Advancing the College of Engineering Strategic Goal of Becoming a National Model of Inclusivity and Collaboration

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Joe McGuire joined the faculty of Oregon State University in 1987, and carried out research and teaching activities in biochemical and biomedical materials engineering until his retirement in January 2018. He is now Professor Emeritus in the School of Chemical, Biological and Environmental Engineering. Joe has served as Associate Dean for Faculty Advancement in the College of Engineering since July 2016, in which capacity he provides leadership and support for implementation of new and revised practices to promote a more inclusive, equitable workplace in the College.

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Thuy Tran directs marketing and communications at Oregon State University’s College of Engineering. In this leadership position, she works to manage external perceptions, strengthen relationships with stakeholders, and support efforts to achieve the college’s strategic goals. These efforts include showcasing high-achieving students, generating recognition for faculty research, and promoting the college’s world-class facilities.

Thuy's unique educational and professional background enables her to combine a deep understanding of scientific principles with the ability to tell a compelling story to communicate the scientific and potential societal impact of individual research projects. Her targeted campaigns raise the perceived stature of the organization and lead to successful institutional fundraising.

After graduating from Williams College with a bachelor’s degree in chemistry and French, Thuy earned a Ph.D. in chemistry from the University of Hawaii. In her early career, she was a research scientist at Pacific Northwest National Laboratory and held management positions in several engineering firms, including CH2M HILL, Lockheed Martin, and Los Alamos Technical Associates. While pursuing her technical career, she obtained an M.B.A in marketing from Washington State University. She was director of marketing and communications for Oregon State’s College of Business before joining the College of Engineering.

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Through her lens as a field ecologist turned executive assistant, Andrea has encouraged corporate and academic leaders to increase their intentional support of an inclusive, equitable and socially just workplace. At Best Buy Inc., she was a founding member of the employee grassroots initiative to raise corporate sustainability awareness with executive leadership, leading to a significant increase of sustainable social and environmental practices across the global enterprise. At Oregon State University, she was recruited to advise the Vice Provost on non-tenured staff development and advancement concerns. Currently, she serves as a member of the College of Engineering’s Change Team, with her focus on non-tenured staff
Advancing the College of Engineering strategic goal of becoming a national model of inclusivity and collaboration

Abstract

The Oregon State University College of Engineering has committed to becoming a community of faculty, students, and staff that is increasingly more inclusive, collaborative, diverse, and centered on student success. We are meeting this commitment in part through design and implementation of new and revised practices for recruitment, professional development, mentoring, and advancement. But changing organizational culture is a large-scale undertaking. In order to build an organizational conscience for the college and secure its transformation into a community where all members feel welcome and engaged, “top-down” policy change must be complemented by enlistment of change agents from every employment sector of the college. For this purpose, a 20-member Change Team — including a balance of tenure-track and professional faculty and classified staff — was assembled in AY17 and empowered to work with college leadership to envision, develop, and resource infrastructure and communication needs to engage all college employees in our culture change process. The work of the Change Team has emerged as essential to advancing our goals in relation to community. We will discuss inception and evolution of the Change Team, profile five projects launched in AY18, and summarize some of the challenges that still remain.

Background

The efforts described in this paper are enabled to a great extent by the broader university-level context. The most important initiatives supporting work within the College of Engineering (COE) are highlighted below. We also provide a brief overview of the college’s strategic plan, which for the first time in the college’s history includes a specific goal focused on inclusive and collaborative community.

Institutional context

During the last five years, Oregon State University (OSU) has taken a number of significant steps to advance equity, inclusion, and diversity. These were informed in part by the 2012 Presidential Taskforce Self-Study on Diversity, which included internal and external review teams. The goal of the self-study was to articulate a vision of the preferred future of OSU as an equitable and inclusive university community, and to identify the most significant goals that must be pursued and accomplished in order to realize that future. The study design actively sought the perspectives of the university community and included review of promising practices at other institutions. Initial outcomes that evolved from increased accountability for equity, inclusion, and diversity included creation of an Office of Work-Life, revitalization of the Dual Career Hiring Initiative, formation of the Greater Oregon Higher Education Recruitment Consortium, adoption of an anti-bullying policy, and establishment of an Ombuds Office. More recently, OSU has re-envisioned and reorganized several of its administrative offices working in the areas of diversity, inclusion, social justice, equal opportunity, and access so that each office can better meet its mission and goals. As part of that effort, the university has established three new positions: a Vice President and Chief Diversity Officer; a Director for Community Diversity Relations; and an Executive Director of the Office of Equal Opportunity and Access. It has also
created a Leadership Council for Equity, Inclusion, and Social Justice, which enlists membership from the leadership of every OSU college. All of these entities are working collaboratively to bring focused energy to university-wide planning and implementation of equity and inclusivity efforts.

