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Faculty Development for Institutional Change: Lessons from an ADVANCE Project

By Sandra Laursen and Bill Rocque

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*"*A university is just a group of professors; that's all it is. And there are two ways changes come: from up above or from below*."*

—Charles, assistant professor in the sciences

"I think it is cultural change, if you begin to nudge people along. In departments, it seems, is where a lot of change needs to happen."

—Carolyn, associate professor, social sciences

"If this is just personal, I'm not sure it's the right thing. I think that some powers-that-be need to come in and make some huge changes."

—Dolores, assistant professor, arts

"This is one of those problems where you have to shake the tree in different places to get it to change."

—Jack, assistant professor, engineering

We conducted the interviews from which these quotations are drawn in our role as evaluators for a National Science Foundation (NSF) ADVANCE Institutional Transformation project on our campus, the University of Colorado at Boulder. Through the ADVANCE initiative, NSF has

supported over two dozen US universities in undertaking “institutional transformation” to increase the proportion of women in science, technology, engineering, and mathematics (STEM) faculties and leadership roles. The title reflects both the ambitious aims of ADVANCE and its understanding that women’s representation in the STEM disciplines cannot be increased without some fundamental changes in colleges and universities, since that underrepresentation stems from a gamut of subtle and interlinked problems (Wylie, Jakobsen & Fosado, 2007).

The faculty members quoted have differing notions of how the university changes: by means of individual leadership from the top, bottom, or middle of the institution and/or by way of changes to institutional policy, individual practice, or departmental culture. Our conclusion, after conducting our evaluation, is that remedying underrepresentation requires interlinked strategies to provide the opportunities, resources, and environments that enable talented women to succeed—both individual support and institutional transformation, in short.

Although framed by gender issues in science, our study revealed a broad range of faculty concerns about how to have more productive and satisfying work and personal lives and about what kinds of institutional transformation would benefit them as individuals and collectively—concerns shared by male and female, science and non-science faculty members alike.

In this article, we explore the broad questions raised in our interviews: What kind of institutional transformation is needed to enable the faculty we have now and will have in the future to lead more satisfying and productive lives, and how can that transformation be achieved? In particular, we examine the role of faculty development, a central change strategy of this project, which is based on the premise that effective faculty members are a prerequisite to an effective institution.

Scrutinizing our interview data through this lens, we identified a range of skills and capacities that faculty want to develop to help ensure their success and satisfaction as teachers, scholars, and whole persons. Traditional faculty development activities target some of those skills in assisting people to prepare a tenure dossier, negotiate a teaching assignment, or revive a research program. But many faculty also described the need not just for individual but for workplace transformation. And we could conceive of faculty development targeted toward enhancing work groups—the faculty as a body or a collection of bodies, such as departments—and not just the institution's individual members.

A third group of problems involved entire systems of interlinked policies and practices, cultural values and norms. As researchers categorizing this data, we faced the same question as the project's implementers: What is the relationship between the individual and the system? ADVANCE project leaders around the country seek to transform a dysfunctional system that systematically excludes women and minorities. Yet they also want to support the women and men who are trying to survive long enough in that dysfunctional system to have a chance to change it.

In this article, then, we analyze faculty needs and consider the possibilities and limitations of faculty development strategies in contributing to institutional transformation in the service of supporting a more diverse faculty.

The LEAP Project

The ADVANCE projects are remarkably diverse in their theories of action and choice of strategies. However, faculty development plays a role in many, and it was the central change

strategy chosen by Leadership Education for Advancement and Promotion (LEAP), the 2002-2008 ADVANCE project at the University of Colorado at Boulder, elements of which continue to this day**.** LEAP assumes that faculty are the driving force of the institution, so helping faculty be productive makes the entire institution more productive. As an early document put it,

> LEAP cannot solve directly problems such as two-career couples, how to care for young children and pursue a tenure-track appointment, or how to move from an instructor position. It can provide a framework within which to hold discussions on these issues. It can also help empower people to work on solutions to these problems and help them believe that these are problems that can be solved.

