

REPORT OF THE WASC VISITING TEAM
EDUCATIONAL EFFECTIVENESS REVIEW

To California Polytechnic State University San Luis Obispo
April 2-5, 2012

In Partial Fulfillment of the Requirements for
Reaffirmation of Accreditation

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The team evaluated the institution under the WASC Standards of Accreditation and prepared this report containing its collective evaluation for consideration and action by the institution and by the Accrediting Commission for Senior Colleges and Universities. The formal action concerning the institution's status is taken by the Commission and is described in a letter from the Commission to the institution. This report and the Commission letter are made available to the public by publication on the WASC website.

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REPORT OF THE WASC VISITING TEAM
Educational Effectiveness Review

California Polytechnic State University, San Luis Obispo
Visit: April 2-5, 2012

SECTION I – Overview and Context

IA - Description of Institution and Visit

Institutional Background

Established in 1901 by the California legislature, California Polytechnic State University at San Luis Obispo (Cal Poly) began as a vocational high school. The University transitioned to a junior college in 1927, and then to a three-year institution in 1936. Cal Poly became a baccalaureate-granting institution in 1940. Graduate/master level degree programs were added in 1949. The institution was incorporated into the California State College System¹ in 1961, and became a university in 1972.

Since its inception Cal Poly has embraced an educational philosophy of ‘Learn-by-Doing’. This philosophy is exemplified in the University’s mission statement:

“Cal Poly fosters teaching, scholarship, and service in a Learn-by-Doing environment where students, staff, and faculty are partners in discovery. As a polytechnic university, Cal Poly promotes the application of theory to practice. As a comprehensive institution, Cal Poly provides a balanced education in the arts, sciences, and technology, while encouraging cross-disciplinary and co-curricular experiences. As an academic community, Cal Poly values free inquiry, cultural and intellectual diversity, mutual respect, civic engagement, and social and environmental responsibility.”

Cal Poly operates under the governance of the systemwide Board of Trustees of the California State University and the administrative jurisdiction of the California State University (CSU) Office of the Chancellor. And, whereas Cal Poly resembles other CSU campuses in providing undergraduate instruction and graduate/masters level degrees in traditional disciplines,

¹ Name of the California State University system at the time Cal Poly was inducted.

the University is considered distinctive in that it specializes in the applied fields of agriculture, architecture, engineering, and other professional fields.²

Accreditation History

Cal Poly became a WASC accredited institution in 1951. Between 1951 and 1980 the institution received a series of five-year reaffirmations accompanied with interim visits and institutional reports. In 1980 Cal Poly received a ten-year reaffirmation with a five-year interim report. A ten-year reaffirmation was also granted in 1990, with progress reports in 1992 and 1994. In 2000 the institution's accreditation was again reaffirmed and the dates for the current sequential WASC review process scheduled (i.e., October 2007 for the Institutional Proposal, winter 2010 for the Capacity and Preparatory Review [CPR], and spring 2012 for the Educational Effectiveness Review [EER]) as the concluding phase of its current WASC reaccreditation cycle.

Off-Campus and Substantive Change Requests

Between 1996 and 2009 Cal Poly submitted Off-Campus Substantive Change proposals for six programs. The first request submitted in 1996, a proposed MS in Architecture in Taiwan, was denied. The two subsequent off-campus substantive change proposals were approved in 1997 and 1998. Respectively, these included a MBA program to be offered in concert with the Ruppin Institute in Hefer, Israel, and a revised proposal to offer an off-site MS in Engineering with an emphasis in Aeronautics. The fourth request, submitted in 2002 and approved in 2003 after a series of revisions, was a proposal to offer a joint doctorate in Educational Leadership (EdD) with the University of California at Santa Barbara. During the CPR visit to Cal Poly the WASC site visit team was informed that the joint doctorate in Educational Leadership with the University of California, Santa Barbara has been identified for closure. In 2008, the Commission approved Cal Poly to offer a Master of Science in Industrial and Technical Studies as a blended modalities program. Submitted in 2008 and approved in 2009, was a proposal to offer a MS in Biomedical

² As of fall 2011, Cal Poly reported 18,762 students (94.4 % baccalaureate; 4.8% graduates; .06% credential programs and non-degree post baccalaureate programs). For the same period, Cal Poly reported 800 full-time faculty (722.4 instructional FTE) and 444 part-time faculty (190.5 instructional FTE).

Engineering through distance education. Final approval was granted in 2010 for two proposals: a MBA (Off-Campus Program) and a MS in Fire Protection (Distance Education Program).

The Site Visit

The site visit to the California Polytechnic State University took place April 2 through 5, 2012. The team was provided with excellent hospitality and work accommodations both on campus and at the appointed hotel. Over the course of the visit the team met with administrators, faculty, professional staff, and students. All representatives of the University were engaged and candid, providing the information necessary for a thorough EER visit.

The team would like to extend its appreciation to President Armstrong and his leadership team for their candid engagement with the visiting team. Since the CPR visit, the University has experienced major changes in leadership, including a new President, Provost, and VP for Advancement (Development). In spite of all of these changes the institution continued to show continuity of mission while simultaneously looking forward to the future.

A special thank you is also extended to David Conn, Associate Vice President for Institutional Review, and his staff for their extraordinary effort in facilitating every aspect of a well-organized site visit. Appreciation is also extended to Dr. Bruno Giberti, Faculty Director of the WASC Self-Study, and the faculty, students, staff, and administration for their thoughtful participation in team interviews. Finally, the orientation to and assistance with the EER process provided by Richard Osborn, as the WASC staff, were both helpful and greatly appreciated.

IB - Institution's Educational Effectiveness Review and Report

Alignment of the Institutional Proposal

The EER report is consistent with the content presented in the Institutional Proposal, including content on selected institutional themes: *Our Polytechnic Identity*; *Learn-by-Doing*; *Teacher Scholar Model*; and *Integration and Student Learning*. Adhering to WASC expectations, the report also emphasizes student learning, student success, and organizational learning. Thoughtful and impressive attention has been given to in depth analysis followed by institutional plans and action

items. Finally, responses to the recommendations of the WASC Commission are woven throughout the report.

Quality of the Review and Report

The EER report provided a useful foundation from which to organize and conduct the EER visit. Both the report and findings of the site visit give evidence of the substantial investment of time and effort that the institution engaged in as part of the EER process. The institution is to be commended for its commitment to self-assessment that has resulted in the transformation of the organization's culture of evidence.

IC - Response to Issues Raised in the Capacity and Preparatory Review

The following recommendations were presented to the University as a result of the Capacity and Preparatory Review. Recommendations are categorized as *Recommendations Related to the Institutional Themes* and *Recommendations Related to the Standards*.

Recommendations Related to Institutional Themes

Commission Letter³ and CPR Recommendation 1: Overarching Theme—Comprehensive Polytechnic Identity - It was recommended that additional attention be given to clearly: a) defining what is meant by the term “comprehensive polytechnic university”; b) articulating the institutional changes desired; and c) identifying the quantifiable measures that will allow the University to assess the effectiveness of its identity. The new leadership is encouraged to support this process with appropriate budget allocations.

The EER did not specifically address this overarching theme of defining the Comprehensive Polytechnic Identity, but instead chose to consider institutional identity through the lens of the three remaining themes. It was clear from the meetings during the campus visit that the institution is making excellent progress toward defining its Comprehensive Polytechnic Identity. The existing Mission Statement of the institution demonstrates that they have a framework for defining this overarching identity. With the new leadership in place, a succinct definition for this overarching theme should remain as an important priority.

³ See also pp. 29-37.

CPR Recommendation 2: Theme 1—Learn-by-Doing - The team urged Cal Poly to develop measurable ways of demonstrating the educational effectiveness of this practice.

In April 2011, the Academic Senate passed *AS-727-11 Resolution on a Working Definition of Learn by Doing*, which states that, “At Cal Poly, ‘Learn-by-Doing’ is a deliberate process whereby students, from day one, acquire knowledge and skills through active engagement and self-reflection inside the classroom and beyond it.” This formulation acknowledges the fact that the process has deep roots in the University’s curriculum and its co-curriculum. As a result, of the actions of the Academic Senate, a working group was assigned to determine ways the success of ‘Learn-by-Doing’ at Cal Poly was being measured. The working group members examined a selection of program review documents from all six colleges. The group found that all of the programs used some form of direct and indirect assessment of ‘Learn-by-Doing’ to evaluate and revise ‘Learning objectives (PLOs), curricular offerings, and assessment practices, but only one of the eight programs explicitly made the connection between ‘Learn-by-Doing’ and planning and budgeting. The results of multiple surveys pointed to the senior project as a promising source for assessing the impact of ‘Learn-by-Doing’ on student achievement of PLOs. On the 2010-11 Inventory of Educational Effectiveness Indicators, 95% of undergraduate programs reported using the senior project to demonstrate that graduates have achieved some PLOs, which suggests that programs are de facto assessing the educational effectiveness of Learn by Doing. The team commends the institution for the action that has been taken encourages the campus to stay committed to the recommendations developed in the EER.

CPR Recommendation 3: Theme 2—Teacher -Scholar Model - It was recommended that Cal Poly continue to clarify the definitions associated with the teacher-scholar model, including establishing a plan that includes targets to be accomplished by the EER visit and beyond.