In addition, university-level programs that provide professional development opportunities relevant to diversity, equity, and inclusion were encouraged and expanded. Two programs in particular have been especially useful to relevant initiatives in the COE: the OSU Search Advocate program, established in 2008; and the OSU Social Justice Education Initiative (SJEI), launched fall 2016. The Search Advocate program enhances equity, validity, and diversity in university hiring. Search advocates are OSU faculty, staff, and students who are trained as search and selection process advisors. Their preparation includes a two-part (10-hour) workshop series addressing current research about implicit bias, diversity, the changing legal landscape in hiring, inclusive employment principles, practical strategies for each stage of the search process, and effective ways to be an advocate on a search committee. The OSU search advocate directory currently lists nearly 600 trained search advocates on OSU’s Corvallis and affiliated campuses. The SJEI consists of two 4-hour workshops with curriculum that invites all OSU faculty and staff (including graduate students) to begin or continue their social justice and equity journey. Topics include the historical and current social context (in Oregon and at OSU), locating individual identities within this context, micro-aggressions, and cross-cultural communication, among others.

In parallel with the initiatives outlined above, OSU secured an NSF ADVANCE Institutional Transformation award in summer 2014. The overarching goal of the project is to serve as a catalyst for advancing the study and practice of equity, inclusion, and social justice for women and others from historically underrepresented groups who are STEM tenured or tenure-track faculty. The 60-hour ADVANCE seminar is the centerpiece of the project and provides an interactive learning experience centered on analyzing the operations of difference, power, and privilege in higher education, with particular attention to STEM disciplines, and helps participants develop skills and tools to create more inclusive, equitable, and just work environments. Recognizing that gaining an understanding of inequity is necessary, but not sufficient, for institutional transformation, participants complete the seminar with an Action Plan that applies their new knowledge to practices within their sphere of influence. To date, more than one hundred participants have completed eight ADVANCE seminars. Recruitment for all but two of the seminars specifically targeted administrators with authority to implement changes in recruitment, hiring, and promotion policies and strategies to improve institutional climate. In the COE, ADVANCE seminar alumni thus far include the dean, four of five associate deans, four of five school heads, and 11 other engineering faculty with both direct and indirect means for supporting change.

College context and the strategic plan
In June 2014 the College of Engineering began a strategic planning process and in May 2015 celebrated adoption of Creating a better future — A strategic plan for the Oregon State University College of Engineering 2015-2020. The plan is framed around four Strategic Goals relating to (1) community, (2) transformational education, (3) research and innovation, and (4) partnerships. Goal 1 in particular commits the college to becoming a national model of
inclusivity and collaboration, as evidenced by a community of faculty, students, and staff that is increasingly more inclusive, collaborative, diverse, and centered on student success, and the presence of fully operational and integrated infrastructure, training, education, and communication systems to support the model throughout the college.

In July 2016, the dean appointed the first associate dean for faculty advancement in the COE to provide leadership and support for implementation of the more inclusive, equitable, and just practices needed to realize Goal 1. As originally envisioned, this effort would involve the implementation of new and revised practices on three major fronts: (i) faculty recruitment; (ii) promotion and tenure; and (iii) the professional development of faculty and staff. The intent of the first two is to promote more equitable, inclusive, and just advancement of tenured and tenure-track faculty. The intent of the third is to promote a college climate that reflects a shared value for equity, inclusion, and justice among all employment sectors. As summarized below, ready access to excellent guidance on best practices for search and selection processes and for proper application of promotion and tenure criteria, suggest a straightforward path toward progress on those fronts. Progress on the third is achievable, but even with access to very useful resources across campus, we have found that path will likely require considerably more creative energy.

