MORE THAN A MOTTO:

Cal Poly’s Learn by Doing Conference

Friday, May 15, 2015 • Chumash Auditorium
Welcome, colleagues, and thank you for joining us for More than a Motto: Cal Poly’s Learn by Doing Conference.

When asked what distinguishes Cal Poly from other institutions of higher education, those familiar with our nationally recognized university most assuredly mention Learn by Doing. We at Cal Poly know Learn by Doing isn’t just a motto; it’s our reality. We are leaders in innovative teaching, learning, and living practices that impact students, faculty, and staff not just while at Cal Poly, but for a lifetime.

The purpose of this inaugural conference is to offer the Cal Poly community an opportunity to celebrate Learn by Doing as a full-campus ethos—one in which experiential learning is not only central to the curriculum but also permeates campus culture. How does Learn by Doing impact the student experience, the teacher-scholar model, and career trajectories beyond the institution? We hope you gain answers to those questions today.

More than a flash in time, this conference is a flashpoint to begin the process of showcasing what makes Learn by Doing at Cal Poly so special. Today’s conference presentations are a prelude for the forthcoming book, More than a Motto: The Meaning Behind Cal Poly’s Learn by Doing Signature. Additional plans related to the More than a Motto project include a second conference in 2017 as well as an online journal. We invite you to bookmark morethanamotto.calpoly.edu for up-to-date information on this campus project.

The More than a Motto team is grateful for all the support we have received since the inception of this project. We would like to thank Cal Poly’s administrative team, especially President Jeffrey D. Armstrong, whose idea it was to design and host a Learn by Doing conference on campus. And, to Provost Kathleen Enz Finken, thank you for supporting our efforts as an integrated piece of the Teacher-Scholar Model at Cal Poly. We also appreciate the time and energy of all those who have assisted in the planning and marketing of the conference. Finally, we would like to thank faculty, staff, and students who submitted proposals and demonstrated such a strong commitment to Learn by Doing. The work our community does on campus and beyond is testament to the strength of Cal Poly’s Learn by Doing signature.

We believe Cal Poly has effectively owned the Learn by Doing tradition since 1901, when Myron Angel helped to found an institution “to educate the hand as well as the head.” We hope you enjoy your conference experience, and we hope you join us in continuing to make Learn by Doing more than a motto at Cal Poly.

Sincerely,

Brian Greenwood, Associate Professor, Recreation, Parks, & Tourism Administration
Dawn Janke, Director, University Writing & Rhetoric Center
Lorraine Donegan, Professor, Graphic Communication
Keri Schwab, Assistant Professor, Recreation, Parks, & Tourism Administration
Concurrent Sessions A from 10:10 – 11:00

A-1
Ashley Stephens, Joi Sullivan, Katie Magnus, & Anika Leithner (Advisor)
Political Science (CLA)
Paideia—Learn by Doing Together
Location: Chumash Right Wing
Description: Paideia is an academic journal produced by political science students for fellow students and alumni with the assistance, support, and guidance of the political science faculty, staff, and Alumni Advisory Board. This co-curricular project provides an opportunity for current and past students to showcase what they've learned and how they've applied that knowledge, whether through a paper or through a career.

A-2
Russell V. Westphal (Donald E. Bently Professor) & Rachael Schelley
Mechanical Engineering (CENG)
The Cal Poly Boundary Layer Data System (BLDS)
Location: Chumash Left Wing
Description: This long-term student-focused project provides Cal Poly engineering students with meaningful project-based, hands-on learning opportunities that also connect them with prospective employers in California's world-leading aerospace/defense and high technology industries. The project objective is to develop, improve, and apply BLDS instruments. These instruments, as conceived by Dr. Westphal, are a unique family of small, autonomous micro-controller-based devices aimed at providing flow measurements within the boundary layer during flight tests of aircraft and aircraft-borne models, as well as for ground-based testing.