The team commends the Academic Senate for passing *AS-725-11* in March 2011 which is a resolution on defining and adopting the Teacher-Scholar Model. In the fall 2011, the President selected ‘embrace the teacher-scholar model’ as one of six strategic imperatives for strategic planning. Several targeted indicators of progress were also proposed. Building these targets into

the strategic planning process is an excellent approach to building the teacher-scholar model into the educational framework of the University

Commission Letter⁴ and CPR Recommendation 4: Theme 3—Integration and Student Learning - A leadership structure needs to be identified so that this agenda will benefit from further focus and be moved forward.

Early in the EER document (p.3), appear the following Academic Senate resolutions that demonstrate the efforts that have been made to clarify and assume clearer responsibility for academic leadership.

- *AS-716-10 Resolution on Academic Assessment at the Program and University Levels* established Senate oversight for institutional assessment in addition to clarifying the meaning of assessment and the use of assessment results.
- *AS-713-10 Resolution on the Establishment of an Academic Senate General Education Governance Board* transferred responsibility for GE from the Provost's Office, i.e. Academic Programs, to the Senate.
- *AS-735-11 Resolution on Coordinated Campus Assessment Efforts* approved a task force report that recommended revising the membership of the Academic Assessment Council, in its existing form a committee of managers, to include faculty members from each college. The report also affirmed the council's responsibility for planning and coordinating institutional assessment efforts like the ULO Project.

These resolutions are evidence that the institution has addressed some aspects of the associated recommendation, although the response suggests that focused leadership for this overall effort still needs to be addressed. The institution is looking to University Learning Objectives (ULOs) as a set of organizing principles that can transform student learning into a cohesive whole.

⁴ Additional reference to the leadership structure is also addressed on page 37.

Recommendations Related to the Standards

CPR Recommendation 5: Considerable effort needs to occur in the next 18 months to assure: a) that there is alignment between university, program, and course learning objectives across the institution; and b) that all learning objectives appear systematically in university documents.

The institution is to be commended for the action taken in response to this recommendation. To address part (a) of this recommendation, the Academic Senate in cooperation with the working group, engaged all academic programs in an alignment exercise. In fall 2010, the Academic Senate asked each program to state its PLOs and to rate the contribution of each PLO to student attainment of the ULOs on a scale of 0 to 3, with 0 being –“does not contribute” and 3 –“greatly contributes.” The overall university measure of alignment across all ULOs was 2.57, solidly between “contributes” and “greatly contributes.” “Demonstrate expertise in a scholarly discipline” was the most highly ranked ULO at 2.80, followed by “think critically” at 2.78 and “communicate effectively: written” at 2.71. “Make reasoned decisions based on an awareness of issues related to sustainability” was the lowest ranked ULO at 2.27, followed by “make reasoned decisions based on a respect for diversity” at 2.35 and “make reasoned decisions based on an understanding of ethics” at 2.44. Though the subjective nature of the reporting must be taken into account, the results still indicate that, on average and at the university level, PLOs are aligned to the ULOs at a level above “contributes.” College-level results were less consistent but showed generally strong alignment. While efforts need to be made to fine-tune these linkages, the institution has made significant progress since the CPR visit.

In spring 2011, resolution *AS-732-11 Resolution on Posting Program Learning Objectives in the Cal Poly Online Catalog*, was approved. As cited in the resolution, the working group chose the online catalog as the most appropriate place to publish PLOs as it is the official source of university information; provides a two-year catalog cycle allowing programs the opportunity to update their objectives if needed; and because this information would be useful to parents and applicants when choosing a major. The Registrar has already implemented the resolution.

CPR Recommendation 6: Attention needs to be given to clearly identifying who among the leadership is responsible for educational assessment and assuring that the related educational goals are linked with budgeting.

Below are the resolutions adopted by Cal Poly to address the above recommendation. The institution is to be commended for taking these actions to identify leadership for educational assessment. Although the institution has given attention to identifying leadership to support educational assessment, on-going attention needs to be given to the linkage to budgeting needs--especially during what continues to be very challenging financial times for the State and the California State University system. Academic Senate resolutions related to assessment leadership include:

- *AS-716-10 Resolution on Academic Assessment at the Program and University Levels* established Senate oversight for institutional assessment in addition to clarifying the meaning of assessment and the use of assessment results.
- *AS-713-10 Resolution on the Establishment of an Academic Senate General Education Governance Board* transferred responsibility for GE from the Provost's Office, i.e. Academic Programs, to the Senate. With its location resolved, the GE Committee could return to the issue of GE program assessment, which has been the foundation of the ULO Project.
- *AS-735-11 Resolution on Coordinated Campus Assessment Efforts* approved a task force report that recommended revising the membership of the Academic Assessment Council, in its existing form a committee of managers, to include faculty members from each college. The report also affirmed the council's responsibility for planning and coordinating institutional assessment efforts like the ULO Project.

CPR Recommendation 7: Questions have been raised about undue influence of donors in the operation of the university. It was recommended that the university consider an independent review of any such alleged incidences.

The institution conducted a thorough and independent review of this matter. As a result of the review, it was concluded that this matter did not violate the principle of academic freedom.

CPR Recommendation 8: The University has recently adopted an inclusive excellence initiative. The team applauds this effort. Appropriate leadership has been identified to continue this initiative. We urge continued progress on enhancing the diversity of the students, staff and faculty, with particular attention to campus climate.

EER report addressed diversity and campus climate in detail, leading to seven recommended action items. While these actions items are a good step, significantly more progress needs to be made to enhance the diversity of the students, staff and faculty, with particular attention to campus climate.

CPR Recommendation 9: In consideration of the current financial difficulties, it was recommended that close attention be given to maintaining the quality of buildings and facilities.

The institution is to be commended for its commitment to continuing to invest in the maintenance of the buildings and facilities on campus. The campus is a very inviting atmosphere and has a well maintained appearance. Since the CPR visit, the campus has completed the \$6 million Meat Processing Plant, a \$5 million Technology Park facility, a \$66 million Recreation Center Expansion, and currently has a \$119 million Center for Science and Mathematics under construction.

CPR Recommendation 10: Financial uncertainties jeopardize the future viability of the university's comprehensive polytechnic mission. It was recommended that there be continuous monitoring of university finances and that relevant financial options be considered to sustain the quality of academic offerings.

The institution is to be commended for its commitment to the University's mission of maintaining its outstanding status academic institution during a very difficult financial period. While the financial conditions for the State of California and its impact on the California State University system have resulted in significant budget reductions, the institution has continued its strong commitment to the themes of 'Learn by Doing', the Teacher-Scholar Model, as well as Integration and Student Learning. The students are to be commended for their action to assess

themselves a Student Success Fee that is intended to support an increase in availability of required course sections and laboratories, provide additional support services to students to improve progress toward graduation and sustain Cal Poly's 'Learn-by-Doing' reputation.

CPR Recommendation 11: The faculty is encouraged to invest time in reviewing the role and critical nature of faculty governance in academic decision-making.

The Academic Senate is to be commended for the actions taken to pass resolutions related to faculty governance in key areas such as assessment and general education governance. The actions taken will be instrumental in the institution's success in these areas.

CPR Recommendation 12: Attention needs to be given to creating a greater awareness of the role of the WASC self-study process in affecting institutional strategic planning.

The institution is to be commended for its commitment to the role of the WASC self-study process in affecting the strategic planning effort. It was evident throughout the EER visit that the campus constituencies embraced the WASC process and were building these efforts into their strategic plan.

CPR Recommendation 13: Apparent inconsistencies exist in the collection and utilization of data by programs. It was recommended that the university expand its capacity for institutional research and analysis to support academic decision-making.

The EER demonstrated that the institution made a significant effort to collect and utilize data in their assessment and decision making process. The development of the PolyData Dashboard and the Management Reporting Briefcase has provided access to significant amounts of data and reporting capabilities for decision-making. While the institution recognizes that the institutional research capacity could be improved, significant progress has been made since the CPR site visit.

SECTION II—Evaluation of Institutional Educational Effectiveness under the Standards

IIA – Student Learning⁵

The EER self study emphasized the demonstration of student learning through two institutional projects: ULO-based assessment in general education and the majors and an assessment of the capstone senior project. The first of these, *ULO-based Assessment Pilot Project*, began in 2008 and involved a concerted effort to define measureable outcomes for the ULOs and to assess student attainment of these outcomes. The major aim was to measure the progress from the freshman year to the senior year and to close the loop by recommending improvements to pedagogy and curriculum. Shared governance was also an issue, as the CPR review team encouraged the faculty “to invest time in reviewing the role and critical nature of faculty governance in academic decision -making” The Academic Senate responded forcefully to these concerns by approving three resolutions addressing the governance issues surrounding assessment: (CFR 2.3, 2.4, 2.5, 2.7, 4.6, 4.7)

- *AS-716-10 Resolution on Academic Assessment at the Program and University Levels* established Senate oversight for university-level assessment and clarified the meaning of assessment and the use of assessment results.
- *AS-713-10 Resolution on the Establishment of an Academic Senate General Education Governance Board* transferred responsibility for GE from the Provost’s Office to the Senate, allowing the GE Committee to return to the issue of GE program assessment, one of the foundations of the ULO Project.
- *AS-735-11 Resolution on Coordinated Campus Assessment Efforts* approved a recommendation to include faculty members from each college in the Academic

⁵ Many of the issues regarding student learning and educational effectiveness are also addressed in the third theme chosen by the institution, that of Integration and Student Learning which is addressed later in this report.

