

INNOVATION

## Building Centers for Action Research

by Lee Cooper



*Universities are already conducting great research, but many still struggle to convert their knowledge and insights into real-world impact. One solution is to encourage the formation of multidisciplinary collaborative teams.*

✓ **INSIGHT** | NOTE 10 Jul 2017

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## Introduction

The world faces many complex problems, and great universities should be part of the solution. In the long-term, universities accrue enormous demonstrated societal benefits. But what about today? If we want universities to have an immediate impact, we need to engage today's students in hands-on projects that confront real problems. That's the

premise of *action research*. The generic mission of a university *action research center* is to transform research and education into service to the world. The goal is to organize, prepare, and support students as they attack real-world problems – and to do so on a large scale.

## Origins

After over 40 years at UCLA, I'd seen many excellent student projects. But when I read one 2010 MBA team's final report and listened to their presentation analyzing the infrastructure for ecotourism in Suriname, I knew that this project was different: someone had finally gotten the balance of collaboration just right. In the past, similar projects were often the result of Herculean efforts by either the team or the client – never both. This time, a talented team was attracted to working with Conservation International (CI). The department chair was their faculty advisor for this AMR project. I served as an extra advisor to help both inside and outside UCLA.

The normal capstone-team dynamic was laid inside an ongoing project stream within CI. Hari Balasubramanian, then CI project manager, actively managed the overall process to ease coordination with the Suriname-based CI staff, energy experts, and staff economists. The Suriname staff established the connections to government, trade and industry, and educational establishments that the Anderson team needed. The team conducted one-on-one interviews with personnel in all the key sectors. UCLA designed an exit survey for the Paramaribo Airport and CI connected them with local university students to administer the survey. The UCLA team combined CI research with their own primary and secondary research, analysis, and modeling to provide a thoughtful assessment of the infrastructure for ecotourism, with feasible options and recommendations for action.

I was intrigued that it worked so well. The structure of support pulled the best out of the student team. Everyone benefited from the process. Russ Mittermeier (then CI President) and Jennifer Morris (then CI EVP) presented the results of the UCLA-CI collaboration to the Parliament of Suriname, leading the Parliament to call for a five-year sequence of collaborative efforts to do green-economy studies in other major sectors of Suriname. The

project report is being used within Suriname to reshape the tourism industry. Subsequent projects included analyzing how to use that country's fresh-water surplus in ways that help sustain the resource while aiding in the country's development.

The CI partnership with AMR has produced a steady stream of successes:

- We have completed two sequential studies furthering shade-coffee development in the San Martin province of Peru.
- We ran two parallel studies for sustainable fisheries in Ecuador – showing how solutions depend on identifiable patterns of local-market conditions. And ran a third follow-up study in harvesting while maintaining mangrove ecological.
- We worked with Conservation International's Center for Environmental Leadership in Business to assess the need for an internal consultancy to assist extractive industries with reducing, minimizing, and offsetting their environmental impacts.
- We developed an effective collaborative strategy that combines a basic management team with expertise from advanced students possibly from any campus department, under active supervision from UCLA faculty and the partners involved.

Building on the successes of these AMR projects, the question became: how could we scale such collaborations both horizontally and vertically? The answer was simple. *Let the scope of the problem shape the scope of the effort.* We sought to develop the infrastructure that allows student and faculty expertise to aid such projects as they progress and change over time.

## Centers for Action Research

The model of effective collaboration that led to success in Suriname can be replicated in any coalition. Universities should seek to have greater impact by creating new centers dedicated to providing students with opportunities to actively apply new knowledge to real-world problems.

# Strategy

- Form multidisciplinary student teams custom fit to the needs of each project.
- Use course credit and teaching credit as the internal coins of the realm, and include all other variable costs in the project budget.
- Fund raise jointly if the projects that students and faculty demand do not have sufficient support.
- Use Internet-based tools and technology to streamline operations, insure ensure that projects can be carried across time and teams, and facilitate access to and utility of the growing knowledge base. Design, build, and adapt knowledge management, project management, and communications management tools to enable this.
- Bring to scale so as to minimize infrastructure costs relative to the value delivered. It takes a small staff to get started. With the right tools that staff can support a lot of projects.
- Where possible, make the knowledge base open source and publicly accessible to foster broad adoption and growth of the engagement model by other universities and colleges. We need to share and learn from history.