A-3
Lisa Sperow
Accounting & Law (OCOB)
Cal Poly Low Income Taxpayer Clinic: Learning By Helping Others
Location: UU 220
Description: The Cal Poly Low Income Taxpayer Clinic (LITC) provides an example of an integrated curricular university-sponsored service-learning project that encourages students to interact and engage in helping others while resolving actual accounting problems. Conference attendees will learn from students about how working for LITC adds value to their education through specific cases on which they have worked and the clients they have helped.

A-4
Pat M. Fidopiastis
Biological Sciences (COSAM)
Genome-enabled Tools to Understand Symbiosis and Encourage “Learn by Doing”
Location: Building 180 (Baker), Room 113
Description: Through a National Science Foundation funded project, Dr. Fidopiastis has integrated hands-on molecular genetics research across a number of undergraduate Biological Sciences courses. Fidopiastis, a 2014-15 Distinguished Teacher Award winner, will demonstrate the mutated gene model being utilized and discuss the impact of this innovative approach to teaching and research.
Concurrent Sessions B from 11:10 – 12:00

B-1
Erin Clark, Arin Miller, Jake Odello, Greg Avakian, & Janet Tarlton
Associated Students, Inc. (Student Affairs)
Professional and Leadership Development through Student Employment
Location: Chumash Right Wing
Description: Associated Students, Inc. (ASI) offers student employment opportunities to over 500 students annually, but working for ASI offers more than a paycheck. Training and development activities are focused on the success of the student and allow them the opportunity to supplement their income while developing professional and leadership skills. ASI student leaders and managers will be the primary presenters, utilizing video technology to bring their experiences to life. Conference attendees will be able to experience and participate in an actual leadership module developed for ASI student employees.

B-2
Dana Paquin
Mathematics (COSAM)
Mathematical Modeling of Chronic Myelogenous Leukemia
Location: Chumash Left Wing
Description: In this progressive research study, Dr. Paquin has mentored a team of Cal Poly undergraduate students as research assistants. The team has worked to develop, numerically simulate, analyze, and refine a mathematical model for strategic treatment interruptions for Chronic Myelogenous Leukemia (CML). Conference attendees will be actively engaged in this mathematical modeling process and through the Socratic method, Paquin will lead participants through a series of discussions on the role that mathematical modeling plays in discovering, addressing, and helping to resolve complex medical problems.

B-3
Jennifer Jipson, Patty Clarkson, & Kari Bowers
Preschool Learning Lab - Psychology & Child Development (CLA)
The Cal Poly Preschool Learning Lab: A Site for Students to Learn by Teaching, Researching and Designing
Location: Building 38, Room 127
(includes a tour of the Preschool Learning Lab)
Description: The Preschool Learning Lab (PLL) provides high-quality, full-day, inquiry-based early learning experiences to 30 children between 3 and 5 years of age. An integral feature of the program is that it serves as a teaching, research, and design laboratory for students, faculty, and the professional staff working in the lab. Conference attendees will receive the unique opportunity both to tour the lab and see Learn by Doing in action while hearing firsthand from those working to make this lab come to life for preschool-aged children.

B-4
Philip Barlow & Al Hauck
Construction Management (CAED)
Implementing a Service Learning Program into the Construction Management Curriculum
Location: Simpson Strong-Tie Lab (Bldg. 187), Mezzanine Level
Description: The connections that Learn by Doing fosters in the community are highlighted through this service-learning program in Construction Management. The presentation will feature a tour of the Simpson Strong-Tie Lab and one of the construction projects currently being built by Construction Management students. Participants will also get a chance to submit project ideas and learn firsthand about the process, outcomes, and impact of the program on the community.
**Lunch & Keynote Speech from 12:00–1:15**

**Location:** Chumash Auditorium

**Keynote Speech by Cal Poly Alumnus Noah Stokes, Industrial Engineering (Class of 2001)**

**Description:** Alumnus Noah Stokes has a unique career trajectory that most recently landed him at Creative Market where he serves as Senior Product Designer. Stokes is a web industry leader in front-end development, design, and implementation. After years as a senior engineer for Apple and Palm, Stokes co-founded the design and development studio Bold, which served clients such as Yahoo, PetSafe, Delicious, and Rdio. With over 14 years in the industry, Stokes has the unique ability to communicate business logic to engineers and engineering logic to business folks, and his keynote speech will highlight the ways in which Learn by Doing at Cal Poly enhanced his ability to succeed at web design and client relations.