Assessment Council and affirmed the council's responsibility for planning and coordinating institutional assessment efforts.

In addition, the *ULO-based Assessment Pilot Project* had five elements: writing, oral communication, diversity learning, lifelong learning and ethics. A description of each of these elements follows.

The primary writing element assessed skill attainment at three course levels: first-year composition, GE-writing intensive and senior discipline specific. By collecting a large sample of student essays, establishing a scoring rubric and inter-rating reliability, the results showed writing skill improved after the freshman year, although sophomores, juniors, and seniors exhibited statistically equivalent levels of attainment. Other assessments involved the first-year composition course, the graduation-writing requirement (GWR), and employer surveys. These assessments led to two of the institutional action items listed below. There was strong support voiced during the EER site visit that the University would continue to give priority attention to these plans. (CFR 2.3, 2.4, 2.5, 2.6, 2.7, 4.6, 4.7)

- Ensure that Cal Poly juniors and seniors continue to improve their writing skills.
- Align learning experiences so that General Education, the Graduation Writing Requirement, and the senior project form a coordinated assessment of writing skills at the beginning, developing, and mastery levels.

The oral communication element assessed a sample of oral presentations by freshmen enrolled in two communication courses. The assessment suggested that the vast majority of freshmen met an average or better level of competence on an AAC&U oral communication rubric, even with only introductory instruction. These findings led to the institutional action items listed below. During the EER visit, there were indications that the first action item listed above was being pursued and that the recently reconfigured Academic Assessment Council would address the second action item related to students' oral communication outcomes. (CFR 2.3, 2.4, 2.5, 2.6, 2.7, 4.6, 4.7)

- Identify areas of the curriculum outside the GE oral communication requirement in which the Communications Studies faculty can partner with other faculties to develop students' oral communication skills.
- Complete the ULO Project on Oral Communication by collecting data on upper-division student performance and making a value-added comparison to lower-division results.

The diversity learning element involved the design and analysis of separate surveys for the first three of the four diversity learning objectives (DLOs); the use of focus groups to assess the fourth objective, and an analysis of the influence of service learning and the United States Cultural Pluralism (USCP) requirement on diversity learning. Each of the three surveys provided evidence of value added learning—as both seniors and juniors scored higher than freshmen, although they did not differ from one another. The focus-group responses revealed negative student biases against diversity learning that appeared to exist before students entered Cal Poly. Senior students were better able than freshmen to reflect on their diversity learning classroom experiences, but still gave mixed responses. Neither service learning nor USCP were found to have substantial influence on students' diversity learning. These findings led to the institutional action item listed

below. Information provided during the EER visit revealed that this recommendation is still under consideration. (CFR 2.3, 2.4, 2.5, 2.6, 2.7, 2.11, 4.6, 4.7)

- Coordinate diversity learning across the curriculum and co-curriculum to create a scaffold for the development of DLO-based skills.

The lifelong learning element involved a survey of student information skills, a foundational component of lifelong learning. The initial results demonstrated the presence of value-added learning across several items on the survey, and as such indicated higher levels of information literacy at the upper-division levels. A revised survey will be administered in spring 2012, with additional attention to be given to the planned analysis. (CFR 2.3, 2.4, 2.5, 2.6, 2.7, 4.6, 4.7)

The ethics project involved the adoption of an adaptation of an AAC&U ethical reasoning rubric applied to an online test created and piloted for the project. The average exam score was 12.45 of 31, with students answering 40% of the questions correctly. Disturbingly, students who had taken an ethics course did not show higher performance on the test. Due to budget cuts, this project was only active for one of the three years originally proposed. The results of the ethics project led to the institutional action item listed below. It has been suggested that the recently reconfigured Academic Assessment Council will address this item. (CFR 2.3, 2.4, 2.5, 2.6, 2.7, 4.6, 4.7)

- Complete the ULO Project on ethics, taking into account the need to align the survey instrument with the learning outcomes of ethics courses.

The results of these five components led to the development of the following summative institutional action items. The continuation of these efforts and review of the final action items related to the ULO pilot projects will be under the direction of the Academic Assessment Council. It should be noted however, that funding for this work was eliminated by the previous administration. Given the importance of this effort, the new administration should give consideration to reinstating the needed funding. (CFR 2.3, 2.4, 2.5, 2.6, 2.7, 4.6, 4.7)

- Place institutional assessment within a comprehensive plan describing assessment at all levels.
- Ensure that institutional assessment of the ULOs uses a consistent approach that yields comparable results.
- Expand Cal Poly's capacity for institutional research.
- Use the results of the ULO Project to inform future efforts of institutional assessment, keeping in mind the proposed WASC requirements for the assessment

and benchmarking of core competencies; in this regard, address the apparent omission of quantitative skills from the ULOs.

The second major element of the EER self-study report on student learning was the *Senior Project Assessment*. This element was chosen as the senior project (required of all graduates) has long been a distinctive component of the student experience at Cal Poly, albeit little had been done previously to evaluate the educational effectiveness of this requirement either at the University or program levels. The assessment plan, known as SP2, was developed to assess the senior project as a capstone experience, as well as a method of assessing students' mastery level skills in the major. The following four CPR action items further guided the SP2 assessment process.

- Use program reviews to assess [student] learning at the university level.
- Ensure that, in all programs, the senior project or thesis is truly a 'Learn-by-Doing' experience.
- Revise the senior project policy to ensure that the project is truly integrative and can be used to assess the broad sweep of senior-level learning.
- Make the educational effectiveness of the senior project a focus of Educational Effectiveness Review (EER).

As such, the first component of the SP2 assessment consisted of a series of surveys to obtain information from programs and students. The first survey asked all undergraduate programs to indicate what they expect of their students in the completion of the senior project. It was found that most of these programs required some or all of their students to demonstrate mastery-level attainment of writing and critical thinking skills in their senior projects. Additionally, programs conducted a self-assessment of their senior projects using the WASC rubric for assessing capstone experiences. (CFR 2.3, 2.4, 2.5, 2.6, 2.7, 4.6, 4.7)

Another survey explored student perceptions of the senior project, with complete responses from over 1,000 seniors. The three most prevalent forms of the senior project were found to be a student research project, a capstone/senior project course and a design project, with more than 90% including a written component. The responses to other elements of the survey indicated that the projects involved educationally purposeful activities; emphasized higher levels of cognitive skills; and involved activities that intended to make high-impact practices effective. The results of survey questions regarding contribution to ULO achievement strongly pointed to potential areas of improvement as there was a perceived need that the capstone experiences of students should better serve as bridges to their later lives. The senior projects were viewed as integrative experiences drawing from major courses in the major curriculum, but skills transferred from GE to the major were not viewed as contributing to the capstone. The longstanding view that the senior project was an impediment to graduation was found not to be the case for the majority of seniors surveyed in the study. Finally, students had a high level of satisfaction with the educational experiences of their senior projects. (CFR 2.3, 2.4, 2.5, 2.6, 2.7)

The next component of SP2 built on the findings of the program survey by asking those programs undergoing review to assess their senior projects for mastery-level writing and critical thinking skills using Cal Poly's University Expository Writing Rubric and AAC&U's Critical Thinking VALUE Rubric. It was concluded that the level of rigor required by these rubrics could not be generalized to support assessment at the university level.⁶ However, the use of these rubrics did produce qualitative and quantitative results at the program level. The following five action items emerged as a result of the assessment of the senior project:

- Review all university- and program- level senior project policies to ensure their currency and to ensure that all programs understand and implement these policies.

⁶ Applicability of the Critical Thinking Rubric as a university-level assessment tool were related variability in the breadth and depth of capstone experiences; the lack of an element to address integral learning; the degree of sampling needed; the need for guidelines for calibration, scoring and reliability; and the applicability across a wide range of discipline-based approaches to the capstone experience.

- Revise the Senior Project Policy to clarify the nature of the capstone experience in relationship to the ULOs, using the evidence provided by the EER report.
- Promote greater consideration by the academic programs of the less highly ranked skills—creative thinking, oral communication, contextual understanding, group work, and reasoned decision-making on the basis of shared values—in the senior project and in the curriculum at large.
- Retain an institutional focus in program review on the demonstration of highly-developed or mastery-level skills in the senior project.
- Continue to investigate the data presented in this chapter.