## Underlying Principle

We are proposing to **let the scope of the problems dictate the scope of the efforts.**

Centers seek to unite student subgroups and individuals from across departments and across degree programs in common purpose to attack a problem. To this effort are added outside partners with supplementary intellectual and financial resources, and domain savvy. These professionals become allies in advancing common agendas. When students and professionals unite with faculty also interested in the agenda, and a great deal more force is being brought to bear. This is one way the universities can become part of the solution today. It is an advanced version of the model for post-secondary education

advocated in the 2014 CED Report (*Boosting California's Postsecondary Education Performance: A Policy Statement and Call to Action*). Project-based learning is a successful and growing trend in education. The successes so far show some of the potential of this trend. It is a model that can be imitated or adapted to any university, college, and K-12.

My goals with this post are to use the UCLA cases I cited so far as exemplars of the realizable benefits of each such collaboration, to take an aspirational look at how such centers are designed to operate at scale, and to propose a business model that should allow this engagement model to spread.

## Benefits to Students

The freshman experience at UCLA starts with Volunteer Day, engaging teams of incoming students in service projects to aid the local community. A center for action research can build on that spirit of engagement and helpful action. Throughout their academic careers from the earliest days to capstone experiences for seniors and advanced degree candidates, students can have curricular and extracurricular opportunities to engage in team projects that advance valued agendas. Students learn to work in multidisciplinary teams with advanced students, professionals from outside partners, and faculty.

Internet-based collaboration, sharing, and communication tools enable greater depth and breadth for action research and project-based learning. For example, students now arrive at college as sophisticated users of their “pocket supercomputers,” ubiquitously connected to innumerable other pocket supercomputers. They have access to inestimable library resources, and use of a range of apps that once required scores of costly devices and services (camera, video, audio recorder, phone, calculator, GIS maps, “suitcases” of books and publications, travel and lodging planning, postal email, and countless specialized apps).

## Benefits to Faculty

Faculty get the opportunity to align their teaching and class projects with valued agendas. Where there is good reason for the walls around the traditional classroom to stand, these will remain. For a growing part of both undergraduate and graduate education the walls separating disciplines and degree programs are falling, creating opportunities for increasing the relevance and impact of the educational experience, while achieving the same pedagogic goals. There is also the greater potential for alignment of teaching and research agendas. Emeriti faculty gain the opportunity to engage with student teams in projects of mutual interest – creating more latitude for matching students and outside partners with interested faculty. Emeriti are eager to participate.

## Benefits to Outside Organizations

Core to the conceit that we can make real change and advance what we value is that projects are the collaborative efforts of multiple partners. Outside partners gain access to a broad and deep bench of expertise and the ability to customize a team to temporal project needs. Since a center provides the information infrastructure for passing projects from one team to the next, partners gain greater flexibility in their personnel planning. Project teams can be scaled up or down over time in synch with project needs – overcoming one of the major diseconomies of scale that small organizations face. Synchronizing with academic calendars is a known and manageable issue.

## Systems Redesign

A center can be crafted out of mainly existing pieces. At UCLA, over 900,000 student-hours per year are dedicated to capstone experiences. Credit vehicles abound for the kinds of engagements a center facilitates. Typically, no new classes need to be approved before a center is established. Beyond the resources a center needs for professional and student staff, the normal curricular budgets fuel the enterprise. This is a major savings compared to the overhead on research projects. Support can come in as donations, rather than contracts and grants. Similar pieces exist on most campuses. Centers can proceed and grow at their own pace. Scalability is mostly associated with the completion of the data-driven information system.

# The Marketplace of Ideas

To my way of thinking, in developing this collaborative model we are creating a complex, multifaceted marketplace. On the supply side are internal university agendas such as UCLA's Sustainable LA Grand Challenge (SLAGC) and the external agendas of outside partners with their project needs and requirements. Market dynamics reveal how partners are attracted to working with UCLA, for example. On the demand side market dynamics show how these ideas and projects appeal to students and faculty. How do their skills match up? How are sufficient resources attracted to the combination? How can we make the resulting knowledge more useful? What innovations can we observe? These are the issues in understanding the dynamics of the *marketplace of ideas*.

We have witnessed the phenomenal growth and development of new marketplaces in the gig economy. Over 40% of the US labor market is now in contingent employment. *Uber*, *Lyft*, *AirBNB*, *TaskRabbit*, *HelloTech*, and the *LendingClub*, are often-discussed examples. All of these have advanced by transforming the players in disorganized and small-scale arenas into data-driven organizations. *Information technology* is the key to creating that level of scalability. The same is true for the *marketplace of ideas*. The 900,000 capstone-hours per year represent a disorganized and underdeveloped market.