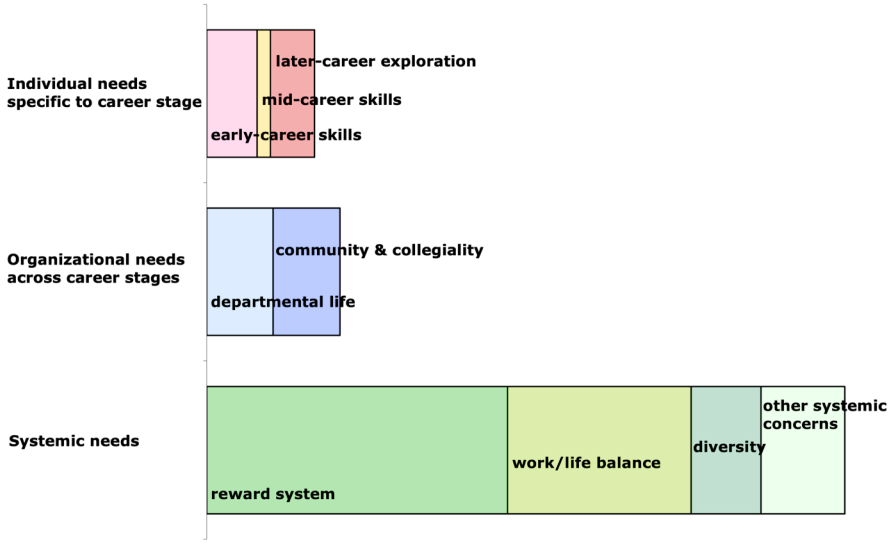
To achieve these goals, LEAP has offered multi-day leadership workshops, a coaching program, speakers, short topical workshops, book groups, and mini-grants to support individual career transitions and departmental climate initiatives not only to STEM women but to men and women across campus. A faculty fellowship program also targeted mid-career women who wished to hone their leadership skills and test the waters of academic administration.

The Interview Study

In evaluating the LEAP project, we interviewed 44 tenure-track faculty, across career stages and departments, who had participated in LEAP programs from 2003 to 2005. Our goal was to help the program directors refine their offerings, set priorities, and figure out how to sustain their programs when the external funding gave out. We wanted to hear what skills and knowledge faculty thought would benefit them, in what new directions might they move, what challenges they forecast for themselves and the university, how structures and policies helped or hindered their work, and how university culture influenced their workplace morale and sense of optimism.

Altogether, the 44 participating faculty made nearly 1100 separate observations about their needs that, collectively, transcend particular campuses and disciplines. We sorted these into three tiers, each with sub-groups, as shown in Figure 1. The figure arranges these needs in order of complexity and shows their relative importance to faculty, but they might also be imagined as spread along a spectrum rather than separated by sharp boundaries. We also examined gender differences in those observations. Men and women emphasized different categories, which suggests how choices within the strategy of faculty development might link to the diversity goals of ADVANCE.

Figure 1: Three Tiers of Faculty Needs



Individual Needs: Career Skills and Resources

Early-Career Survival Skills

"It is a hard transition to make, to go from being a postdoc to your first faculty job, where suddenly your time is divided 27 different ways."

–Patrick, associate professor, science

Early-career faculty emphasized making the transition from graduate school to faculty life, which entailed managing stress and learning how to play new multi-dimensional roles. They wanted to build specific skills such as how to advise students and work in research groups. LEAP's introductory workshops targeted early-career faculty skills such as time management, career planning, negotiation, and communication, and participants reported a surprisingly high positive impact for these workshops.

Contrary to the stereotype, preparing for tenure was not the focus of these early-career faculty. Instead, many tried to keep a long view in mind. "Tenure should be a byproduct of a rich, engaging, meaningful, intellectual life, not the goal," said Lana, an assistant professor in social science.

Investing in early-career faculty may pay off very handsomely. As a 2007 National Research Council report points out, replacing a faculty member is much more expensive than retaining one already hired: it may take up to 10 years to recoup the start-up costs of hiring a new STEM faculty member in particular. So addressing the career needs of pre-tenure faculty can directly benefit the university by improving the retention and success of its new hires. At Colorado, the university acknowledges the value of these workshops by continuing to offer them after they

were no longer externally funded and by working to build them into the start-up packages of all new faculty.

Mid-Career Executive Skills

"I've got to a comfort level where I can manage my group,... the students underneath me, and myself. But am I at a comfort level where, with a bunch of peers, I could lead a discussion or something like that?"

—Jason, assistant professor, engineering

As they progressed in their careers, faculty required different skills. Faculty nearing tenure and those recently past tenure expressed a shared need for advanced skills: after five to 12 years of experience, they had mastered early-career survival skills and now wanted to develop the executive and organizational ones required to run effective meetings, lead committees, and foster collaborations. LEAP addressed these needs through its advanced leadership workshops and in training for department chairs. Baldwin and coauthors (2008) likewise note the needs of mid-career faculty for leadership skills.