Both the *ULO-based Assessment Pilot Project* and the *Senior Project Assessment* required substantial investment of time, effort, and support. In addition to the findings of each study, these efforts lead to important cross-unit conversations and collaborations on assessment that have not previously been part of Cal Poly's culture. The visiting team, however, raised questions about the challenges associated with pursuing the numerous action items that resulted from the pilot studies. A promising approach comes from the Senate in *AS-735-11 Resolution on Coordinated Campus Assessment Efforts*. In this resolution, adopted May 31, 2011, the Senate endorsed a proposal to adjust the membership and mission of the Academic Assessment Council, including coordination and direction of campus assessment efforts. Further clarification also noted that the Academic Assessment Council would operate under the joint guidance of both administration and the Academic Senate. As such, the Council has a representative of each academic unit appointed by the representative deans (7 in total); non-academic administrative representatives as non-voting members (6); one student representative and one faculty member from each academic unit selected by the Academic Senate Executive Committee (7). At the time of the site visit to Cal Poly, the Council had met twice and had chosen the Associate Vice Provost for Programs and Planning as chair. The group also adopted as its initial goal, i.e., to develop a comprehensive assessment model that is meaningful to enhance student learning and program

improvement, as well as efficient—making the best use of all resources. The Council has identified their first assignment as the further analysis of the ULO and senior pilot assessment projects. The Council appears to be well organized and in a position to mount a continuing, sustainable approach to assessment. (CFR 2.3, 2.4, 2.8, 4.4, 4.6, 4.7)

Assessment of student learning, although still in development, has progressed substantially since the CPR. In addition, there are clearly identifiable methods of quality assurance being employed and/or under consideration to demonstrate educational effectiveness. Now additional efforts are needed to translate these pilots into sustainable continuing processes. (CFR 2.3, 2.4, 2.8, 4.4, 4.6, 4.7)

IIB – Student Success

Retention and graduation rates

Cal Poly defines student success not only in numerical terms regarding retention and graduation rates, but also the attainment of University Learning Objectives (ULOs) and the degree to which students achieve whole-system learning. The institution should be commended for a significant increase in the six-year graduation rate for first-time freshmen. The graduation rate has increased from 65% to 76% between the 1996 and 2005 cohorts. Although the institution has not been able to analyze how much of the growth is due to the specifically targeted efforts to facilitate graduation, the improvement in the graduation rates is impressive. Also notable is the fact that Cal Poly has significantly increased the six-year graduation rate during a time of declining financial support from the state. And, although the institution is proud of its accomplishments in this area, it seeks to increase its graduation rates to match those of other highly selective universities. As a part of this effort Cal Poly has set ambitious goals: an 80% sixth year graduation rate by the end of AY2015-16 and 90% as a longer-term goal. (CFR 1.2, 1.5)

The institution has a good system to measure retention and graduation rates for different ethnic groups and by different colleges. However, it is not clear whether or not the Deans or

department use those data to change their programs or to provide extra academic support activities for underrepresented minority (URM) students. Cal Poly would benefit from further data analysis to determine reasons for the lack of student success, especially for different ethnic groups. This should be addressed as the campus moves forward with its plan to consistently and methodically collect data on selected key issues, including the difference in graduation rates between URM students and the rest of the student body. (CFR 1.2, 1.5)

Also supporting its desire to improve graduation rates, Cal Poly participated in a nationwide effort led by the Education Trust to identify key indicators of disadvantage associated with achievement gaps. As part of this effort the University identified several areas that indicated significant achievement gaps between URM and non-URM students. As a result of these new understandings, the University leadership had committed to “find the cause of the achievement-gap jumps in those populations and develop appropriate interventions.” As the institution moves forward in this area it could benefit from the continuation of similar efforts, such as data comparisons with peer institutions, especially those with higher graduation rates for URM students. The institution would benefit by participating in a consortium that cooperates in developing surveys, studies and analysis to examine the best practices for increasing the retention rate with special attention to URM students. (CFR1.2, 1.5, 2.10)

Further reflecting its attention to retention and graduation rates, the University conducted an analysis to ensure that a greater percentage of courses offered were those that directly assisted students in their progress toward degree completion. Changes in this area have resulted in more students being able to take the courses needed for graduation on time. Cal Poly also conducted an analysis of its policies and practices affecting academic progress. This analysis identified areas for improvement and resulted in policy changes that have improved students’ opportunities to complete degree requirements in more timely ways. Changes in policies included: 1) streamlining the ways that students can change their majors; 2) availing students with regular information regarding their academic progress; and 3) implementing a consistent campus policy

regarding designation of academic probation and disqualification. Each of these changes has affected improvements in retention and graduation rates. Students have voiced enthusiastic support for these changes and reflected that benefits were immediately felt. (CFR 1.7, 2.12, 2.13, 4.6)

The visiting team was also encouraged by the newly formed partnerships between academic affairs and student affairs aimed at fostering an increase in the graduation rate. The campus reports that these partnerships have already produced positive results.

These changes in policies and practices have led to the recognition of the graduation barriers and the solutions needed to address those barriers. The University should be encouraged to continue its review of policies and or practices that may serve as barriers to graduation especially as they affect URM students. (CFR 1.7, 2.12, 2.13, 4.6)

Tutoring and Advisement

The University provides tutoring for students experiencing academic challenges. The visiting team noted the positive impact of the directed tutoring efforts on student accomplishments and encourages the campus to consider expanding these services to increase graduation rates in selected majors or for selected groups of students. (CFR 1.7, 2.12, 2.13, 4.6)

Cal Poly has developed an impressive and comprehensive orientation to academic advising. First, the University has created a set of common standards that guide the advisement of all students. As such, the campus advising initiative operates from a common mission statement, learning objectives, and an advising syllabus—all which were recently adopted for campus-wide use. Further, the University has developed a number of innovative initiatives that have further enhanced academic advising. One of these efforts, an 'intrusive advising program', requires students to use advising services. Another campus-wide effort is the Freshman Success Program. The success of the program is indicated by a significant increase in the student rating of academic advising in the results of the 2011 NSSE. (CFR 1.7, 2.3, 2.8, 2.12, 2.13, 4.6)

The institution also has a long history of operating several programs for entering students. One of these programs, the First Year Seminars, focuses on low-income, first generation, and/or physically disabled students. Indeed the campus has so many of these programs that “the University faces challenges in analyzing their impact.” However, the national literature is clear that the type of programs developed at Cal Poly are the most effective in providing students a support structure as they launch their academic careers. (CFR 1.7, 2.3, 2.8, 2.12, 2.13, 4.6)

The University’s commitment and continuing efforts in the development of innovative, creative, and productive programs to meet student needs is to be commended. The creation of a new position of Assistant Vice Provost for University Advising should also accelerate the positive momentum brought by the recent additions to previous efforts. However, further analysis of the impact of its academic advisement and support programs would be beneficial, especially those aimed at benefitting special target populations. The University is encouraged to engage in deeper assessment of their academic support services to students, and subsequently expand those efforts that will make a positive impact on increasing the graduation rate of URM students. (CFR 1.7, 2.3, 2.8, 2.12, 2.13, 4.6)

Student Satisfaction

The campus has achieved a very high rating with regard to students’ overall level of satisfaction. The EER report documents that the students at Cal Poly are more satisfied with their college experience than the students who attend other CSU campuses, other polytechnic colleges, or peer colleges. Supportive of this, the visiting team experienced very positive interactions with students who expressed a high level of satisfaction with both their academic experience and their college life. Students were eager to discuss the experiences with ‘Learn-by-Doing’ and many pointed to the ‘Cal Poly experience’ as their reason for attending the University. The students also voiced a strong level of satisfaction with their interactions with faculty and administrators. The students noted their view that the campus was committed to them as young scholars and professionals but also to listening and addressing their concerns. They reported the ready access

to higher administration as a means to resolve issues of interest to students. The only variance to this view came from minority group students who voiced concerns about the lack of ethnic diversity in the makeup of faculty and staff, and a concern for the campus climate that may have a negative effect on their college life. (CFR 2.10, 2.13, 4.8)

Meetings with faculty groups revealed many of the reasons for the high level of satisfaction among the students. Notably, the Cal Poly faculty demonstrates a clear commitment to their role as teacher/scholar, and the majority of cases also to include serving as mentors and role models as part of their service to students and the institution. The faculty's commitment to student learning is evident in all facets of academic life and has been extended to the co-curricular areas as well. (CFR 2.10, 2.13, 4.8)

Student support services have been created, maintained, and in some cases expanded by the institution to address the needs of its student body. This has been especially important during a period of budget cuts. The recent student vote, to increase student fees to support increased course offerings and expanded student support services; has helped considerably in this area. The positive vote of the students reflects their support and acceptance of the campus commitment to the principles of student success and 'Learn-by-Doing'. It was also reported that federally funded student services directed toward assisting URM students continue to be highly successful. The University is encouraged to continue a review of the effectiveness of student services with special attention to the impact of all support services on the graduation rate. The campus may benefit by determining which elements of these programs can be adopted by the other campus support services in order to sustain the positive effects on URM students once the federal funding expires. (CFR 2.10, 2.13, 4.8)

