

Adopted: March 4 2014

**ACADEMIC SENATE
of
CALIFORNIA POLYTECHNIC STATE UNIVERSITY
San Luis Obispo, CA**

AS-779-14

**RESOLUTION ON PROPOSAL TO ESTABLISH THE CENTER FOR SOLUTIONS
THROUGH RESEARCH IN DIET AND EXERCISE (STRIDE)**

1 RESOLVED: That the Academic Senate of Cal Poly endorse the attached proposal for the
2 establishment of the Center for Solutions Through Research in Diet and Exercise
3 (STRIDE).

Proposed by: Aydin Nazmi and Kevin Taylor, Kinesiology
Department

Date: January 22, 2014



**Proposal to establish the Center for Solutions Through Research
in Diet and Exercise (STRIDE)**

California Polytechnic State University

Submitted by: Aydin Nazmi, Interim Director STRIDE and Assistant Professor,
Food Science and Nutrition and Kevin Taylor, Kinesiology
Department Chair and Professor, Kinesiology

Date: January 21, 2014

Background

Since 2007, Solutions through Research in Diet and Exercise (STRIDE) at California Polytechnic State University (Cal Poly) has served as a hub for new research partnerships as well as community, state, and national collaborations in obesity-related issues. Much remains to be done. The STRIDE Program is ready to increase its educational, grant, and philanthropic activities in order to create more opportunities for faculty and students at Cal Poly to participate in discovering solutions to obesity.

Nearly 70% of the United States adult population is overweight or obese. Childhood obesity has also become a major concern for public health and national human capital. Obesity is strongly associated with the onset and progression of heart disease, diabetes, hypertension, some cancers, and other debilitating diseases. Indeed, nutrition and physical inactivity related chronic diseases represent five of the top ten causes of death in the United States. Medical costs associated with obesity amount to a staggering \$190 billion per year. These expenses significantly impact macroeconomic indicators and place a heavy burden on an already-stressed healthcare system. Moreover, the medical, economic, and social consequences of obesity inequitably impact racial/ethnic minorities and the poor. Public health strategies designed to curb obesity have been largely unsuccessful, as evidenced by the alarming and consistent increase in obesity rates across all age groups over the past three decades.¹

Long-term solutions require collaboration across diverse disciplines to address the physical, social, and environmental factors associated with obesity. More and better interdisciplinary efforts to combat the obesity problem are urgently required. Further, the obesity epidemic has created an increased need in the healthcare industry for professionals with strong backgrounds in nutrition, health promotion, exercise science, and public health.

In spite of the long time success of the current STRIDE program, which is housed in the Kinesiology Department, there is a lack of such coordination in San Luis Obispo County and on the Cal Poly campus. A coherent nucleus is needed to facilitate cutting-edge research for faculty and experiential learning for students. The herein proposed Center for STRIDE will function as that nucleus.

STRIDE Mission Statement

To advance knowledge and practice in obesity prevention by:

- Conducting cutting-edge interdisciplinary research
- Fostering innovative collaborations among researchers, students, and communities
- Providing real-world learning experiences to develop the next generation of leaders

¹ Data sources: Institute of Medicine, National Center for Health Statistics, Centers for Disease Control and Prevention

STRIDE Values

Innovative and Sustainable Solutions

We think and act creatively, knowing that sustainable improvements in education, policy, behavior, and environments are key to improving our nation's health.

Commitment to Community

We engage in community-based, participatory efforts to inspire our research, programs, and student leadership opportunities.

Quality and Excellence

Our team of experts excels at providing diverse communities with the highest quality solutions.

Health Equity

We identify and work to overcome disparities that prevent people from achieving sustained optimal health.