Later-Career Exploration

"If I said to myself, 'Okay, I want to be dean someday,' well, what would I do? ... I have some idea of how to pursue it, but I'm groping a little bit."

—Norma, associate professor, science

Experienced faculty wanted to explore options for career growth, as Baldwin and coauthors (2008) also found. Associate professors sought advice on long-term career planning, changes in career direction, and promotion to full professor, and LEAP programs were developed to meet those needs. Senior faculty wanted to test their aptitude for leadership roles. LEAP provided one person this chance each year, but many others expressed interest in flexible, short-term opportunities to "try on" academic administration. Investing in senior faculty development allows an institution to help experienced faculty develop in new directions and to foster home-grown leadership.

Organizational Needs: Collegiality and Community

The second tier of faculty development needs cuts across career stages, addressing the life of faculty as a group. Faculty wanted better relationships within their immediate work groups and also sought intellectual and social interactions with faculty outside their departments or fields.

The Central Role of Department Chairs

"What are the key factors that affect women's careers on this campus? It's access to resources, it's merit increases, it's startup packages, it's laboratories, it's access to libraries, it's travel funds—those are things that department chairs, and deans also, have an impact on."

—Elaine, full professor, engineering

"A lot of the things that make people's lives difficult in academia go on at the departmental level."

—Julia, assistant professor, social science

Department chairs control access to resources, set the tone for decision-making, and communicate explicit and implicit expectations to the faculty in their departments. Chairs' effectiveness, fairness, and communication skills are thus essential—but they are not always well-developed. Many faculty recommended training and support for chairs, and the chairs themselves saw the need for help as they faced a steep learning curve on a dizzying array of issues.

While some chairs sought advanced management training, others just wanted to talk with fellow chairs. Interactive formats using panels and case studies proved popular in LEAP workshops for senior leaders, including potential future chairs.

Difficult Conversations

"Are you willing to spend your time and energy against a butthead? And that butthead could be a dean, a provost, a full professor who's got a Nobel prize, a MacArthur prize or whatever—but they are dominating the meeting, keeping other people's opinions from being heard."

—Ricardo, full professor, engineering

"Our department has widely been touted as being very collegial. What we're suffering from now is where collegiality has been a reason not to address difficult issues. Some difficult issues have come to the fore, and we don't have the skills to talk about them, or the willingness."

—Carolyn

These quotations highlight two sides of the same coin. Some faculty described how conflict in their departments escalated into dysfunction: turf battles, posturing, hazing, the monopolizing of meetings. Others described what Massy and coworkers call "hollowed collegiality" (1994),

where the desire to preserve a surface calm kept substantive issues off the agenda altogether. In either case, poor communication skills prevent a department from addressing important issues and setting collective priorities.

Many faculty recognized the need for better communication skills: listening, acknowledging others' concerns, setting aside past disagreements to seek new solutions, facilitating effective meetings, using informal channels to build consensus—all crucial to effective departmental functioning. Asked directly, few faculty saw incivility as a major problem—yet their narratives often told a tale of disruptive behavior that was seldom confronted or of necessary conversations avoided.

Indeed, learning communication skills was both a draw and a frequently reported outcome for LEAP workshops, which are addressed to individuals. However, LEAP's attempts to offer the same skills to departmental groups met with only moderate success. We see this reaction as grounded in a strong tradition of academic autonomy and some resistance to learning "soft" skills. Faculty theorized that voluntary training for individuals would eventually improve communication in departments—perhaps a viable model, but certainly a slow path to change.

Intellectual Connections

"Here's your office, we'll see you in seven years—maybe! And have a nice trip."

—Marty, assistant professor, social science

Faculty expressed the need for intellectual community in their department and beyond it. Early-career faculty felt especially socially and intellectually isolated and blamed this on the inherently solitary nature of scholarly work. Marty elaborated as follows:

> You're supposed to be an independent, established researcher, and you've gone out there and made a name for yourself—so it's really geared into the system…. You are supposed to have shown that you have evolved from your graduate peer group, gone off into your own world, and in fact broken ties that you made in the past.

But his colleague Lana described a more productive intellectual climate:

> There are two ways to do academics, "clay pigeons" and "soup." "Clay pigeons" is where you make your little argument and you launch it in the air, and everyone sits around and fires at it. And "soup" is where you throw an idea out and drag it into the middle of the table, and everyone throws in some more vegetables and meat. And I have to be in a soup department, or I can't work.