Campus Diversity and Campus Climate

Whereas the campus has a long history of efforts to promote diversity learning and efforts aimed at closing the achievement gap, there is concern that issues around diversity and campus climate have continued to exist for a long time with little to no improvement despite the varied

campus efforts to effect change. Knowledge of the continuing concern is widely known across campus and was voiced in meetings with students as well as those with staff. Although the student groups interviewed reported differences of opinion regarding the quality of the campus climate for minority students (i.e., the students in the open forum reported a better quality of campus climate than the students in the minority group session), the minority students expressed great concern about the campus climate. In fact, minority students were especially concerned about the negative impact the campus climate has had on the recruitment and retention of minority students. These students reported that their friends have chosen not attend Cal Poly because of the reported lack of a positive campus climate for minority students. These students asked that the campus reconsider its diversity requirement within General Education to focus more on ethnic diversity in order to improve the understanding of the history of ethnic groups and in turn improve the campus climate. They also asked for additional funding for those programs aimed at increasing the graduation rate of minority students. These students opined that the existing programs on campus appear to be highly effective but should be expanded to address the needs of more students. They also expressed deep concerns about the lack of minority group role models among the staff and faculty.⁷ The students were convinced that the new campus leadership will listen to their concerns and is committed to addressing the needs of minority student groups. Similar sentiments were expressed by staff both with regard to concern for the campus climate and hope for improvements under the new University leadership. (CFR 1.5, 2.10, 3.2)

Efforts attempted to date to improve campus diversity and climate at Cal Poly have included an aggressive diversity-training program whereby 33 staff and faculty were trained to be diversity trainers for others on the campus. The results indicate the campus thought the training was worthwhile. However, dialogue with faculty and staff suggests that members of the campus

⁷ It should be noted that the challenges of improving diversity at Cal Poly are made greater due to the demographics of the broader community of San Luis Obispo, which does not have a significant population of diversity.

community have very limited understanding of the possible options that could be used to support improvements in the diversity makeup and climate of the campus. (CFR 1.5, 2.10, 3.4)

The University also piloted a project called Intergroup Dialogues, first developed at the University of Michigan, that provides for the guided and structured interaction between members of different social identity groups. This program has been offered to students in different majors over the last two years. The significant effort involved in operating this type of program is recognized and the University is encouraged to consider how a program like this could be part of a larger plan to address the campus climate issues. (CFR 1.5, 2.10, 2.11, 2.13)

The EER report also documents use of consultation with an expert on diversity and cultural competence. The result of that consultation was a set of recommendations, including a need to ensure that the Inclusive Excellence plan permeates all areas of the campus. These recommendations are now under consideration by the campus leadership. It is suggested that as University leadership reviews these recommendations, that it involves campus minority groups to identify the recommendations considered most beneficial in improving the campus climate for minority students, staff and faculty. (CFR 1.5, 2.10, 2.13, 4.8)

Most recently the campus has shifted its efforts regarding campus diversity to align with the ***Making Excellence Inclusive*** programs. This realignment is supported by the views of the new president who has expressed his belief that the Cal Poly community should more closely “mirror the world in which graduates will live and work.” As such, he has asked for more information about the campus climate and efforts to improve it. As part of the realignment around making excellence inclusive, the president reorganized university leadership to reflect the view that everyone associated with the University is responsible for addressing diversity and campus climate issues. As such, the separate Inclusive Excellence Office was eliminated and its responsibilities merged those responsibilities with employment equity to create the position of Special Advisor to the President for Diversity. Members of the campus community expressed concern about the elimination of the Inclusive Excellence Office without a clear plan as to how

specific diversity issues will be addressed. It is noted, however, that the responsibility for assessing and addressing the campus climate will continue to be addressed by the Inclusive Excellence Council. Based upon the dialogue with the visiting team, the Council does not appear to have a clear set of goals. In the past few years, in addition to sponsoring a number of events, it has provided advice to the senior leadership and in some cases acted directly on a variety of issues relating to the needs of minority students on campus, including serving as a repository of diversity-related information; researching the possible design of a “diversity index” for Cal Poly; responding to reported incidents of intolerance; exploring ways of improving communication between students and the administration, including the appointment of an Ombuds; establishing a means for offering diversity training to faculty and staff; piloting the Intergroup Dialogues program; reviewing recommended actions to increase pipeline, matriculation, and graduation rates of historically underrepresented students; and establishing a support group for student veterans. As the University moves forward with its reorganization in this area consideration should be given to adjusting the goals, objectives, makeup, and activities of the Council to address larger campus issues affecting campus climate for minority students. (CFR 1.5, 2.10, 2.13, 4.1, 4.8)

As such, the University needs quickly and aggressively to develop a plan of action which responds to the importance and urgency of the diversity issues as presented in the CPR, EER and now the campus strategic plan, to increase the diversity of student, staff, and faculty. It also suggested that the campus leadership enlist the perspectives and opinions of minority students, staff and faculty in the development and implementation of its action plan to improve the diversity climate of the campus, including these campus members on committees, task forces, work groups and advisory boards. (CFR 1.5, 2.10, 2.13, 4.1, 4.8)

IIC – Organizational Learning

Program Reviews

The institution has conducted program review processes for over 20 years. The current program review process operates on a six-year cycle with five stages—preparation, self-study, peer review, action plan development, and action plan implementation. Oversight of the process is the responsibility of the Office of Programs and Planning, which provides academic programs with guidelines, a timeline, and a self-study report template. The guidelines call for faculty participation in the preparation of the self-study, which includes: Standard Information, Summary of Progress, Changes, Challenges, Proposed Actions; Program Description; Assessment of Student Learning; Student Success Measures; Program Resources; and Focus Themes. The self-study themes include an institutional theme and an optional program-specific theme. At the time of the EER review, the institutional theme was identified as the senior project—a capstone experience to student learning. The peer review aspect of the program review process involves both internal and external reviewers, including the incorporation of reviews by external accrediting agencies. Once a program has gone through the review process and has received a report from the review team, it is then up to the program faculty to develop an action plan based on the team’s recommendations and their own understanding of what needs to occur to assure continuous quality improvement. The action plan is then submitted to the dean of the school and vice provost for approval. During the implementation phase of the action plan, programs are required to submit annual progress reports, noting changes in programming; new obstacles and challenges; tasks completed, pending, deferred, rescheduled, or reassigned; and identification of additional resources impacted or needed. The deans’ offices prepare aggregate progress reports and a summary is sent to the Provost along with a copy to Programs and Planning. The requirement that progress reports be made annually was instituted in the 2010-12 guidelines to strengthen the action plan as an effective process of continuous improvement. (CFR 2.7, 4.1, 4.3, 4.4)

As an aspect of the EER the institution reviewed its program review process in considerable depth. The three working groups examined the program review documents of twenty-three programs from three cohorts (2006-2008, 2007-2009, and 2008-2010). Emphasis was placed on reviewing evidence provided for four elements: theme-based questions and evidence; outcomes-based assessment of student learning and development, evidence -based claims and decision-making, and the use of program review results to inform planning and budgeting. Using a ranking based on degrees of evidence (0 = no evidence, 1 = some evidence, and 2 = clear evidence), theme-based questions and evidence ranked lowest at an average of 0.9, with the other three elements averaging 1.67 to 1.97. The group then applied to these reviews the WASC Rubric for Assessing the Integration of Student Learning Assessment into Program Reviews. The overall average of the self-assessment of rubric-based results suggested that the institution's program review is at a developed stage. (CFR 2.7, 4.4)

Another aspect of the program review process was a query regarding the status of implementation of Program Learning Outcomes (PLOs). As such, it was reported during the CPR visit that all programs had defined PLOs. Academic programs with external professional accreditation were reported to have well developed PLOs that were integrated horizontally and vertically into the respective program curriculum, and assessed systematically. Programs not professionally accredited were also reported to have PLOs, but varied as to the extent to which PLOs were tracked through curriculum mapping and assessed. Also variable was the degree to which these latter programs had achieved alignment between university, program, and course learning objectives. In addition, whereas PLOs were stated to exist for all programs, the placement of this information in institutional and program documents varied across programs. (CFR 2.7, 4.4)

The EER report provided additional clarification regarding the development status of PLOs. Table 7.1 in the EER report indicates that in 2010-11, of the total 62 undergraduate programs—82% had defined PLOs, 5% of the programs had PLOs under development, and 13%

of the programs did not have developed PLOs. Given this new data, it is clear that some programs are still in the process of developing PLOs. The table also shows that PLOs were published in the University catalog by 30% of the programs and were posted on the departmental web page by 49% of the programs. Additional attention should be given to ensure that program learning outcomes are published or posted systematically. In *AS-732-11 Resolution on Posting Program Learning Objectives in the Cal Poly Online Catalog*, the Academic Senate resolved that PLOs are to be listed with other program information in the Cal Poly online catalog. A sampling of programs in the 2011-13 Cal Poly online catalog indicates that all of the programs are now listing their PLOs. (CFR 2.7, 4.4)

Sample Reviews

The WASC EER team examined the recent program reviews of three undergraduate Bachelor of Science programs: Agricultural Business, Biological Science and Psychology. While there were concurrent reviews of multiple BS or MS programs covered in these documents, only the reports of these three BS programs were considered. These program reviews began with self-studies prepared in fall 2011, and concluded with internal and external reviews conducted from October 2011 through January 2012. Thus, the three stages of preparation, self-study and peer review have neared completion, but the stages of development and implementation of an action plan remain to be completed. (CFR 2.7)

The self-study reports for the three programs were found to be thorough and detailed, comprehensively addressing all of the elements of the institution's program review template. The internal and external reviews were also found to be thorough, comprehensive, and to provide constructive recommendations for action or further review. The external reviewers were from peer institutions in the western U.S. as well as from research institutions across the country. (CFR 2.7)

The WASC visiting team also held interviews with representatives of the three selected programs. The Agribusiness faculty indicated that they had prepared their action plan and that it

was to be forwarded to the office of Programs and Planning later in the week of the visit. However, faculty questioned the value of this action plan and the subsequent annual reports given current fiscal challenges. The Biological Sciences faculty was beginning to address the need to develop an action plan due to be submitted by the end of the current quarter. They questioned their ability to meet all of the recommendations and were encouraged to set priorities and a staged plan to address these priorities. The Psychology faculty was planning to begin to address their action plan in their next departmental faculty meeting. A brief review of the learning outcomes and methods used by each of these three programs follows. (CFR 2.7, 3.11, 4.5, 4.6, 4.7)

Agricultural Business (College of Agriculture, Food and Environmental Science, CAFES).⁸

The department developed new PLOs over the past year, concurrent with the ongoing development of new curricula. The University Learning Objectives (ULOs) served as the partial basis for these PLOs. The PLOs for this department were published in the 2011-13 online catalog, but were not found on the departmental website. Both internal and external reviewers examined the goodness of fit of the PLOs. The internal reviewer referenced to PLOs as "... generically good learning objectives for an undergraduate education." The external reviewers found the PLOs to be well aligned with the revised curriculum and in line with the recommendations of the National Food and Agribusiness Management Education Commission report to the USDA.