Implementation of the College of Engineering strategic plan

Faculty recruitment
The national need to improve inclusivity and increase diversity in STEM disciplines poses a complex challenge that is associated with a variety of policy and social issues described and analyzed by a huge volume of scholarship and archival reports [1-5]. The engineering faculty diversity challenge in particular has proven to be quite durable. Despite this complexity and the slow pace of progress in diversifying faculty ranks overall, there are universities of every Carnegie classification that have created faculties far more diverse than those of their peers, often starting with faculty diversity levels well below average. Superior recruiting practices are cited as principally responsible for driving this success [6].

The COE strategic plan explicitly enlists us to purposefully and thoughtfully recruit and retain a more broadly diverse community. In order to improve faculty diversity in the COE, we have integrated search advocacy into every tenure-track faculty search. We require that all search committees include a search advocate from outside the hiring unit, and all search committee chairs must also have completed search advocate training. Screening criteria are written to be as inclusive as possible, recognizing there may be multiple ways to meet a qualification, and each is clearly linked to required and/or preferred qualifications listed in the position description. In this regard, focus is placed on preparing to “screen applicants in” as opposed to writing qualifications to screen them out. When candidates are selected for phone interviews, then selected for on-site interviews, committees must be able to base those selections on screening criteria that are clearly linked to the qualifications, as opposed to basing them on their own professional experiential values, and (unchecked) assumptions.

In addition, the demographic impact of screening is assessed after selection of candidates for phone interviews, and then again after selection of candidates for on-site interviews, to allow committees to determine whether their process might have led to the disproportionate elimination
of one group or another. In such an event, the OSU Search Advocate program will assist committees interested in bringing about a more balanced outcome, e.g., by suggesting they revisit applications of qualified applicants that had been screened out. The purpose of this step is not to advance people based on their identity, but rather to try to identify what might have produced the screening effect and, if possible, adjust the criteria to make the process more even-handed.

Since inception of the strategic plan, more than 50 percent of new faculty hires in the COE have been women, increasing the percentage of total women faculty in the college from about 15 percent in 2015 to nearly 22 percent today. However, as experienced by many predominately white institutions, we have continued to struggle to recruit and retain tenure-line, underrepresented U.S. engineering faculty of color. Sixty-four percent of tenure-line COE faculty are U.S. citizens (6 percent faculty of color), and 25 percent are permanent residents of the U.S. (7 percent faculty of color), and this has remained fairly steady over the past five years. Data are not available on the numbers of faculty who have disabilities, identify as lesbian, gay, bisexual, transgender, or queer, or hold other subordinated identities.

**Promotion and tenure**

While the recent increase realized in women faculty hires in the college is encouraging, that indicator alone provides no real useful information about better equity, inclusivity, collaboration, or community. In this regard, it is important to recognize that throughout college history only about 20 different women in tenure-track appointments have ever been promoted to associate and/or full professor. Among them, about 10 have received promotion to full professor. Until recently, practices used to evaluate faculty research and teaching accomplishments had not aligned well with either the OSU promotion and tenure (P&T) Guidelines or the COE strategic plan. Such misalignment made it difficult to ensure a fair and proper evaluation and also limited any potential for guiding faculty energy in ways that best serve our mission-specific activities. For example, academia has institutionalized a number of barriers to collaboration, and these are especially apparent to untenured faculty. Establishing independence as a researcher is often prioritized over accomplishing great things together, and this can result in new faculty being hesitant to collaborate with senior faculty or get involved in interdisciplinary projects. Revision of P&T practices is thus a worthy aim if we intend to become a model for inclusivity and collaboration.

At OSU, the Promotion and Tenure Process Review Project was launched in 2005 to determine what aspects of the university’s P&T system may hinder its ability to attract, employ, retain, and advance scholars from various different identity backgrounds. A report produced as a result of the project revealed four critical concerns. Among them, the question of fairness was the greatest overall concern. Candidates denied promotion or tenure perceived that the university P&T criteria were selectively applied; that criteria not known to them were used; and/or that criteria interpreted and applied at the college and departmental levels could evolve or change during a candidate’s probationary period. This perception created a sense that P&T was a moving target. At the unit-specific level, variability of commitment to faculty advancement was another critical concern, with reported behaviors varying between advocacy, support, neutrality, and challenge.
The report led to a number of recommendations for process improvement, some of which are currently enforced across campus and within the COE. But several challenges have remained in relation to implementation of P&T practices in the COE that are compliant with otherwise functional university guidelines. A review of college P&T practices carried out after inception of the strategic plan revealed the most persistent among these challenges. They are summarized below, along with some steps we have taken to address them.