Lana and others saw a direct link between personal isolation and scholarly attainment. Support "is very, very important for our mental health, which is going to increase our productivity," noted Jeanine, an assistant professor in science. LEAP workshops offered skill development—but even more important, they built social networks that provided ideas and reassurance, helped solve problems, and boosted morale.

Established faculty spoke less often of social isolation but echoed the need for stronger intellectual ties. They mentioned colleagues whose intellectual generosity and leadership fostered connections, who put "community first" and not their own careers. Lana described these faculty as giving "support for doing the things that are low priority but matter—reading a lot, having coffee with your colleagues, having faculty reading groups." Then she added, "I'd like to see a lot more positive social pressure on doing that kind of work."

The Value of Relationships

"I don't want [young faculty] to view any one person as their mentor. I think everyone—they and myself—should seek multiple counsel."

—Tony, associate professor, arts

Like Tony, many faculty emphasized mentoring relationships. They recommended improvements to the formal mentoring process, but they also saw mentoring as a career-long commitment, a shared responsibility of peers and senior colleagues. The best mentors, said Daniela, an assistant professor in social science, "never tried to tell me that I had to be exactly like them. But they are more or less interested in what it is that I'm facing and can offer me suggestions or strategies as to how to go through it." Mentoring should not force conformity to narrow notions of success. As Daniela further noted, "The ultimate goal for a coach should be to try to develop that person's characteristics and personality [traits] to make them better people—and they'll carve their own goals out."

Some faculty wanted more interaction with those outside their own departments and career cohorts. Senior faculty felt the need to better understand their younger colleagues; in return, they were willing to provide advice, information, and an often-calming reality check. Such cross-generational relationships across units provided a fresh perspective on problems, independent of evaluative roles. As Ricardo put it, "You get a conversation that helps both people understand the diversity of the campus and doesn't necessarily say that what's going on in their department is right or wrong. ...There is a degree of anonymity and safety, and at the same time potential empathy, from somebody on campus outside of your department."

Systemic Needs: Structures that Enable Flexibility and Balance

We have so far discussed two tiers of faculty development needs, individual and organizational. But our dataset also contains a third group of concerns whose sheer number—over 750 statements—demands attention. In these statements, faculty described problems that are not solvable at an individual or even unit level but require changes to institutional structures and systems—for instance, the provision of low-cost, campus-based child care. These needs thus link individuals and the institution: they are institutional problems that constrain faculty's ability to do their jobs well.

A More Flexible Faculty Reward System

"The way it is now... boy, if you aren't God's gift to your discipline, you're in trouble. ...I think that there's a sense of production line. And limited acceptance of diversity of behavior and diversity of investigation and diversity of success, if you will."

—Ricardo

Nearly half of faculty statements in the systemic tier addressed the faculty reward system. Our interviewees spoke less about formal procedures than about the informal processes of earning tenure, promotion, raises, or recognition. They interpreted the unstated norms and expectations in their departments, worried that these varied unfairly, and critiqued the ways in which the reward system induced stress and pushed performance standards ever higher, as exemplified in Ricardo's frustrated observation, as well as this one by Lana:

> The bar for just sheer output is going up every year. ...I think we have a system which pushes people into producing just *crap* in order to get the numbers—you know,

> "minimum publishable units." I have no time to read a book any more, because I'm so busy writing all the time—there's something deeply wrong with that.

In discussing the reward system, faculty also spoke of:

- Failures to communicate clearly and consistently about criteria and standards for tenure, promotion, and post-tenure evaluation of faculty.
- Their concerns about how research, teaching, and service are weighted in evaluating faculty work, and the difficulty of fairly evaluating the quality and impact—not just the amount—of each.
- Disparities created by differing norms across departments and disciplines, as well as the special difficulties of evaluating faculty whose work bridges departments, disciplines, or roles.
- The negative side effects of a reward structure that, they said, discourages collaboration, collegiality, and a willingness to take risks; hampers the institution's ability to retain an excellent and diverse faculty by deterring capable graduate students from academic careers; and diverts faculty attention away from graduate and undergraduate education.