Scope of the proposed unit

The STRIDE program is the Cal Poly home for interdisciplinary research and learning related to obesity. It brings together faculty, students, and communities to create innovative solutions to complex problems. The obesity crisis requires experts from a diverse range of fields. STRIDE faculty and students represent Kinesiology, Nutrition, Landscape Architecture, Agricultural Economics, Business, City and Regional Planning, Journalism, Statistics, Computer Science, Graphic Communications, among other disciplines. Each team member brings a unique skillset with which to tackle the complex, multi-faceted problem of obesity. Together, the STRIDE team undertakes key research projects, plans innovative programs, and designs novel interventions. STRIDE harbors major research capacity, from study and survey design to program evaluation and data analysis. Thus, STRIDE is well positioned to undertake an increasing number of significant research projects and achieve high impact for scientific, local, and national communities.

In the five years since its inception, STRIDE has become a leading source for expertise. Several successful efforts have put STRIDE on the regional and national maps for research and innovation. STRIDE has

STRIDE: Hub for innovation

STRIDE serves as a local, regional, national hub for research, collaboration, and innovation in obesity prevention. Projects include faculty, students, and community organizations, serving to generate novel research, develop the next generation of leaders, and respond to unmet regional needs.

responded dynamically to the needs of the scientific and local communities. For example, the "Pink and Dude Chefs" nutrition education and culinary program for children, which exemplifies the mission of STRIDE, has been a resounding success. The program positively impacts faculty, students, the community, and Cal Poly in the following ways: 1) Generating research resulting publications and master's theses; 2)

Developing leadership skills of “Health Ambassadors”, an innovative mechanism by which STRIDE students are trained in standardized research and program methods; and 3) Addressing an underserved population of middle-school students in a low-income, predominantly Hispanic area of the county. Due to the widespread success of Pink and Dude Chefs, STRIDE is currently in development of an online training series by which other communities may adopt and implement this program.

Through the STRIDE program, faculty members have embarked on several grant-supported projects, such as Dr. Phelan’s \$6.8m federally funded research from the National Institutes of Health (National Heart, Lung, and Blood Institute and the National Institutes of Diabetes and Digestive and Kidney Diseases). Dr. Phelan has two active studies at Cal Poly; the Healthy Beginning Study and the Fit Moms study. The purpose of the five-year Healthy Beginnings study (\$3.4m, Clinicaltrials.gov: NCT01545934) is to determine the efficacy of a multi-component lifestyle intervention that incorporates a partial meal replacement program into a comprehensive and nutritionally sound behavioral program to promote healthy gestational weight gain in multiethnic obese women. This study is part of a larger consortium of studies that occurs at seven sites across the country.

The purpose of the five-year Fit Moms study (\$3.4m), a clustered randomized trial, is to test the long-term efficacy of an Internet-based weight control program tailored for low-income postpartum mothers collaborating with the Women, Infants, and Children (WIC) program, which is a federally-funded community-based program providing nutritional support for low income multi-ethnic women.

Dr. Hagobian, a co-investigator with Dr. Phelan on the Healthy Beginnings study, is heavily involved with the multi-site intervention study (LIFE-Moms) to develop common protocols for measuring physical activity and disease risk factors. He was recently awarded an NIH grant for \$3.2m to assess weight and health outcomes in fathers of the pregnant women in the Fit Moms study.

Other faculty members who have been involved in STRIDE projects include:

- Bob Clark (Kinesiology)
- Kellie Green Hall (Kinesiology)
- David Hey (Kinesiology)
- Kris Jankovitz (Kinesiology)
- Steve Klisch (Mechanical Engineering)
- Veronika Lesiuk (Kinesiology)
- Kelly Main (City and Regional Planning)
- Lisa Nicholson and Arlene Grant-Holcomb (Food Science and Nutrition)
- Camille O’Bryant (Kinesiology)
- Jennifer Olmstead (Kinesiology)
- Christiane Schroeter (Agribusiness)
- Heather Smith, Karen McGaughy, and Soma Roy (Statistics)
- Heather Starnes (Kinesiology)

- Kevin Taylor (Kinesiology)

Additionally, the following faculty have engaged STRIDE as a client for student projects:

- Norm Borin (Marketing)
- Brady Teufel and Dan Eller (Journalism)
- Jonathon York (Entrepreneurship)

The STRIDE model successfully combines faculty scholarship, student learning outcomes, and community needs. This mechanism is highly collaborative, generates innovation, and saves resources while building leadership capacity in Cal Poly students.

