The following discussion was organized by college. While this discussion was intended primarily to facilitate creative thinking about future opportunities, each table recorded some general notes. The following summary is a synthesis of the wide-reaching discussion. Detailed notes by college follow.

1. **Post-Baccalaureate Education.** Some fields in which a bachelor’s degree has been sufficient historically will require additional education in the future.

   a. Does this observation apply to your disciplines?
      i. *Faculty from all colleges agreed that they have observed external pressure to increase educational requirements – primarily for employability of graduates.*
      ii. *At the same time, they raised the concern that requiring more credentials needs to be reconciled with moving away from “seat time” toward competency as a way to measure preparation.*

   b. If so, will additional education be required for entry into your field, and/or for future advancement?
      i. *At the entry level, faculty asked whether undergraduate education be redesigned to add what is perceived to be missing rather than increase the time. They cited concerns about additional student debt for increased education.*
      ii. *For future advancement, faculty stressed the importance of life-long learning.*

   c. If so, what form(s) or type(s) of credential(s) might this additional education take (e.g., certificate, professional development, master’s degree, doctorate)?
      i. *Faculty noted that the particular form of post-baccalaureate education depends on the field – e.g., education “is” a post-baccalaureate field; terminal masters degrees are “worthless” in the sciences.*
      ii. *Faculty saw opportunities for interdisciplinary work at the master’s degree level.*
      iii. *Additional suggestions included “4 plus 1” and “3 plus 2” combinations, and even an expanded bachelor’s degree to accommodate a wider range of learning opportunities (study abroad, internships, field work, service learning), but faculty noted that such approaches don’t fit well with graduation rate imperatives.*
2. **Global Competency and International Education.** Global awareness and cultural competence were listed frequently as an area requiring more attention in our students’ education.

   a. What implications do you see for the curriculum in your discipline? What avenues does the curriculum in your discipline provide for Learn by Doing in a global context?
      i. *Faculty observed that global competency needs to be defined.*
      ii. *The global context can be incorporated in learn-by-doing through how projects are selected and framed.*

   b. How should we prepare our students for success in an increasingly global society?
      i. *Suggestions included traditional approaches such as language skills, well-designed study abroad programs and student exchanges, international scholars, and living/learning residence halls.*
      ii. *Innovative suggestions included using Skype or other technology on campus to bring in a more global perspective.*
      iii. *Faculty noted costs and implications for time-to-degree as challenges.*

   c. How can attracting international students to Cal Poly contribute to the University’s mission?
      i. *Some colleges suggested that graduate education at Cal Poly may be more attractive to international students in certain fields.*
      ii. *Some faculty noted institutional obstacles to recruitment and admission of international students, including documents required, financial aid limitations, and ineligibility for certain kinds of work.*
3. **Alternative Program Design, Delivery and Funding.** Public funding for higher education continues to decline. Further, alternative educational models are emerging such as competency-based education (vs. seat-time), hybrid and online course delivery, and variable session lengths and formats.

   a. What opportunities do you see for alternative program design and delivery formats to meet future educational needs in your field?

   i. *Interested faculty indicated that they need support to try innovative methods, including infrastructure and instructional designers to assist them.*

   ii. *Some faculty argued that “learn by doing” is already a proven alternative.*

   iii. *Others asked how competency-based assessment can be reconciled with the experiential aspects of “learn by doing.”*

   iv. *Faculty expressed concern that some alternative program delivery models fail to account for the value of holistic education, including the role of faculty in knowledge development, collaborative work, and student mentoring. In particular, faculty in several colleges expressed concern that undergraduate students who fulfill general education requirements by taking online classes elsewhere are missing some of the essence of a Cal Poly education.*

   v. *Suggestions also included using off-site locations and partnerships to serve students when they are away from San Luis Obispo (citing the new Silicon Valley study away program).*

   vi. *Faculty generally saw the best opportunities for alternative delivery methods with new programs, including certificates and programs for non-traditional students, including working professionals.*

   b. What types of summer courses or programs could your college offer for current Cal Poly students, high school students, industry professionals, and/or other markets?

   i. *A number of faculty suggested that summer opportunities need to be explored more fully, particularly to offer content in formats that don’t fit the 10-week term and to serve non-traditional students.*

   c. What obstacles hinder further development of self-supporting educational programs at Cal Poly?

   i. *Faculty generally cited institutional obstacles from the CSU as significant barriers.*
College of Architecture and Environmental Design

Post Baccalaureate Education

- Long standing issues:
  - MARCH in addition to BARCH
  - MSARCH: ARCE, digital fabrication...
- Is the college or university ready to invest? It can't be a volunteer effort. Exceptions: MCRP and ARCE are supported.
- Certificates: approved in CM and facilities management. Build modules toward MS ARCH or other degree with concentrations. Inability to mix types of funding is an obstacle. Digital fabrication as another certificate possibility.
- Revive path to MBA, making it available to all majors.