A quarter of faculty statements about the reward system discussed interdisciplinary scholarship or teaching. Many faculty were interested in interdisciplinary work, and they had heard university leaders tout it. Yet they felt constrained in pursuing it. Some feared that their departments could not fairly evaluate interdisciplinary scholarship or teaching, while others found little opportunity to cross departments to explore shared interests. Faculty saw tension between the primacy of individual publication in the standards for advancement and the intrinsically collaborative nature of interdisciplinary work. Like other needs in this category,

their individual concerns were embedded in larger systems, and their individual solutions were constrained by those same systems.

Work/Life Balance

"We need to have more of the people that our group looks up to, and models after, [be] people who have lives, who have families, who do things other than think 24/7 about the next scientific project. We need someone to stand up on a rooftop and say, 'Hey! Get a life!' **[Rachel, another good pull-quote!]** And whether anyone is brave enough to do that is not clear."

—Alice, associate professor, science

Many faculty raised concerns about work/life balance: how to meet the demands of an academic job and still live a satisfying personal life. Again, individual and system issues intertwined. Some told stories about coping with these multiple expectations as individuals, while others described how academic policies and culture framed individual dilemmas. As Carolyn remarked,

> I think one of the biggest things for faculty is just learning to relax. *(Laughs.)* It's okay to have a life, and it's important. There's one thing else that the university could do—find ways to really make it clearer that they need us to be whole people. They do not need us to be just worker bees.

Work/life balance issues were salient in individuals' experiences and perceptions of academic careers, a persistent theme across all our interviews for the project. The interviewees were acutely aware of colleagues' support or lack of it for their efforts to balance their work and personal lives. What Colbeck and Drago (2005) have called a bias against caregiving was reported by partnered, single, gay, adoptive and foster parents and by those caring for elderly,

sick, or disabled family members. Time management, decision-making, and coping strategies engendered guilt or required complicated juggling acts, even as they varied by the specific challenges faced.

Commented [R1]: It is accurate to say that all kinds of caregivers reported this issue; it is not accurate to imply that we can distinguish the relative strength of the issue as experienced by different groups (i.e. that some experience it "especially") .

The interviewees also discussed:

- The "two-body problem"—the difficulty of finding appropriate local work for partners who were also professionals.
- Choices about whether and when to have children and the personal and career costs and benefits of choices such as stopping the tenure clock to take parental leave.
- The importance of personal time to health and productivity: not just for family but for friendships, spiritual practice, community involvement, relaxation, exercise, and hobbies.

As with the reward system, many faculty feared that concerns about work/life balance would deter young scholars from academic careers. Our separate interviews with graduate students suggest that this fear is warranted.

The problems identified in this tier make it clear that not all needs can be addressed through faculty development. For example, better time management skills may help a new professor cope with conflict between work and personal obligations, but the underlying problem is systemic. Some contributors to the problem are not personal: gender inequity in family roles, academic workplace norms equating productivity with time on task and emphasizing quantity over quality, and the competing ticking of tenure and biological clocks. Fixing the person instead of these systems is temporary, unsatisfying, and unfair.

Faculty Development as a Change Strategy: Possibilities and Limitations

The three tiers of needs portrayed in our analysis emphasize both the possibilities and limitations of faculty development as a general change strategy. Moreover, the gendered distribution within these tiers has particular implications for ADVANCE and other change initiatives that address gender disparities.

The first tier of faculty development needs, issues for individuals that are specific to career stages, is well recognized in the literature and addressed on campuses, as Sorcinelli and coworkers found in their survey of faculty developers (2006). In our data, first-tier needs statements by men modestly outnumbered those reported by women. For ADVANCE projects, this finding is a double-edged sword. Meeting such needs does appear to benefit all faculty, consistent with a "rising-tide" philosophy. But a focus on first-tier faculty development needs may not provide the special boost to women faculty that ADVANCE projects seek.

Second-tier needs emphasize connection within and across departments. The importance of departments to faculty is not surprising. In research done at another ADVANCE site, Bilimoria and colleagues (2006) argue that the department is a mediating link that connects individuals' job satisfaction to institutional characteristics. Faculty experience leadership and mentoring—or their absence—in a departmental setting.

But even though a respectful and inclusive work environment matters to everyone, researchers find that collegiality is especially important for women. The women faculty in our study commented about needs related to work units considerably more than men did. Thus strategies to improve departmental life may also help to retain a more diverse faculty.

All types of relationships are important—formal and informal, intellectual and social, within and across departments and career stages. In our study, women's greater emphasis on the need for connection suggests that attending to organizational development may pay dividends in retention and success of women. This concurs with the finding of Sorcinelli et al. (2006) that organizational development is a frontier for faculty developers, who recognize needs that their programs do not yet address.

