2014 Tech V | Draft Goals and Strategies

Goal A: Establish baseline standards and upgrade the technology infrastructure for California community colleges to create a state-of-the-art business and learning environment

Strategy 1: Create a statewide mechanism that defines standards for technology outcomes, documents college-level technology needs through an annual audit, and offers funding that enables colleges to meet technology standards.

Building off the FUSION model used to document and support the facilitates infrastructure of California community colleges, the Chancellor's Office would create the capacity to audit the state's technology resources and provide funding to help bring colleges up to a minimum standard. First, a statewide committee would establish the minimum standards covering issues such as federated ID implementation, accessibility, security, classroom equipment, and wireless network coverage. These standards will need to be periodically refreshed and should include criteria for system replacements and upgrades. Second, a survey would be developed that gathers nuanced information about existing technology resources. Each year, colleges would report the status of their infrastructure, services, skills, and usage patterns, which would help to shape local three-year plans for technology expenses. Colleges would have the opportunity to apply for funding to carry out projects that address the standards. The technology audit information would also be used to help leverage additional funding for the system, identify effective practices, and support bulk purchasing and hosting.

Strategy 2: Secure one-time funding to help colleges meet minimum standards and track use of centralized funding to help colleges both attain and maintain system-wide standards.

The first issue that needs to be tackled to bring colleges up to a minimum standard is wifi coverage ("the last 100 yards"). Tools such as a GIS map of wifi dead zones and the first technology audit could help to further clarify areas of need. The Chancellor's Office would secure one-time funding that would help all colleges establish the necessary core infrastructure (e.g., training, switches, wiring). In the process of attaining the wifi standards, colleges will also be able to roll out a federated ID system that allows students to access content, whether library services or emergency messaging, at all colleges. Once this first issue is addressed, the Chancellor's Office would use the annual technology audit and TTAC to identify other priorities that reflect new areas of emphasis, align emerging priorities with system-wide technology standards, and support colleges in continuing to meet or exceed those standards. The Chancellor's Office would also create a technology visiting team that can help assess the degree to which colleges are implementing the minimum standards, before awarding additional funding.

Strategy 3: Based on priorities identified in the annual technology audit and through system goals, broker bulk purchasing that reduces prices, increases consistency, bundles professional development, and customizes products.

To increase the purchasing power of colleges across the state, the current system that pools resources for library technology would be expanded to other technology purchasing. The needs that the bulk-purchasing system would address could range from security-related technologies to IT support services to electronic textbook access. First, the Chancellor's Office would devise a structure for purchasing that secures lower pricing, such as reverse auction models and piggy-backing agreements, and ensure that this structure is in compliance with state regulations. Second, the Chancellor's Office

would use the annual technology audit to determine high-priority needs that are common across the state. Third, working through the Foundation, contracts would be negotiated with vendors that include professional development and maintenance agreements. Vendors would be asked to address specific needs that emerge from the annual technology audit, statewide projects, and TTAC recommendations. For example, the Online Education Initiative could be used to broker better connectivity between learning management systems and commonly-used ERP systems. Finally, clear communication would be directed to the field that explains the value and components of these bulk agreements. Colleges—including CSUs and UCs—could then voluntarily join a bulk-purchasing consortium through a subscription model.

Goal B: Leverage technology to increase use of comprehensive and high quality professional development resources that promote student success

Strategy 1: Create a statewide professional development support system that enables all system entities to coordinate and benefit from professional development opportunities.

The statewide professional development support system would help reduce costs and increase awareness of the wide array of training opportunities already being offered. Using a robust online interface that is linked to the Online Education Initiative and the Student Success Center, entities would be able to post their events to a master calendar or list high-value meetings offered outside the state. Entities could also access free or at-cost back-end support including CMS, registration services, payment processing, conference apps, email communications with participants, evaluation services, email kiosks, portable wifi services, video conferencing and hosting, venue contracts, and information on event management and AV service providers. Other services would include bulk-purchased shells for common topics (e.g., sexual harassment, FERPA compliance), a speakers bureau, opportunities to request content development expertise, and a repository of presentations.