In the Agribusiness self-study report (written in October 2011), it is stated that because the PLOs were adopted in the spring of 2011, they have not been part of any self-assessment process. There has been no assessment of student learning in the program aside from the assessment of senior projects. It is intended that the PLOs will serve as the basis for developing course learning objectives (CLOs) that should form the basis for future assessments. Two faculty members teaching the two-quarter senior project course have developed and applied several assessment tools in their courses. In addition, the senior project was assessed as part of the senior project assessment pilot study (described earlier in this report). The faculty indicated that this assessment had not been satisfactory, as two different rubrics for the review had been provided and neither were found to be fully appropriate for their senior project course. Rather an assessment developed by program faculty for the senior project was to serve as the basis for developing a draft of a departmental assessment plan. The draft assessment plan focuses on the core courses in the major, whose learning objectives will be tied to the PLOs. The external reviewers commended the faculty for the development of good assessment tools, noting that the profession was just beginning to discuss assessment and was not as far along as Cal Poly in this process.

Biological Sciences (College of Science and Mathematics, CSM).⁹

⁸ The undergraduate program in Agricultural Business had an enrollment of 643 students in the fall of 2011, accounting for 18 percent of the enrollment of the College of Agriculture, Food and Environmental Science.

PLOs were developed for the program as recommended in the previous 2005-06 program review. The PLOs for the BS in Biological Sciences were published in the 2011-13 online catalog and posted on the departmental website. Some faculty include PLOs in course syllabi, although this is not required by the department. The PLOs appear to be appropriate for the discipline.

The PLO assessment effort has focused on three areas over the past five years. One of the PLOs has been assessed through embedded questions in the freshman introductory course series and in the senior project proposal course. Another PLO was assessed through a data analysis and writing assignment in the senior project proposal courses. No assessment methods have been developed for the other four PLOs. The senior project proposals were also assessed as part of the capstone review mandated in the program review process. The data collected has yet to be used across the program, so the loop has not been closed on assessment and improvement.

The external reviewer commended the department on developing a comprehensive student learning outcomes, with a good measure of the success being the identification of key areas of improvement in the curriculum. The external reviewer also found the assessment strategies to be “creative and very impressive” and to “be working just as they should”. Likewise, the EER team found the faculty to be strongly engaged in and likely engage in the continuing effort to develop and implement a formal assessment processes in support of continuous quality improvement.

*Psychology (Letters and Arts; CLA).*¹⁰

Eight PLO’s for the BS in Psychology have been posted on the departmental website and, more recently, in the 2011-13 online catalog. The faculty continue to refine the measurability of the PLOs, but have developed two approaches to assess attainment of PLOs. First, faculty teaching core courses provided exam or essay questions corresponding to the PLOs and reported on student performance on these questions. Second, alumni and current students responded to on-line surveys about the extent to which the programs met their learning objectives. These approaches were initiated in the past year, so the assessment “loop” has not yet been closed. To date, the faculty have judged these to be effective processes for collecting data on the ability of the core courses to deliver program-learning objectives.

The joint report by the internal and external reviewers determined that assessment of the program is in an early development stage and being done on an ad hoc basis specifically to meet the requirements of the self-study report. The reviewers stated that the department needs to cultivate buy-in from all faculty members, with assessment initiated internally by the faculty to assist them in reaching long-term goals. The approaches used in the pilot assessment projects were said to be useful if they were to be carried out systematically. The reviewers recommended the development of a formal (written) assessment plan, with full faculty awareness and approval of said plan.

IID – Our Polytechnic Identity

In its institutional proposal, the University proposed a self-study framed within the context of their “... institutional identity. This overarching theme was intended to inform and guide their investigation of three important institutional themes: the integrated educational

⁹ The undergraduate program in Biological Sciences had about 740 students enrolled during AY 2010-11.

¹⁰ The undergraduate program in Psychology had approximately 250 students enrolled during AY 2010-11.

experience, learn-by-doing, and the teacher-scholar model. Subsequently, the CPR was guided by the overarching theme, “Our Polytechnic Identity in the Twenty-First Century,” (along with three underlying themes). As such, the faculty identified the need to enlarge the concept of polytechnic and presented four challenges affecting the transition into a comprehensive polytechnic university. Challenge 1 was to move Cal Poly into the ranks of outstanding polytechnic universities in the area of research. Challenge 2 was the need to ensure that all graduates become whole-system dialectical thinkers. Challenge 3 addressed the need to ensure that graduates had experiences that would increase the likelihood of them becoming leaders in their chosen fields. Challenge 4 was to enhance campus diversity, as well as to increase student, faculty, and staff awareness and understanding of diversity issues. With regard to these challenges, the CPR visiting team questioned the ability of the institution to meet Challenge 1, as the substantial increase in resources required to meet this challenge would be difficult to obtain given CSU funding formulas. Further, when the working group was queried about this issue, the visiting team perceived that the faculty lacked the sense of empowerment and self-efficacy needed to move their agenda forward, despite a genuinely expressed desire to achieve the contrary. The working group was encouraged to continue to refine their definition of a comprehensive polytechnic university in ways that could be embraced by all members of the University.

Following the CPR visit, the Commission letter also emphasized the need for the institution to refine the definition of their identity as a *comprehensive polytechnic university*. The letter pointed out that all of the institutions identified by Cal Poly as those to be emulated were research institutions and that a shift to this identity would pose not only challenges for strategic planning and budgeting, but campus morale as well. The Commission urged the new leaders of Cal Poly to identify more clearly the aspirational goals of the institution, and the role of faculty in helping to shape possible changes in the institution’s identity.

Progressing to the EER the University chose to consider Cal Poly’s institutional identity through the lens of the three underlying themes. As such, rather than directly addressing their

polytechnic identity, each theme was examined as an essential aspect of the institution's polytechnic identity. *Theme 1: 'Learning-by-Doing'* was examined as the long-standing signature pedagogy for the institution operationally consisting of the union of theory and practice—with an emphasis on the latter. Focus was placed on the need for a measurable definition of this pedagogy that could be achieved through the historical and theoretical foundations of the pedagogy, along side its unique implementation at Cal Poly, and subsequent impact on student success as assessed through the institution's University Learning Objectives. This effort was consistent with the CPR recommendation to establish a working definition of 'Learn-by-Doing' supported by measurable ways of demonstrating the educational effectiveness of this practice, including the use of program reviews in this investigation. Finally, the team recommended that University identify ways to strengthening this signature pedagogy and address funding issues so that this strong and excellent practice is not compromised in the future.

The working group worked diligently to address these action items in preparation for the EER visit. The group collaborated with the Academic Senate to produce a single, working definition of the 'Learn-by-Doing' pedagogy that was expansive enough to account for the many ways and places in which student learning occurs, yet precise enough to be useful in assessing the educational effectiveness of specific practices. The result of these efforts was *AS-727-11 Resolution on a Working Definition of 'Learn- by-Doing'*, which states that, "*At Cal Poly, 'Learn-by-Doing' is a deliberate process whereby students, from day one, acquire knowledge and skills through active engagement and self-reflection inside the classroom and beyond it.*" The working group acknowledged that campus units provided multiple approaches to 'Learn-by-Doing' that demonstrated that the University had many ways of understanding and implementing the shared philosophy of learning.

With the newly established definition of 'Learn- by-Doing', the working group focused on methods to measure and to demonstrate the educational effectiveness of this pedagogy. They concluded with three recommended actions: Development and implementation of a university-

wide ‘Learn-by-Doing’ assessment rubric; encouraging an explicit emphasis in program reviews on the connections between ‘Learn-by-Doing’, PLOs, planning, and budgeting; and assessing the long-term career and personal benefits of ‘Learn-by-Doing’ through systematic longitudinal studies of specific student cohorts. The newly reconstituted Academic Assessment Council now has as its charge the goal of developing a sustainable assessment process.