## Information System Needs

While project ideas and initial coalitions may well form in broader social media, project management needs to be an early focus. Teams need the basic discipline to set benchmarks and goals and record the process and results of projects. Communications reflect part of the process of each project and the relevant aspects need to be tracked. As the number of projects grows the matching of students' skills and interests with internal and/or outside partners' project needs requires an information system that could be used strategically, e.g., communicating project needs and goals, tracking project communications, project progress and milestones, and archiving and mining project results and knowledge. Major tools such as *#Slack*, *Asana*, *Hootsuite*, *Workbot*, and *Zapier* are



already highly developed and amendable to the needs. Anything connecting to the Slack APIs could help. Projects that require more confidentiality can opt out or require multi-factor authentication for access, but long-term benefits accrue to coalitions of the willing. Conservation International (CI) has come to see this kind of discipline is needed if they are to learn best from prior projects. The next generation of best practices comes from the accumulating, sharing, and communicating open-source knowledge. The saying I've heard is that PDFs are where knowledge goes to die.

## The Revolution will be Bottom-Up, Not Top-Down

As in the Cambrian explosion of speciation, a profusion of local efforts have begun to redress problems in social, political, and environmental justice. The SLAGC is one umbrella for perhaps 150 such projects at UCLA. Each of these must find the human and financial resources to survive or it simply dies – the basis of *kernel analysis* discussed in my prior post. The information infrastructure described here makes it easier and less costly for such small and local efforts to find partners and resources to help overcome the diseconomies of scale such projects typically confront. Universities are hosts to legions of bright, young, idealistic students who want to make a difference in the world. The multidisciplinary, project-based learning model and information infrastructure to ease partnership building and project execution are two key elements for fostering the radical change that is so needed.

What Silicon Valley has taught us about radically new products is that for a cool idea/product to achieve hyper-growth you need a *whole-product solution* and a *compelling reason to buy* (Moore 1995). The Wintel became a platform by uniting hardware and operating systems with applications and peripherals – a whole-product solution. Mostly business needs provided the compelling reason to buy. Apple, with a few peripherals, provides whole-product solutions. Design and/or opening of new product classes make Apple products *must-buys* for some segments.



The pilot projects between AMRs and Conservation International are cool efforts that the participants and the stakeholders loved. Designing a center for action research is the attempt to drive this model into hyper-growth. It is fundamentally designed to provide a whole-product solution, by building teams that are fit to the needs of their projects, and changing the teams as needs change. Given the natural fit of these projects to capstone efforts and other curricular initiatives, much of the expense associated with personnel costs are shifted onto normal course budgets. Gaining customized teams at lowered total-project cost is a compelling reason to buy. Some of that lowered cost has to be funneled into helping all project partners move onto the more structured and project-team centric communications systems such as #Slack. The balancing benefit is the transformation of these collaborative efforts into data-driven enterprises that can learn from history, build best practices, and provide the evidentiary base for translational sciences.

This is a revolution with a solid business model to back it up. Does anyone know of any other agent or agency that is trying to build this infrastructure? If not, why not?

The next post explains why being able to duplicate and scale this infrastructure matters. There is an expected \$47 trillion upside to be had in switching from business as usual (BAU) to new industries that could move beyond zero-carbon-footprint to actually drawing down atmospheric CO2 levels beginning in 2043. The entrepreneurial opportunity associated with Paul Hawken's (2017) Drawdown and related efforts is the topic of the next post. Michael Totten is co-authoring that one.

A fourth post will follow, titled "Addressing the Crisis in the American Workforce."

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Author's note: I want to thank Michael Totten for his comments and Jae Park for his editorial and publishing help. This post appears on [LinkedIn](#) in addition to the California Management Review blog. Parts of this post are based on sections of my upcoming book (2019): *My Half of UCLA's First Century*.

1. Applied Management Research (AMR) is a two-quarter team project that substitutes for a comprehensive masters examination as an MBA graduation requirement. The assistance of the AMR Office on all of these projects is gratefully acknowledged.

2. The CI team also included Aaron Bruner, Annetter Tjonsiefat, Lisa Famolare, Eduard Niesten, and Michael Totten. The Anderson team included Jody Menerey, Hiromasa Ebihara, William Tang, John Kinney, and Deborah Yim. Charles Corbett was the faculty advisor. I thank Hari and all the rest for helping me see what could be accomplished.
  3. The goals of the SLAGC are to make LA 100% water and energy independent, with enhanced ecosystems health by 2050.
  4. Many Anderson students come into the MBA program with experience using #Slack – especially those from technology backgrounds. Once in the school with the motto “Think in the Next” they revert to using email for project communications and Excel spreadsheets for project management – 25+ year-old tools that don’t fit easily into data-driven enterprises.
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Lee Cooper is Professor Emeritus at the UCLA Anderson School of Management. A member of UCLA's faculty since 1969, his research and teaching on competitive analysis and strategic planning have guided teams in the development of disruptive technologies. Cooper led the Venture Development Project (2002-2005) and is currently developing the UCLA Center for Action Research.