Global Competency and International Education

- Defining global competency in curricular terms: what is it?
- In a PBL-based curriculum, what kind of problems do we give them? That can encourage global competency.
- Exchange students as a place where these issues intersect.
- One department: is GC that big of an issue? Most of our students are not working in international context.
- We have international faculty and students in our departments.
- Long standing issues:
  - Off-campus opportunities for programs other than the BARCH
  - Off-campus opportunities other than European
- Attracting international students to our programs: graduate programs seem to be an obvious strategy.

Alternative Program Design, Delivery, and Funding

- Alternatives: online, interdisciplinary, nontraditional students, non-state students, non-state funding.
- Alternatives in new and existing programs?
- Nexus: certificates offered to nontrad students.
- Certificates also raise the issue of alternative design etc.
- Sense of the need for cultural diversity as something coming down from above.
- Brian's comment about C2 courses is illogical. Why are they taking those courses? We need to know.
- Is there a reason to build longer term connections to our students? They might be a market for alternative programs.
- Mixing state and nonstate funds is again an obstacle. Once again, initiatives need to be supported.
- CSU policies frustrate us. Could we form a third system? Could we rework our relation with CSU?
College of Agriculture, Forestry, and Environmental Science

Post Baccalaureate Education
- Industry driving need with MS in Agriculture
- BRAE – breadth, PE
- AgEd – driven by credential (who creates it?)
- 4 plus 1 works; BS/MS at the same time with one project
- Is today’s BS the old high school diploma
- Importance of life-long learning

Global Competency and International Education
- U.S. provides safe food supply/ingredients globally
- Language skills – Chinese, Spanish
- Internships and study abroad – global – need integrated programming
- National and international exchanges
- Bring global perspective to campus – use Skype

Alternative Program Design, Delivery, and Funding
- Bring industry in to have projects done in class (product development/project based)
- Silo obstacles
- Critical faculty mass – not enough to be innovative; trained in silo
- No instructional designers [in CAFES?]
- How to attract ? faculty here
College of Engineering

Post Baccalaureate Education

• Potential in EE, CE/ENVE, BMED, ME related to professional societies
• IE – information systems, some at undergrad, some at grad level
• MFG – AS efficiencies (grad level); AERO – systems engineering; Biomechanics – human performance
• Multi-disciplinary MS with targeted areas

Global Competency and International Education

• Faculty need time and money
• Technology can reduce barriers
• Exchange programs
• International diversity
• ESL services – immersion program during summer
• Outside of Europe – China, India, South America

Alternative Program Design, Delivery, and Funding

• Self-support programs
  o New degree programs
  o Target working professionals
  o Distance/hybrid mode
  o Fairness issue
College of Liberal Arts

**Post Baccalaureate Education**
- Graduate degrees increasingly important
- Students go into public health, public policy, arts menage as well as specific disciplines
- Certificate in NGO/volunteer management, across departments
  - Health, education, social welfare
  - Leadership and team building
- More projects that draw students from different disciplines in capstone or leadership/project management experience
- Summer classes that are unique in some of these interdisciplinary areas so students more likely to do summer school here
- Masters programs in unique areas more likely to attract student interest, including interdisciplinary design, STS fields, public humanities
- Use certificate programs to prep bachelor’s students for application to high-quality masters/doctoral programs
- English – technical and professional certificate
- CLA defined by and prepares graduates to work many of its disciplines
- Any grad program would need to be self-sustaining
- Professionally oriented masters programs
  - Ethical concerns about sending students into non-traditional work
  - Do it yourself degree – e.g., viticulture, food science and modern language; studying Spanish in agriculture
- Humanities component or certificate in other masters degree for a truly comprehensive polytechnic degree (e.g., language skills)
- Specializations are different at the graduate level – e.g., Stanford, data and public policy; social journalism
- Can some of the need for more education be facilitated at the undergraduate level?
- Should we be considering post-baccalaureate education because of 4-year community college degrees?
- Proposal: enriched 5-year BA, minors or concentrations plus disciplinary knowledge; include required interdisciplinary, collaborative team-based extended projects
- Also supports GE from other colleges

