue to meet monthly as they advance and expand the field of social work. The faculty fellows who participated in the grant with SJSU will now become trainers of additional instructors in Vietnam.

“My favorite part has been to watch the growth of the participants from Vietnam – how they took leadership responsibility and how the faculty took on the role of trainers,” said Ed Cohen, co-director of SWEEP and a Fulbright Scholar in Vietnam this year. “That has been very gratifying, and their mastery of available technologies played an important role in their transformation.”

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Promising Practices Grant Updates Courses

First-year students in Richard McNabb’s First-Year Writing (ENGL 1A) course work as a group to analyze an article and post comments in Canvas as part of an in-class discussion.

San Jose State faculty members are testing out ways to get students engaged in general education courses and to improve student success in key classes with a CSU Promising Practices grant that provides resources to redesign classes.
Richard McNabb said he pursued the grant to increase student engagement in his First-Year Writing (ENGL 1A) courses, while Manolo Callahan said he wanted to find a way to present a dense amount of material in his two-semester Mexican Americans and the Development of U.S. History and Government (MAS 10A and 10B) course.

“I wanted to tap into the multi-literacy students currently use,” McNabb said. “They are taking traditional academic writing and repurposing it for other uses such as social media, power points or blogs.”

The students will be engaged in multi-modal writing projects that will include text, visuals and audio.

McNabb is also incorporating new technology into his classroom that supports more engagement with students. He and six other English professors are using a software application that allows them to ask a grammar-related question and get answers from all the students in the classroom at once. Using i>Clicker and Learning Catalytics, each student answers a multiple choice question from their cell phone or a laptop. In his class, McNabb can see what percentage of students select the correct answer and he can discuss a concept further if a high percentage of students select the wrong answer.

“It allows me in real time to assess how engaged they are with the material,” he said.

While students in one session of his class had only used the tool once, it received promising reviews.

“It involves more students this way,” said Charles Thompson, ’19 Justice Studies. “This is a better way for the whole class to learn.”

The students are also using Canvas, the campus learning management system, where they can access a Writer’s Help 2.0 handbook that is available campus wide. McNabb’s students were engaged with Canvas for a group activity on a recent morning. Gabryella Milano, ’19 Psychology, said she liked using Canvas during group work on analyzing articles because the students can put their comments directly into a class discussion online.

“I like the direct feedback,” she said.
Callahan, who teaches a two-semester course, increased his use of Canvas this year. Beginning in fall, he created weekly learning and specific reference modules in Canvas to present course material. The modules explain high-level concepts his students need throughout the semester such as critical reading techniques, concept mapping and research methods along with weekly content on the historic topics they are studying.

“We try to cover a lot of material and I was thinking about technology,” he said. “What can we do differently using technology to provide more content?”

For his class, the students log into Canvas to read their weekly assignments, watch video lectures or review clips from movies or films about Mexican history and culture. The students write short essays after reviewing the material and he encourages student interaction by requiring them to write comments on the essays of one or more peers in the class.

Callahan meets once a week in a lab class, where students participate in active learning sessions. He said the flipped model allows him to spend in-person class time on monitoring and assessing the students’ understanding of key concepts and historical debates.

As part of the grant, faculty members are invited to regular webinars with educators from other CSUs who are also working on course redesign.

“I was really attracted to the idea of a learning community,” Callahan said. “We have Friday afternoon webinars with roughly 52 people. They provide a lot of tips and share how they use apps and technology.”

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Proven Course Redesign Improves Engagement
Students in Laura Guardino's U.S. History and Government (HIST 15A) course watch a short video in a 'smart classroom' in Sweeney Hall.

In the College of Social Sciences, three history faculty members received CSU Proven Course Redesign grants to update U.S. History and Government (HIST 15A) courses. The professors are using some flipped classroom techniques in the general education course.

Laura Guardino said the course used to be team taught as it incorporated history and political science concepts. Since the department was already planning to redesign the course to focus only on history topics, she and two of her colleagues decided to apply for the Proven Course Redesign grant to support the effort.

Guardino said the goal of the redesign is to ensure they teach students the skills they will need in upper division courses such as critical thinking, analytic skills, close reading analysis, how to cite sources, write a thesis and make oral presentations. The other faculty members with grants include Robert Cirivilleri and Katherine Chilton.

“We are using an online learning platform that students can use on their smart phones or laptops,” Guardino said. “It makes grading more efficient. Students can read essays and view lectures online. Discussions in class extend into concrete problem debates.”
The history professors are using an online platform, Globalyceum, that was created by retired SJSU Professor Pat Don, who taught Social Science Teacher Education and wanted to create a curricular resource that maximizes technology.

Guardino added that the trio received funding for iPads for the classes and would begin incorporating the tablets into their instruction in mid-March. She said Academic Technology staff members have been supportive in helping her and her colleagues learn how to use the resources in their Smart Classrooms that are equipped for audio-visual presentations.