Relationship to the mission of Cal Poly

Cal Poly's mission is to "foster teaching, scholarship, and service in a learn-by-doing environment where students and faculty are partners in discovery." STRIDE's mission is to advance knowledge and practice in obesity prevention by conducting cutting-edge interdisciplinary research. Through STRIDE, innovative collaborations among researchers, students, and communities are fostered. STRIDE researchers develop projects that provide providing real-world learning experiences to develop the next generation of leaders. STRIDE offers a learn-by-doing environment whereby students mature professionally and personally. STRIDE projects help students apply and practice the knowledge they gain in the classroom. STRIDE students conduct applied research, manage and develop programs in their areas of expertise, and learn how to collaborate within complex organizational structures.

Moreover, STRIDE's innovative approach to student learning ensures that cross-disciplinary collaboration occurs at all levels of planning, program development, and research. Students develop in their areas of interest while engaging with peers from various academic backgrounds, fostering mutual respect and learning in team environments. Students working with STRIDE get extraordinary co-curricular experiences in academic settings and in culturally diverse communities. Importantly, STRIDE students learn to work within underserved populations, growing diversity awareness and cultivating social responsibility.

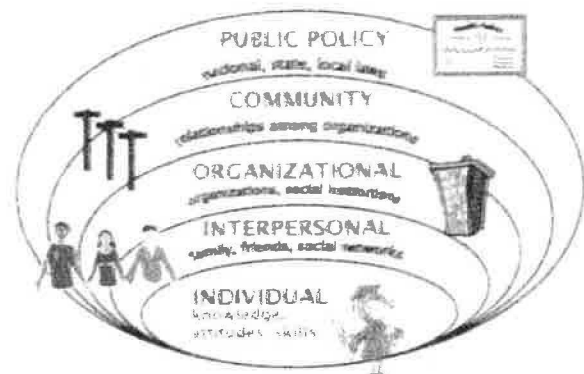
In addition to student outcomes, STRIDE fosters faculty scholarship by bringing together experts from a wide variety of backgrounds to focus on issues of shared concern, generating research projects, grant proposals, and a collegial collaborative environment. STRIDE faculty mentor students who gain disciplinary expertise and exposure to critical dynamics of organizational efforts. Serving both faculty and students, STRIDE develops the next generation of distinguished researchers and future strategic leaders.

Rationale for the proposed unit

No single unit within the University is comprehensively examining obesity- one of the most significant public health challenges of our time. The required activities cannot be supported successfully by a single department. Cal Poly has faculty dispersed across the University that are engaged through their areas of expertise in obesity and other public health issues, but until recently, there has been no concerted effort to bring them together. STRIDE serves that purpose. STRIDE is currently classified as a program within the Kinesiology Department and has operated as such since its inception. To better serve the needs of faculty and students from across disciplines, and to facilitate buy-in from a wider range of stakeholders, STRIDE must exist as an entity through which many partners can ally toward a shared vision.

Academic institutions are increasingly employing problem-based approaches, whereby teams from several fields pool know-how and resources for the common good and for a common goal. Cal Poly stands to benefit from this approach in terms of faculty scholarship and student learn-by-doing experiences. This approach takes into account the unmet needs of diverse communities, opening opportunities for both researchers and students. It has allowed STRIDE to establish important relationships within the community that are unmatched by any other unit on campus.

STRIDE employs the social-ecological model of obesity (Figure), which implicates a range of proximal and distal factors working in conjunction to determine risk. This model recognizes the importance of several layers of variables mediating individual behavior and strongly influencing individuals' opportunity structures. The



The social-ecological model

health, social, and applied sciences are therefore all fundamental to the study of obesity. For example, body weight is considered a function of many influencing levels including agricultural policy, city planning, commodity economics, and lifestyle practices. Thus, layers of the model must be studied as a cohesive whole to understand the problem of obesity and to design effective interventions for populations. STRIDE's goal is to bring together experts working in each area of the social-ecological model to more thoroughly address the factors associated with obesity. As such, the house of STRIDE must be equitably welcoming to faculty and students across diverse scientific or academic backgrounds. To do so effectively requires status as a University entity committed to a collaborative and shared vision.