**Poster Session from 1:15–2:00**

**Location:** Chumash Auditorium

**Description:** The poster session will include an extraordinary cross-section of curricular, co-curricular, and research-related Learn by Doing examples from across campus. Presenters will be on hand during the poster session to discuss their work and interact with conference attendees.

**Poster presentations:**

- Craig Baltimore, Architectural Engineering (CAED)
  *Teaching Large Scale Structures Through Hand Sized Toys (K'nex)*

- William Riggs & Charlie Coles
  *City & Regional Planning (CAED)*
  *Designing Streets for Bicycles and Pedestrians: Engaging Students in Research and Service in California Communities*

- Karen Lauritsen, Robert E. Kennedy Library (Information Services)
  *Making Memorable Experiences with Cal Poly Science Café*

- Sandy Stannard, Architecture (CAED)
  *Learn, Explore and Be Inspired By Nature: A Design/Build Case Study*

- Tom Bensky, Physics (COSAM)
  *The Computer + Newton’s Laws = Learn by Coding in Introductory Physics*

- Aydin Nazmi & Kevin Taylor, Cal Poly Center for Solutions Through Research in Diet & Exercise (STRIDE), Food Science & Nutrition (CAFES), and Kinesiology (COSAM)
  *Health Ambassadors And A-Team: Creating a Sustainable Model for Learn by Doing in the Health Sciences*

- Laura Hosman, Political Science & Science, Technology & Society Program (CLA)
  *Solar Powered Digital Library Kits for Pacific Island Schools: Hands-On Projects in Liberal Arts and Engineering Studies (LAES)*

- Marie Yeung, Biological Sciences (COSAM, students from CAFES)
  *A High-Impact and Interdisciplinary Learn by Doing Experience to Answer Real-World Questions: Evidences from a Microbiology Research Project*

- Soma Roy, Allan Rossman, Beth Chance, Karen McGaughey, & Kevin Ross, Statistics (COSAM)
  *Helping Students “Discover” and Learn Statistical Concepts by Doing*

- Brennan Davis, Sharon Dobson, Lynn Metcalf, Stern Neill, & Lisa Simon, Marketing (OCOB)
  *The Impact of Experiential and Collaborative Learning on Career Readiness and Skill Development: Examining the Role of Peer Mentoring*

- Andy Ia, Student Community Services (Student Affairs)
  *Making a Difference in the Community*

- Alex Dekhtyar & Anya Goodman, Computer Science (CENG) and Chemistry & Biochemistry (COSAM)
  *Teaching Bioinformatics in Concert*

- Alyssa Wigant, Trudy Vinson, & Tammie Velasquez (supervisor & mentor from the Gender Equity Center), Graphic Communication (CLA) and Gender Equity Center (Student Affairs)
  *Galentine’s Day: Ladies Celebrating Ladies & Eliminating Girl Hate*

- Joy Harkins & Jeffrey Silva, Dean of Students (Student Affairs)
  *Alternative Breaks: Learn by Doing Good!*

- Conny Liegl, Robert E. Kennedy Library, Communications and Special Initiatives (Information Services)
  *Designing the Future: Implementing the Kennedy Library Master Plan with Help of Student Assistants*

  *Beginning: Acceleration into Making and Representation*
Concurrent Sessions C from 2:10–3:00

C-1
Solina Lindahl
Economics (OCOB)

Location: University Union, Room 219

Description: In an effort to excite and energize a General Education course in Economics that has long been taught in a more rote and information-laden manner, Solina Lindahl implemented a project into the course that brought to life course material and engaged students through the creative medium of a music video. Conference attendees will view several of the student-created music videos submitted to the Rock-O-Nomix project, and Lindahl will discuss her future intentions and aspirations with this assignment.