Strategy 2: Create a searchable database and delivery mechanism for curated professional development resources targeted toward a variety of learning environments and the full range of college personnel

Leveraging the common professional development support system as a centralized repository of content, the Student Success Center should create and curate a searchable portal of professional development materials that provides easy access to high-quality resources. For example, users could have content pushed out to them based on key attributes, use a decision tree to vet the types of materials that should appear in a search, or see trending information on popular resources. Resources would be tagged using meta-data on key factors such as target audience, format, length of time for delivery, contact info for presenters, and include a rating system. This portal could also be used to host learning communities and support mentoring programs. The Student Success Center, in addition to curating content within the portal, could analyze the content to look for solutions to common problems, identify gaps that need to be filled, foster connection among various initiatives, and increase the use of existing resources.

Strategy 3: Establish a means for documenting skills-attainment and measuring the impact of professional development

The professional development support system should also be linked to e-portfolios where users can track their attainment of skills. This system should leverage a badging model, where the standards for skills attainment are clearly defined and there are opportunities to store evidence of learning. The e-portfolio could leverage existing training systems, such as @ONE's online teaching training, Educause's badging, or regional certification programs. Users can then elect to make some of their skills attainment public through a transcripting service, such as to document flex credit requirements, support job applications, or augment the speakers bureau. This data source could also be queried to examine the impact of professional development, such has identifying colleges that have a strong track-record of professional development participation and then examining whether students at these institutions show improved outcomes.

Goal C: Expand access to data and predictive analytics to inform student, college, and state decisions regarding statewide priorities

Strategy 1: Import, aggregate, and validate information within a single data repository

As a first step, the system will need to consolidate diverse data sources into a single location and align this information so that analysis can be conducted on it. The repository should be created in a manner that addresses privacy, data security, and disaster recovery. Data sources should expand beyond what is currently available in MIS to include aspects such as labor market information, employment outcomes, offerings by other training providers, skills/competencies, and program-level student learning outcomes. Wherever possible, data should be collected at the state level to minimize the burden on colleges. Using a quality assurance process, the data should be examined to identify and flag potential data accuracy issues. Colleges should be granted amnesty to correct faulty data when problems are identified, incentivized to clean up their data, and given ongoing guidance on how to upload, update, and improve data. The Chancellor's Office should also establish a process to address data accuracy problems for external data sources. As this repository is developed, a decision should be made regarding whether student-level data should be pulled directly from local data warehouses or filtered through the annual MIS submission process.

Strategy 2: Create tools that compile and visualize data to support common decisions and provide professional development that supports the use of these tools

Once data have been aggregated, the practitioners should be given the opportunity to explore the relationships among various data elements and define high-value queries related to program, regional, and intersegmental issues. Based on this input, dashboards and reporting tools would be created, such as: program review and accreditation tools that allow for broader comparisons and benchmarking; reporting for Scorecard, federal, or California Student Aid Commission priorities; enhanced GIS tools for growth and equity calculations; trend data to support enrollment management; and tracking student outcomes as they cross segments or institutions. This system should provide tiered access that allows researchers to conduct sophisticated analyses, such as if-then scenarios, as well as fixed reports that all practitioners can access. Finally, extensive professional development should be provided to explain what the data mean, their potential uses, and their value for local and statewide priorities.

Strategy 3: Develop the capacity to conduct predictive analytical modeling to assist students, colleges, and the system in making plans and decisions at all levels

Leveraging the work already underway in statewide technology initiatives such as Common Assessment and Ed Planning, as well as data and research resources like Cal-PASS Plus and the RP Group, the Chancellor's Office should create a Center for Data Analytics that pairs the new data repository with the skills of data scientists and researchers who are familiar with existing data sources and definitions. Starting with discrete applications of analytics, the Center for Data Analytics should develop ways to provide data to colleges that would support common processes like program review, equity planning, and advisement systems.