In 2011-2012, STRIDE engaged 423 Cal Poly students from a diverse range of majors in 92 programs, projects, and events. Together, we touched the lives of 7,300 community members.

Fiscal sustainability

To be financially sustainable, STRIDE must pursue even more aggressively four main funding sources: research and grant funding, fee-for-service and consulting, philanthropic gifts, and broad-based institutional support.

Research and grant funding: External funding for obesity-related research and programs represents a significant proportion of total health science funding opportunities through both public and private mechanisms. Based on the wide range of collaborating faculty, STRIDE expects to capitalize on a diverse array of available research funds. National Institutes of Health, USDA, and NSF are prime contenders, for example. Collaborative external partnerships in research make STRIDE grant proposals more competitive and compelling to funders.

Since 2007, numerous faculty researchers across disciplines have received research funding based on STRIDE projects. As faculty researchers capture external funding for their research in conjunction with STRIDE, their projects will support STRIDE mechanisms designed to continue funding success. Development of research and grant funding mechanisms such as this will help overall fiscal sustainability.

Fee-for-service and consulting opportunities: STRIDE serves a unique role in the community as a resource for expertise in research, evaluation, and program design. STRIDE's fee-for-service and consulting services have increasingly been requested. From 2007 to 2012, these activities were valued at approximately \$200,000. These efforts will represent a growing proportion of revenue. For example, a national non-profit has engaged STRIDE as an evaluation partner for programming across 15 states.

Philanthropic gifts: STRIDE enjoys support from a number of benefactors. The Maxwell Family Foundation contributed \$250,000 to the founding of STRIDE and has gifted another \$100,000 as of April 2013. The Webster Family Foundation continues to support STRIDE with gifts totaling \$60,000 to date. In addition, STRIDE receives gifts from individuals, local organizations, and businesses. As STRIDE grows in size and stature, these opportunities will increase.

As the only University entity dedicated to researching and finding solutions to the obesity epidemic, STRIDE is highly marketable as part of a larger university advancement strategy and compelling to donors interested in supporting health and wellness.

Broad-based institutional support: STRIDE represents a significant value for Cal Poly through the opportunities provided for faculty research and student learning. To date, STRIDE has engaged faculty and students from all six colleges and more than 25 departments.

The scholarship and experience that this engagement provides furthers faculty professional development and supports student success all across campus. For this reason, ongoing support from a broad base of stakeholders is critical. To date, College Based Fees and State funds have supported STRIDE overhead (approximately \$235,000 per academic year). Other funding, including philanthropic gifts, cover remaining costs

(approximately \$30,000). It is expected that as funding from grants, fee-for-service and consulting, and gifts increase over time, the proportion of institutional support will decrease but still represent an important investment towards continued success and validation of STRIDE's importance to the University.

In sum, STRIDE is of significant value to Cal Poly and has demonstrated positive impacts on student and faculty success. As a Center, STRIDE will continue to move forward and grow in research, collaborations, and student leadership outcomes.

STRIDE Goals

Currently, faculty and staff have four main goals to achieve by 2017 for STRIDE, which will be realized through the establishment of the Center for STRIDE.

Goal 1: increase human resources capacity and overall size of STRIDE

Objective 1.1: Increase number of core, student, and staff members

Core staff--- STRIDE currently has three permanent staff. We will grow this number to seven by 2017, adding a data steward by 2014, a budget analyst by 2016, a project coordinator by 2016, a policy analyst by 2016, and a manager by 2017. A grant writer/consultant will be contracted part---time on an as-needed basis.

Student and research staff--- STRIDE employs approximately 10-15 part-time student staff, mostly undergraduate, at any given time. We will grow our student team to include more graduate students engaged in STRIDE research, from three in 2013 to six by 2017, and at least one postdoctoral researcher will be aligned with STRIDE by 2017. We will also engage two faculty members to serve as research area leads by 2017.