Overall, men and women placed similarly high importance on the need for systemic change. However, gender differences were evident *within* this tier: Men expressed concerns about the faculty reward structure nearly twice as often as women, while women discussed work/life balance 60 percent more often than men. Women also raised issues of diversity more often.

These different perspectives on the same landscape may be significant for the recruitment and retention of women. Although the men we interviewed were concerned about the reward system, as Gunter and Stambach (2003) describe it, they try to decipher and win according to the rules of the career game. Women experience the reward system in the context of a desire to be whole people and of their other roles as mothers and partners. In interviews similar to ours, Monroe and co-authors (2008) found that female faculty felt that systemic conflicts were inevitable and the risks of challenging them high. So rather than fighting the system, they took personal responsibility for finding acceptable coping strategies. Thus, changes at the system level may have the greatest impact on women's success and satisfaction in academe by lessening their perceived need to find individual solutions to systemic problems.

Visions of New Systems

"The way people talk about what makes a scholar, a tenured scholar, is very individual. You have to point to a person's unique contribution. [But] this runs counter to best business practices, where so much is team-oriented. You don't want a university that's built of people who work alone, you want a university where people are colleagues, where they can be part of a collective and make a contribution that way. ... So there must be multiple ways to demonstrate scholarship. If we are so uncreative that we cannot recognize and think about scholarship in multiple forms, then we don't belong here."

—Carolyn

Carolyn and others offered visions of a new type of system based on a holistic, long-term view of faculty careers. Allowing individuals to evolve over time, the system would provide more flexibility and permit more variation among individuals. In this view, job satisfaction stems from day-to-day work that holds purpose and meaning and that also builds a satisfying career as a scholar and teacher. Long-term professional goals are thus not at cross purposes with achieving tenure and promotion. "We are creating our careers as we go, and every day we can decide... how much it's worth it to us to really mentor a graduate student or to spend time in a committee meeting," said Monica, an assistant professor in social science.

This flexibility would also reduce panic and paralysis from an over-strong focus on tenure. As Lana noted, "If you hate your job, is getting lifetime tenure in it really what you're [after]? So I stopped thinking about tenure, and I started thinking about having absolutely as much intellectual fun as I could have before they could catch me."

Natalie, an associate professor in engineering, saw that a system in which one size did not fit all would increase not only individual but also collective well-being.

> They say herding faculty is like herding cats, right? They're all off doing their own thing their own way, there's no bosses, it's impossible. And, yet, actually they are all doing the same thing. It's not an effective way to run an organization, to have everybody doing the same thing. And so recognizing that it is an organization and that you can have different people with skills in different areas that are going to enhance your overall organization... that's when it's going to start making a difference.

Implications for Action

"How secure do we as individuals have to get before we start to really take on some of that changing of the system as part of our individual mandate, contributing to structural change?"

—Monica, assistant professor in social science

Faculty development can address first- and second-tier needs. It does so by providing individuals with opportunities to build their capacities, reflect on their careers, and explore options for longer-term professional growth, while also helping chairs succeed and departments improve communication and the quality of life. Programs that target first- and second-tier needs can also mix people across career cohorts, fostering connections as well as offering information or skills. These improved intellectual and personal connections can aid retention and productivity and may be especially helpful for women. They also help to build capacity within the institution for creativity and leadership.

But to address third-tier needs, changes in policy and structures are needed. Faculty development can help in identifying these changes, then in making them effective, by strengthening feedback between faculty and policymakers, developing the awareness and skills of those who carry out policies, and helping to generate and evaluate experiments with broader models of faculty success.

For example, at Colorado, faculty trained by LEAP helped to gather input from stakeholders across the state for the university's strategic plan. At Georgia Tech, case-study-based training for both faculty candidates and evaluation committees for tenure and promotion helps clarify criteria and standards and raises awareness of unintended bias. And at the University of Michigan, faculty development is reshaping recruitment and hiring processes across campus, as faculty opinion leaders commit to become informed about how bias can creep into decision-making. When they take their new understandings to their department, they can influence not only a particular hiring process but their colleagues' beliefs.

At the same time, a combination of policy changes—for example, lowered barriers to partner hires—and institutional carrots and sticks makes new hiring practices more rewarding for departments. Building on such initiatives, the most transformative efforts will "shake the tree in different places," combining faculty development with policy and cultural changes that do not just passively allow but actively create more flexible views of faculty success and productivity.

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