C-2
Jonathan Reich, Joe Ragsdale, Paul Wack, Tom diSanto, Adrienne Greve, Beverly Bass, Chris Clark, & Margot McDonald
Landscape Architecture, Architecture, City & Regional Planning (CAED)
Implementing Sustainable Environments: Cal Poly’s National Leadership in Comprehensive Interdisciplinary Sustainability Education

Location: Chumash Right Wing

Description: This award-winning interdisciplinary curriculum offers Cal Poly students an opportunity to shape their own education informed about principles and problems of sustainable environmental design with global, regional and local perspectives and concepts; students then implement sustainable practices locally. Conference attendees will be asked to weigh in and vote on potential outcomes at key points in the presentation, as both past and current sustainability proposals are presented.

C-3
Megan Guise, Nancy Stauch, Kurt Payne, Dan Neff, & Ben Woodford
English (CLA), Physics (COSAM), & Central Coast New Tech High School (Community)
Preparing for a Career in Teaching: Cal Poly Teacher Candidates Immersed in a Project-Based Learning School

Location: Chumash Left Wing

Description: This presentation highlights a partnership established between Cal Poly’s Single Subject Credential Program and Central Coast New Tech High School (CCNTHS), a project-based learning school. Through a panel discussion, conference attendees will learn about the dual impact on CCNTHS and Cal Poly students through this unique Learn by Doing approach to teacher education.

Concurrent Sessions D from 3:10–4:00

D-1
Lindsey Chase, Alexa Coburn, Baheej Saoud, Michael George, Brian Self, & James Widmann
Mechanical Engineering & Aerospace Engineering (CENG)
Hands-on Inquiry Based Learning Activities: Learn About Learning by Doing

Location: Chumash Right Wing

Description: This interdisciplinary team of students and faculty will demonstrate an innovative active learning approach utilizing Inquiry Based Learning Activities (IBLAs) in the classroom. Instead of a passive lecture-driven learning environment where the information is simply delivered by the instructor, this team will demonstrate how IBLAs are implemented in an undergraduate Dynamics course in which students participate in hands-on activities with their peers in order to learn the concepts presented. Conference attendees will take on the role of students, as the presentation team demonstrates and facilitates a typical day in this Dynamics course.

D-2
Colleen Twomey
Graphic Communication (CLA)
Phoenix Challenge College Packaging Competition

Location: Chumash Left Wing

Description: This instructionally-related activity provides students with a co-curricular opportunity to compete with an international field of colleges and universities to design, prepare files, and print a “real life” package to be judged at the annual Flexographic Technical Association Forum. The Phoenix Challenge Foundation is an organization of industry professionals who are dedicated to encouraging today’s youth to explore the exciting career opportunities available to them through the flexographic printing and packaging industry. Conference attendees will hear firsthand from the 2015 Phoenix Challenge Cal Poly team comprised of seven students and led by Graphic Communication professor Colleen Twomey.
Learn by Doing Faculty Scholar Award Presentation & Closing Remarks

4:10 – 6:00 pm

Location: University Art Gallery

Description: Showcasing student work from graphic design, photography, and studio art from the Annual Student Exhibition, the University Art Gallery is a perfect spot for Cal Poly’s Learn by Doing conference reception. At the closing event, attendees will enjoy Cal Poly Wines, graciously donated by Dean Thulin and the College of Agriculture, Food & Environmental Sciences. The wines are a prime example of Learn by Doing in action with students involved in the winemaking process from vineyard to bottle. The reception also will include jazz music from one of Cal Poly’s student combos, Backline Quartet, featuring undergraduate student musicians from the College of Engineering and the College of Liberal Arts. Best of all, the conference reception will feature the announcement of the inaugural Learn by Doing Faculty Scholar Award recipients. This new faculty award, which was established and funded by members of Information Services’ external advisory board and administered by the Kennedy Library, recognizes outstanding faculty scholarship on Cal Poly’s signature Learn by Doing pedagogy.
The More than a Motto project team extends heartfelt thanks to the following faculty and staff:

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Cal Poly Preschool Learning Lab
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Cal Poly Floral Design Team
Cal Poly Wines
College of Architecture & Environmental Design
Center for Teaching, Learning & Technology
Robert E. Kennedy Library