The Director position--- Aligning with the University's commitment to interdisciplinary collaboration, STRIDE will serve as an example for the Cal Poly community. The goal is to have a permanent director in place (the current director is interim, with release time supported by the Colleges of Science and Math and Agriculture, Food, and Environmental Sciences.) The Director will have a permanent, 12-month appointment, with the responsibility of providing summer salary via grants/contracts.

Objective 1.2: Increase interdisciplinary faculty collaboration

STRIDE will engage Cal Poly faculty from all colleges in research, projects, and teaching related to its mission.

Seed funding initiative- The STRIDE seed funding initiative, which provides modest one-

time funding for faculty research, aims to increase collaboration and increase external funding by promoting collaborative grant applications.

Research groups- STRIDE will continue to grow as a hub of research activity for all Cal Poly faculty. For example, the FLASH Research Group, which includes faculty representing eight departments, originated in 2013 and is the first of several STRIDE-based research groups that will bring together faculty from across campus to build scholarly activity and to publish manuscripts. This group will grow and produce manuscripts collaboratively at the rate of at least three per year by 2017. Other research groups conducting research in the thematic areas of maternal/child health, biomechanics, and the built environment will be explored beginning in 2015.

University Centers and programs- STRIDE will partner with existing Cal Poly programs such as the CAFES Center for Sustainability, Liberal Arts and Engineering Studies (LAES), and SUSTAIN SLO to increase faculty collaboration and interdisciplinary scholarship. STRIDE will engage in at least one project with these programs by 2015-2017. STRIDE will also partner with ongoing efforts in the development of emerging programs such as the One-Health Initiative and the California Food and Nutrition Institute (CFNI).

Goal 2: Develop exceptional leaders by creating innovative opportunities for students

Objective 2.1: Develop student leaders through learn-by-doing and earn-by-doing opportunities

“Earn-by-doing”- STRIDE’s paid student personnel teams in business administration, marketing, nutrition, physical activity, PR/media, and community engagement represent real-world experience for Cal Poly students. By 2014-15, STRIDE will garner support from each Cal Poly college to support student development and earn-by-doing activities relevant to students’ fields of expertise.

Student teams- STRIDE will build new partnerships with academic departments and Cal Poly programs including Liberal Arts and Engineering Studies (LAES) and the CAFES Center for Sustainability to develop new opportunities for students to work together at solving society’s most pressing problems related to health and well-being. At least two student teams will undertake new and collaborative projects each year. For more information on STRIDE student teams, please see:

<http://stride.calpoly.edu/content/our-team>

Objective 2.2: Create innovative opportunities for student engagement and collaboration

Learn-by-doing- STRIDE will continue to enhance connections to curriculum and offer educational experiences beyond the walls of the classroom. For example, through two service-learning courses (Health Ambassadors and Assessment Team; KINE 290)

based in the Kinesiology Department, STRIDE offers innovative mechanisms by which to train student researchers and community outreach leaders. Beginning in 2014-15, STRIDE will collaborate with the Food Science and Nutrition Department to add a nutrition-specific FSN 290 as a complementary method for training student leaders.

A focus on students- STRIDE will partner with other departments and units including Student Affairs, University Housing, Health and Counseling Services, or Athletics to continue offering innovative and complementary learning opportunities for all Cal Poly students from several colleges in several thematic areas related to health and wellness.

Goal 3: Increase visibility on and off campus

Objective 3.1: Increase Cal Poly presence by expanding on-campus collaborations

University units--- STRIDE is building new partnerships with University Housing to promote healthy eating and active living in the context of campus life. Beginning in 2014-15, STRIDE will partner with the three 'healthy living' residence halls as a partner in promoting health and wellness for students. Student Affairs, Health and Counseling Services, and PULSE will also be explored as potential partners for aligning and expanding the range of STRIDE activities.