On a recent morning, students in Guardino’s smart classroom watched a video about modern-day slavery before delving into a discussion on slavery before the Civil War.

“We want to find a little connection to the present day,” she said. “We ask a probing question that is connected to their lives.”

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**Video: Teaching with Technology at SJSU**

Students and faculty talk about how technology enhances teaching and learning at SJSU. [Watch this and other videos about available resources at SJSU](https://mail.google.com/mail/u/0/?ui=2&ik=43258bacd0&view=pt&search=inbox&th=153aef092520651b&siml=153aef092520651b).
CS Students Become Technology Ambassadors

Samantha Flores, left, '17 Psychology, is an IT Services student assistant who is serving as a liaison for computer science students piloting new applications such as Cisco Spark.

Debra Caires, a computer science lecturer and director of the internship program in the College of Science, transformed her Technical Writing (CS 100W) courses into a service learning class so that her students would get real-life experience. Her students work with clients to identify and solve a problem in a way that is transferable, sustainable and scalable, just as they would if they were working in the programming industry.

“There has been a huge employment shift in Silicon Valley,” Caires said. “Entry-level jobs are requiring two internships or courses that have applicable projects.”

In Caires’s classes, groups of students are paired with a client – a faculty member, staff member, student organization, small business or nonprofit representative – who needs help in using technology to solve a real-life problem. Caires said the “tidal wave” of new technologies on campus can be intimidating, but her students can serve as technology ambassadors by helping their clients to implement the resources available at SJSU.
Caires selected three groups of students this semester to oversee a pilot of new online tools, including IBM’s Watson Analytics, a predictive analytics and data visualization tool; Adobe’s XD, a user experience application; Adobe’s Voice, an animated video tool; Adobe’s Slate, a visual storytelling application; and Cisco Spark, a tool that incorporates secure messaging and video conferencing.

The three groups of students will be working with their clients, and will also be reporting back to IT Services (ITS) student assistants on any feature requests or bugs they find while using the new Cisco Spark application to improve user experience. The IT student assistants who will serve as liaisons include Sri Krishna Kadiyala, '17 Bioinformatics Engineering, Jose Lupercio, '17 Justice Studies, and Samantha Flores, '17 Psychology.

“It’s completely new to me,” said Lupercio, of his role as a project liaison. “I used to be at the front desk and now I am more hands on. I feel it shows I am learning something that requires a lot of responsibility.”

The students are using agile project methodology, a technique that breaks large projects into smaller milestones that must be completed in a “sprint” of two weeks. The students will conduct five sprints throughout the semester and will present the final outcomes of their projects on May 6, from 9 a.m. to noon, on the second floor of MacQuarrie Hall.

“This is my first time doing something like this,” said Justin Tennant, '17 Computer Science. “I am unfamiliar with software development so this is eye opening for me. I feel like I am learning a lot.”

The students spent their first two-week sprint researching agile project methodology while getting familiar with Cisco Spark, as well as other applications such as Google Calendar and Slack.

“I like that we focus on what we can get done quickly rather than the whole project,” said Eric Fonseca, '17 Computer Science.

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Adobe Day Highlights New Teaching Tools
Beginning Digital News Photography (JOUR 95) student Raven Swayne gets hands-on practice shooting a portrait with studio lighting in University Photographer Bob Bain's office/studio. The students also learned to use Adobe Lightroom.

More than 50 San Jose State staff and faculty members attended the Fourth Annual Adobe Day at the software developer’s downtown offices. The half-day session with the Adobe Education team offered a chance for SJSU staff and faculty to use digital tools in guided training sessions that they can replicate on campus.

After the presentation from Adobe’s team on March 4, Journalism and Mass Communication (JMC) Professor Michael Cheers introduced the new visual storytelling tool Slate to his students the following week.

“Students in both classes were uploading content to Slate in less than 10 minutes,” he said. “They embraced it. Both classes will submit their midterm using Slate.”

He will also be introducing another new tool, Muse, a responsive web design tool, after spring break.
Cheers said access to the latest software, including tools in Adobe’s Creative Suite such as Photoshop, Adobe Premier Pro and Lightroom, are integral to preparing his multimedia students for internship and entry-level positions involving photography and video.

“For the first time in JMC history, two multimedia/photojournalism students from SJSU are going to the New York Times Student Journalism Institute,” Cheers said, of James Tensuan and Randy Vazquez, who will participate in the program in summer 2016. “It’s an amazing accomplishment. They had to compete against thousands of college students from across the country.”

To help students learn the intricacies of the programs, Cheers hosts labs on weekends and before class, and also posts tutorials and visual storytelling examples on Canvas.

“My hope is that the students go beyond what is required for the assignment and a letter grade, and embrace innovation and creativity,” he said. “I love it when a student comes to class and shows the instructor what they learned independently.”

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