**Global Competency and International Education**
- Would like students to have to study abroad
- Co-curricular and co-teaching as an approach to accomplish this, but requires institutional support to facilitate
- Required course on global issues, not just adding a class, but rethinking curriculum to address these concerns
- CP doing a good job offering study abroad options in summer, but need 10 weeks, or at least 6 weeks for a true academic experience
- Also, could internationalize by bringing international scholars here and using them in classes
- Why so few CP students get Fulbrights? Students don’t know about it.
- Prioritize writing and communication in international and CP students
- International dorms/language dorms
• Visiting scholars
• Sister school exchange program with another international university
• Extended field trips
• Advertising internationally
• English language institute as head start program for international students
• Enhanced BA/BS would allow for substantial time abroad and/or internships
• Think carefully about where we send our students – considerations/options
  o Service/engagement (NGOs)
  o Research experience
  o Coursework
  o Internships/work
  o Collaboration between CP and international learn by doing partners on site
  o Focus on sustainability, engagement, self-reflection, research-action-analysis-reflection LBD cycle
• Barriers:
  o 4-year graduation emphasis and prerequisites in some disciplines
  o Money – added costs and fees – opportunities need to be affordable
• Local competencies are important too – e.g., Pitzer Center for Global Local Engagement
• Other opportunities – take advantage of new technologies to support on-campus international co-teaching and collaboration with partners in other domestic areas and internationally

Alternative Program Design, Delivery, and Funding
• Not all teaching models allow flipped classes; many are already flipped
• Facilitate service learning, co-teaching
• Lots of missed opportunity for summer teaching – why not a 4th quarter?
  o Would facilitate faculty to pick which 3 quarters to teach and free the other quarter for professional development
• During summer it makes sense to offer what can’t be found online or elsewhere
  o Social stewardship (policy and social justice)
  o Design and innovation
  o Leadership
• Multi-faceted faculty role – not just course delivery – keep this in mind
• Concerns about competency-based education
  o Why undermine learn-by-doing model that promotes lab/studio environment
• What does it mean that students feel like they have to take online classes?
• Advertise strengths of staying on campus
• Using extended studies, immersive studies for international and/or high school students as money makes and to help advertise Cal Poly to potential students
• Distance learning options while students are interning or learning or serving elsewhere domestically or abroad – e.g., new CIE program in Silicon Valley
• Mechanisms to give credit to students are doing things in other locations
• Support students who are working full-time
• Satellite campuses in urban areas; partnerships with other CSUs (esp. Pomona) and community colleges
• Faculty mobility – residencies; student and staff mobility as well
• Partner with others rather than bemoan students taking classes elsewhere
• Money!
College of Science and Mathematics

Post Baccalaureate Education

• Higher degree may help with better jobs – varies by discipline and career goal
  o Terminal master’s degree is worthless in some fields (e.g., Chemistry)
  o Education is a post-baccalaureate field
  o Statistics – value of BS has increased
  o Math – mostly need masters
  o Physics – value of BS has increased – geophysics, problem-solving vs. subject matter knowledge
  o Kinesiology – masters helps employment at lot; diversity in options with BS but limited jobs now.
• BS in Nursing at Cal Poly?

Global Competency and International Education

• General Education – should be more visible; university should be more proactive in support of global competency
• International living/learning communities
• Increases diversity, world-wide reputation
• If we made it easier for international students to come here, it would make it easier for students to go outside as well
• Can model better work ethic and appreciation for education
• In CSM, advantage of common mathematical language
• How to raise global awareness?
  o More awareness of history of a discipline
  o Merging data sets/surveys
  o More study abroad flexibility

Alternative Program Design, Delivery, and Funding

• Project Sustain: Cal Poly is a good example of alternative design that could/should gain more traction
• Competency-based assessment – barriers/challenge
• Current CSU/Cal Poly policies/procedures inhibit alternative educational models
• No more lower division in the future?
  o What becomes the role of the university?
  o How to ensure equal opportunities
  o What’s essential from the classroom experience? Collaborative experiences? Faculty mentoring?
  o Or, can we start to design/expect different experiences in the lower division?
• Financial models?
Orfalea College of Business

Post Baccalaureate Education
- Every discipline moving to six years (irony)
- European model of 3 plus 2
- Competency vs. time in a major (what can you prune?)
- Student debt
- MS Accounting is mandatory – 225 units
- Niche graduate programs

Global Competency and International Education
- Can students get internships in the U.S.?
- International information resources are expensive
- Adds value to the program – good students
- Recruiting
- Admission process ‘abusive’ – existing course assessment
- Mix of students who want to stay in U.S. vs return home

Alternative Program Design, Delivery, and Funding
- More funding (revenue) and research through online programs
- Faculty needs help with infrastructure
- Cost – students shop; tuition and living expenses
- Fits in schedule