Academic/curricular integration- STRIDE has offered two service and learn-by-doing courses in the Kinesiology Department for six years, and will seek to grow these activities in partnership with other departments beginning in 2014-15. STRIDE will also be one of the key units associated with the new Cal Poly Public Health minor, to be proposed by 2017. The minor will be a cross-college effort attracting students from every college to areas of public health that align with Cal Poly faculty expertise.

Objective 3.2: Foster existing and develop new partners in the local/regional community

Community focused- STRIDE's research and outreach activities take place in the local community with partners such as schools, San Luis Obispo County Public Health Services, the Food Bank Coalition of San Luis Obispo County, HEAL (Healthy Eating Active Living) SLO, among many others. STRIDE will continue to work with community groups as key partners in developing new research and creating student leadership and outreach opportunities.

Objective 3.3: Be a leader in the emerging national collegiate health movement

National visibility- STRIDE will be a leader in emerging research and program areas dedicated to college and campus community health. For example, STRIDE will participate in the National Consortium for Building Healthy Academic Communities, <http://healthyacademics.org/>, and at least one FLASH research project manuscript

per year will be submitted to this consortium. By 2017, STRIDE will participate in a multi-site college health study. For more details on FLASH, please see <http://stride.calpoly.edu/content/research/flash>.

Goal 4: Increase revenue and funding

To be financially sustainable, STRIDE must pursue several funding sources, including research and grant funding, fee-for-service and consulting, philanthropic gifts, and broad-based institutional support for earn-by-doing opportunities for students.

Objective 4.1: Increase research/grant funding

Since 2007, numerous STRIDE faculty researchers across disciplines have received external funding. Currently, STRIDE faculty hold more than \$10m in research grants. When STRIDE becomes a university center, indirect costs will be used to pilot new research projects and to stimulate new programs. By 2017, STRIDE will achieve \$15m in research funding, bringing approximately \$550,000 in indirect costs to the Center.

Objective 4.2: Increase fee-for-service and consulting opportunities

STRIDE serves a unique role in the community as a resource for expertise in research, evaluation, and program design. STRIDE's fee-for-service and consulting services are increasingly requested. From 2007-2012, these activities totaled approximately \$200,000, and will grow going forward. For example, a national non-profit recently engaged STRIDE as an evaluation partner for programming across 15 US states. From 2013-2017, STRIDE will earn at least \$170,000 from these endeavors.

Objective 4.3: Increase philanthropic support

As the only University entity dedicated to researching and finding solutions to the obesity epidemic, STRIDE is highly marketable as part of a larger University Advancement strategy and compelling to donors interested in supporting health and wellness. In partnership with college and University Advancement, STRIDE will likely comprise a key element of the Cal Poly Capital Campaign. Specific targets for fundraising include "earn-by-doing" opportunities, development of STRIDE's online training mechanism, and an endowed chair position. From 2014-2017, STRIDE anticipates a total of \$350,000 in new philanthropic support.

Objective 4.4: Broaden and increase internal support

STRIDE furthers faculty scholarly activity and supports student excellence all across campus. For this reason, ongoing support from a broad base of stakeholders is critical. To date, College Based Fees and State funds, primarily from COSAM, have supported some STRIDE overhead. With the consent of the Academic Deans, we will garner minimal broad based support, primarily to support earn-by-doing opportunities for students, from all six Cal Poly colleges over the next three years. Further, as funding from grants, fee-for-service and consulting, and gifts increase over

time, central campus support will represent a critical validation of STRIDE's importance to the University.

State of California
Memorandum

CAL POLY
SAN LUIS OBISPO

To: Steven Rein
Chair, Academic Senate

Date: March 24, 2014

From: Jeffrey D. Armstrong
President



Copies: K. Enz Finken
R. Fernflores
A. Nazmi
K. Taylor

Subject: Response to Academic Senate Resolution AS-779-14
Resolution on Proposal to Establish the Center for Solutions through Research in Diet and Exercise (STRIDE)

Based upon the above subject Resolution, the positive endorsement by the Academic Deans' Council at its January 27, 2014, meeting, as well as the recommendation of Provost Enz Finken, I am pleased to approve the establishment of the Center for Solutions through Research in Diet and Exercise (STRIDE).