In the face of continuing budget cuts, the administration and faculty have done their best to protect their signature pedagogy of ‘Learn-by-Doing’, which they fully understand as a high-impact educational activity that requires considerable financial resources. Students have also acted decisively to protect their quality of education by voting to increase college-based fees, which have been approved by the CSU Chancellor’s office. Despite these actions, the faculty evinced considerable concern as to the future viability of this practice.

Theme 2: Teacher-Scholar Model. In the CPR the institution raised the question: “What does the term *teacher scholar* mean to Cal Poly, and how does the teacher scholar model fit within the mission, goals, and values of the University?” The initial response was consensus that the University remains a teaching-centered institution, and demonstrates “a high level of scholarly activity that enhances student learning.” However, the faculty struggled with qualifying the activities that should be considered “scholarship”. Additionally, there was debate as to how scholarship was assessed and weighed in the promotion and review system. Subsequently, the University directed its efforts in the EER toward gathering data to obtain a more thorough understanding of the existing and continuing scholarly activities that articulate expectations for a teacher scholar model that embraces the institution’s mission and vision for its future. Toward this aim the University was encouraged to establish a plan that included targets to be accomplished by the EER visit and beyond. The CPR Commission letter also emphasized this in its statement: “The teacher scholar model also needs further definition by the time of the EER visit.”

As such, the EER working group focused on developing a comprehensive understanding of scholarship and a shared working definition of the teacher-scholar. Their involvement in an Academic Senate task force led to the approval of the *AS-725-11 Resolution on Defining and Adopting the Teacher-Scholar Model*. This resolution endorsed adoption of the teacher-scholar model proposed by Boyer, with scholarship defined as discovery, application, integration, and teaching/learning, implemented in a discipline-specific manner while mindful of Cal Poly's mission.

In response to the recommendation to establish a plan of targets to be accomplished by EER and beyond, the President selected "embrace the teacher-scholar model" as one of six strategic imperatives of the Cal Poly strategic plan. The draft plan, (set aside until the arrival of the new president) is now again under active development. The president also included among the targeted indicators of progress several initiatives that should help guide the model's implementation, including attention to: faculty-student research and creative activities; student-faculty ratios; ratio of tenured/tenure-track to non-tenured/tenure-track faculty; endowed programs and chair; and nationally recognized scholars. More direct indicators will be developed during AY 2011-12 following a process of campus consultation. Once the institution sets targets for these indicators, Programs and Planning will assess the institution's progress toward their achievement.

Another challenge associated with defining scholarship is the ability to track faculty activities. Whereas technology applications have been explored, the institution's examination of its program review process was used to obtain information on research, scholarship and creative activity RSCA. However, it was found that the program review process provided mostly anecdotal evidence of RSCA that was rarely examined with the rigor devoted to other areas. Most programs did not have explicit standards for RSCA, though a majority provided a range of acceptable activities as well as some specific examples. Of the program reviews that explicitly addressed teacher-scholar issues, all expressed similar impediments to fully implementing the

model: time available for RSCA due to heavy teaching loads and funding for infrastructure to support RSCA. However, it was also pointed out, that the previous program review guidelines did not specifically ask about RSCA. The working group reached the consensus that programs would be likely able to present more evidence of RSCA and its importance to student learning if explicitly requested during the program review process.

As part of the institution's inquiry into definitions of scholarship, commercial tools were investigated but were found to be unable to address the complexities of the retention, promotion and tenure (RPT) process in the CSU system. However, Academic Personnel and Information Technology Services are working toward an electronic workflow solution that they hope to have in place by fall 2012. The Academic Senate has endorsed a pilot to be run in one college.

As part of the CPR study the institution also identified the availability of appropriate library resources as an influence on faculty scholarship. In following up on this issue, the working group found a marked disparity in funding for library resources at Cal Poly as compared with both CSU and non-CSU peer institutions. Further impacting this challenge has been the erosion of the buying power of the library budget as publisher costs have continued to inflate each year. In the short term, it is felt that improved access to scholarly and professional information can best be addressed by channeling new funds to protect and expand access to these resources. A longer-term strategy is for Cal Poly to sustain its investment in DigitalCommons@CalPoly, an online archive of student and faculty scholarship. While content depends on voluntary participation and publisher copyrights prevent inclusion of some work, much of the content meets established standards for scholarly rigor.

Another follow-up item from the CPR study was an institutional action item to make the RPT process consistent and clearer. The working group acknowledged that Cal Poly, unlike many other institutions, does not provide for faculty input in the RPT process after promotion files have

moved past the college-level committee. In AY 2011-12, the Academic Senate will establish a task force to develop a policy on the responsibilities of a university-level RPT committee.

The EER visiting team supports the institution's actions, which include: *1) Further clarification of the progress indicators for the teacher-scholar model; 2) Continued work toward an electronic workflow solution to the problem of tracking RSCA; 3) Revision to the program review guidelines to request both the documentation of RSCA at the program level and the assessment of its contribution to student learning; 4) Allocation of new funds to protect and expand access to scholarly and professional information through the library; 5) Promotion of greater student and faculty participation in Digital Commons; and 6) Establishment of a university-level RPT committee.*

Theme 3: Integration and Student Learning. When the self-study began, student learning was viewed as a combination of major, GE, and co-curricular experiences. Surveys confirmed the value of this view but also revealed an important missing component: student employment. The CPR Commission Letter stated: "The theme of integration and student learning would likewise benefit from a leadership structure, as the team discovered that 'everyone is waiting for someone else to take the initiative to take this effort forward.'" The working group addressing this issue subsequently concluded that any structure for integration and student learning must take the whole student into account and would therefore require intentional dialogue and sustained cooperation among all units, as well as a commitment to valuing and integrating different approaches that reflect different types of expertise.

With this information in mind, the Integration and Student Learning work group shifted its focus to consider how Cal Poly intentionally integrates student learning in all of these areas. As part of this, the University emphasis was placed on the alignment between university, program and course learning outcomes. In fall 2010, the Academic Senate asked each program to state its program learning outcomes (PLOs) and to rate the contribution of each PLO to student attainment of the university learning outcomes (ULOs) on a scale of 0 to 3 with 0 being "does not

contribute” and 3 being “greatly contributes.” A method was devised to aggregate results. The overall university measure of alignment across all ULOs was 2.57, solidly between “contributes” and “greatly contributes.” College-level results were less consistent but showed generally strong alignment, with overall scores varying from a low of 2.42 for Science and Math to a high of 2.86 for Engineering. The GE program also completed the exercise with an overall alignment average of 2.46. The action recommended by the working group: Encourage all programs to have PLOs contributing to each of the ULOs at some level. The team encourages the institution to continue these efforts to increase the alignment between PLOs and ULOs.

Also to be addressed in the EER response was assurance that all learning objectives are systematically included in university documents. Supporting this effort, the working group drafted two Academic Senate resolutions that have been approved. In AS-732-11, the Senate resolved that PLOs be listed with other program information in the Cal Poly online catalog. *AS-739-12 Resolution on Course Learning Outcomes* requires a statement of ULOs, PLOs, and CLOs, and resolved that CLOs be aligned with PLOs, that CLOs be published in the online catalog, and that these be communicated to students “via the syllabus or other means appropriate to the course (EER, p. 47).”

Another area that reflects the strength of and commitment to integration of student learning is the Senior Project required of all graduates. Cal Poly’s Senior Project Policy calls for a capstone experience that “integrates theory and application from across the student’s undergraduate educational experiences.”

Recently conducted student surveys showed encouraging results that current practices usually provide an integrated experience. However, students generally felt that their senior projects drew little from their GE courses, despite many of the projects including a substantial written component. It has been suggested that students’ metacognition be promoted by implementing an e-portfolio and revising the Senior Project Policy to include a written, reflective

component. Whether or not this change occurs remains to be seen, especially given the resources that may be required for implementation.

Returning to the Overarching Theme: Polytechnic Identity. As mentioned earlier, the leaders of the EER study chose to consider institutional identity through the lens of the three underlying themes versus engaging in a separate review of their polytechnic identity. In the many interviews conducted by the EER visiting team there was general consensus that the campus has embraced an identity as a comprehensive polytechnic institution that is the amalgam of the three underlying themes. What appears to have been lacking was a concise definition and description of this identity. As such, the best statement of the institution's identity is the Cal Poly Mission Statement, which was revised in response to *AS-705-10 Resolution on Revision of Cal Poly Mission Statement to Include Staff*, adopted by the Senate on March 2, 2010 and approved by the President on March 22, 2010:

Cal Poly fosters teaching, scholarship, and service in a learn-by-doing environment in which students, staff, and faculty are partners in discovery. As a polytechnic university, Cal Poly promotes the application of theory to practice. As a comprehensive institution, Cal Poly provides a balanced education in the arts, sciences, and technology, while encouraging cross-disciplinary and co-curricular experiences. As an academic community, Cal Poly values free inquiry, cultural and intellectual diversity, mutual respect, civic engagement, and social and environmental responsibility.

Perhaps the institution's EER self-study report states it best "...the environment in which we conclude is not the environment in which we began." The challenge now is how to further develop and sustain the outcomes achieved in these times of declining budgets. The working groups who addressed the Cal Poly Identity and its three underlying themes of 'Learn-by-Doing, 'The Teacher-Scholar Model' and 'Integration & Student Learning' are strongly commended for their extraordinary efforts in addressing these topics, which contributed immeasurably to organizational learning.

III E Impact of Economy

Cal Poly San Luis Obispo is to be commended for its commitment to the University's mission of maintaining its outstanding academic institution during a very difficult financial

period. The budgets for the State of California and California State University (CSU) system have continued a downward spiral since the CPR site visit. Although some relief was provided to the CSU in 2010-11 that restored \$250 million of the \$571 million reduction taken in 2009-10, in 2011-12, the CSU system budget was reduced another \$750 million. Fee increases have only covered about half of these reductions. While the financial conditions for the State of California and its impact on the California State University system have resulted in significant budget reductions, the institution has continued its strong commitment to the themes of Learn by Doing, the Teacher-Scholar Model, as well as Integration and Student Learning. (CFR 3.5)

While Cal Poly's Full-Time Equivalent (FTE) enrollment target was reduced in 2010-11 from the 2009-10 target of 17,350 FTE to 15,702 FTE, it was increased to 16,000 FTE in 2011-12 and will remain at 16,000 FTE in 2012-13. The CSU budget was not reduced in the approved 2012-13 State budget, however, there is a trigger included in the budget that will take place if the voters do not approve tax increases in November 2012. If the tax increases are not approved the CSU's budget will be reduced by \$250 million. Cal Poly San Luis Obispo's portion of the reduction is approximately \$13.7 million. The students are to be commended for their action to assess themselves a Student Success Fee starting in 2012-13 that is intended to support an increase in availability of required course sections and laboratories, provide additional support services to students to improve progress toward graduation and sustain Cal Poly's 'Learn-by-Doing' reputation. These fees are expected to generate \$8.6 million in 2012/13, \$11.2 million in 2013/14, and \$13.9 million in 2014-15. The Chancellor's Office has authorized the implementation of this fee. (CFR 3.5)

While financial challenges have been on going, the institution is to be commended for its commitment to continuing to invest in the maintenance of the buildings and facilities on campus. The campus is a very inviting atmosphere and has a well maintained appearance. Since the CPR visit, the campus has completed the \$6 million Meat Processing Plant, a \$5 million Technology

Park facility, a \$66 million Recreation Center Expansion, and currently has a \$119 million Center for Science under construction. (CFR 3.5)

Faculty grants and contract awards have seen a couple of good growth years over the past five years; however, there is not consistent growth. Given the polytechnic mission and academic structure at Cal Poly and their commitment to the Teacher-Scholar Model, there is significant potential and capacity to continue increasing grants and contracts awarded. (CFR 3.4; 3.5)

The institution has continued to have unqualified independent financial audits and it continues to demonstrate strong financial management of campus resources. (CFR 1.8; 3.5)

SECTION IV - Major Findings, Commendations, and Recommendations

Commendations Supporting Continuous Improvement

- The institution has made excellent progress toward developing a definition of a comprehensive polytechnic university. The University's Mission Statement provides a framework for anchoring this overarching identity. With the new leadership in place, a succinct definition for this overarching identity should remain as an important priority.
- The Academic Senate is to be commended for the actions taken to pass resolutions related to faculty governance in key areas such as assessment and general education. The actions taken will be instrumental in the institution's success in these areas.
- The institution is to be commended for its commitment to continuing to invest in the maintenance of the buildings and facilities on campus. Since the CPR visit, the campus has completed the \$6 million Meat Processing Plant, a \$5 million Technology Park facility, a \$66 million Recreation Center Expansion, and currently has a \$119 million Center for Science under construction.
- The institution is to be commended for its commitment to the University's mission of maintaining its outstanding status as an academic institution during a very challenging financial situation. While the financial conditions for the State of California and its impact on the California State University system have resulted in significant budget reductions, the institution is to be strongly commended for its continuing commitment to the themes of 'Learn by Doing', the 'Teacher-Scholar Model', as well as 'Integration and Student Learning', which contributed immeasurably to organizational learning.
- The students are to be commended for their action to assess themselves a Student Success Fee that is intended to support an increase in availability of required course sections and laboratories, provide additional support services to students to improve progress toward graduation and sustain Cal Poly's 'Learn-by-Doing' reputation. The positive vote of the students reflects their support and acceptance of the campus commitment to the principles of student success and 'Learn-by-Doing'.

- The institution is to be commended for its commitment to the role of the self-study process in affecting its strategic planning effort. It was evident throughout the EER visit that the campus constituencies embrace the self-study process and are building these efforts into their strategic plan.
- The institution is to be commended for its efforts in assessment of student learning. The assessment pilot projects required a substantial investment of time, effort, and support, but yielded important cross-unit conversations and collaborations on assessment that have not been part of Cal Poly's culture, making the investments extremely worthwhile.
- The program review process is clearly in a developed state. There is a need for faculty and administrators to ensure that action plans are developed and that annual reports demonstrate progress in meeting these plans and furthering the institution's systems of assuring continuous quality improvement.
- Cal Poly is to be commended for defining student success not only in numerical terms regarding retention and graduation rates, but also in the attainment of University Learning Objectives (ULOs) and the degree to which students engage in whole-system learning.
- The institution should be commended for a significant increase in the six-year graduation rate for first-time freshmen. (The graduation rate increased from 65% to 76% between the 1996 and 2005 cohorts.)
- The institution is to be commended for the collection of data on the academic preparation and needs of its incoming students.
- The institution is to be commended for its plan to consistently and methodically collect data on selected key issues, including the difference in graduation rates between URM students and the rest of the student body.
- Cal Poly is to be commended for its analysis of its policies related to academic progress. This analysis produced important changes that have enabled students to complete their academic requirements for graduation in a timely manner. These changes --the recognition of the graduation barriers and the process to address identified barriers—are a major strength of the institution's self-assessment results.
- The campus is to be commended for several beneficial initiatives that improve the advising for students, including: the development of advising standards across the campus; 'intrusive advising' to enroll student in appropriate courses; and creating a new position on university advising.

Recommendations

- The visiting committee encourages the campus to continue its review of campus policies that affect retention and graduation rates.
- Cal Poly would benefit from further data analysis to determine reasons for the lack of student success, especially for underrepresented minorities (URM). The institution would also benefit from engaging in comparative data analysis with peer institutions, especially those with higher graduation rates for URM students. As part of this, the University is encouraged to

continue the review of policies and processes that may serve as barriers to retention and graduation, especially as these affect URM students.

- Although the campus reports that student services directed toward assisting URM students and federally-funded are highly successful, the campus would benefit from further analysis of those programs to determine which programmatic elements can be adopted by the other campus support services in order to sustain the positive effects on URM students once the federal funding ceases.
- Although the campus is committed to improving the campus climate for minority students, there is concern that the issue of diversity as related to the campus climate has been allowed to exist for a long time. The institution needs to quickly and aggressively address these negative effects and actively increase the diversity of student, staff, and faculty as part of its responsibility to serve the citizens of California.

Finally, it is clear that the Cal Poly campus community is deeply committed to their institution.

Since the last site visit tremendous effort and collaborative engagement have been demonstrated, resulting in excellent progress toward developing systematic processes that support educational effectiveness.

CREDIT HOUR POLICIES AND PROCEDURES

Kind of Visit: EER

Date: April 2-5, 2012

A completed copy of this form should be appended to the team report for all CPR, EER and Initial Accreditation Visits. Teams are not required to include a narrative about this matter in the team report but may include recommendations, as appropriate, in the Findings and Recommendations section of the team report.

Material Reviewed	Questions/Comments (Please enter findings and recommendations in the comment section of this column as appropriate.)	Verified Yes/No
Policy on credit hour	Does this policy adhere to WASC policy and federal regulations?	Yes
	Comments: Policy directive provided by the CSU Office of the Chancellor (10/4/11).	
Process(es)/ periodic review	Does the institution have a procedure for periodic review of credit hour assignments to ensure that they are accurate and reliable (for example, through program review, new course approval process, periodic audits)?	Yes
	Does the institution adhere to this procedure?	Yes
	Comments: Institution has multiple avenues of review, including the utilizes the receipt of course schedules by the Office of the Registrar, the program review process for existing courses, and the new course approval process which includes initial approval by the academic department and host college, review by the Academic Senate Curriculum Committee, oversight by the Academic Senate and final approval by the Vice Provost for Academic Programs.	
Schedule of on-ground courses showing when they meet	Does this schedule show that on-ground courses meet for the prescribed number of hours?	Yes
	Comments:	
Sample syllabi or equivalent for online and hybrid courses	What kind of courses (online or hybrid or both)? Both How many syllabi were reviewed? 6 What degree level(s)? Undergraduate What discipline(s)? Business, Horticulture & Crop Science, Statistics, and Food Science and Nutrition	Yes
	Does this material show that students are doing the equivalent amount of work to the prescribed hours to warrant the credit awarded?	Yes
	Comments:	
Sample syllabi or equivalent for other kinds of courses that do not meet for the prescribed	What kinds of courses? How many syllabi were reviewed? What degree level(s)? What discipline(s)?	
	Does this material show that students are doing the equivalent amount of work to the prescribed hours to warrant the credit awarded?	

hours (e.g., internships, labs, clinical, independent study, accelerated)	Comments: None evidenced.	
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