One challenge was an inadequate awareness among P&T committee members (at the college and unit level) of what they are actually enlisted to do as a peer reviewer. From the perspective of the dean’s office they are enlisted to provide thoughtful evaluation of candidate dossiers in relation to OSU’s explicit criteria for promotion and the granting of indefinite tenure, university guidance on the many activities from which scholarship and creative activity may derive, and the many activities from which a commitment to effective teaching may derive, and COE core values and performance goals laid out in our strategic plan. Instead, a number of committee members believed it appropriate to provide their personal judgement on any given candidate’s suitability for promotion, based on their having acquired so many years of experience as a tenured researcher and teacher in the COE. As a result of this, scholarship and creative activity were often simply enumerated by committee members (as opposed to being carefully and objectively evaluated) based on their (committee members’) experience with traditional measures of research productivity.

The review also revealed that P&T committee membership at the college level in particular lacked broad representation of perspective with respect to both gender and rank (we recognize that analysis of representation along other dimensions of identity – race, sexual identity, (dis)ability status, others – is lacking, but expect that similar patterns of deficiency exist). Since 2010, college P&T committee members have been appointed through an election process. Until this year, only four (white) women and three associate professors (all men) had ever been elected to serve on the college committee. Moreover, associate professors had been required to leave the room during the entire evaluation of any candidate being considered for promotion to (full) professor. This practice suggests a culture where one’s eligibility to “make a decision” (i.e., to vote) was valued over one’s ability to contribute perspective to an evaluation.

We are addressing these issues by providing orientation and training to the college and unit-level P&T committees. And as P&T committee members must be elected, we are making all faculty aware that proper inclusion of associate professors on the college committee — and inclusion of assistant as well as associate professors on unit committees — are two of the best mechanisms we have to secure better diversity, broader perspective, and improved function. In addition, college and unit-level leadership are being more proactive in nominating faculty with the skills and motivation to promote better alignment of P&T committee function with college and university goals. It is encouraging that the (13-member) AY18 COE committee includes three women, each serving for the first time, and two associate professors.

Finally, we are revising faculty position descriptions to better support university values in relation to effective teaching and to scholarship and creative activity — especially for faculty whose demonstration of scholarship may be nontraditional (e.g., “community-engaged scholarship” [7]). College leadership is also encouraging adoption of a written expectation for
every faculty member to promote achievement of college and university goals in relation to building a more inclusive and collaborative community. Such revisions are significant, because the position description is central to evaluation for P&T at OSU. We have revised the letter used by our schools to solicit external letters of evaluation to reflect the changes just outlined above, and revision of the P&T dossier template (and associated assessment documentation) used by our college to properly reflect those changes is in progress.

**Professional development of faculty and staff**

We have developed and delivered several new and revised faculty development workshops to promote inclusive, equitable, and just practices in COE mission-specific activities. These included a new faculty “boot camp” delivered annually since 2016, including one half-day dedicated to faculty advancement in relation to the strategic plan. We have also revised workshops on research expectations, teaching effectiveness, and graduate student mentoring, among others. But these improvements were directed primarily to junior faculty on tenure track and, like the initiatives put in place to improve P&T practices, do little to promote development of professional faculty and classified staff, which constitute the majority of COE employees.

**The Change Team**

With reference to Goal 1 in the strategic plan, the purpose of work toward the professional development initiative is to promote a shared value for equity, inclusion, and justice among all employment sectors in the college. With this in mind, the first strategy formally considered (immediately after inception of the strategic plan) was to bring in a consulting firm for as many campus visits as required to deliver “diversity training” to all of our roughly 400 COE employees. This proposal was soon dismissed in favor of assembling a cohort of internal change leaders — with representation from each of our five schools as well as college administration — to build capacity within the college to take ownership of our own learning. The original Change Team included 13 professional faculty and classified staff, and 12 tenured or tenure-track faculty.

**Evolution and current projects**

The original charge to each Change Team member was to become empowered to co-facilitate two 2-hour seminars, intended to provide a foundational level of understanding of diversity, equity, inclusion, and social justice among the majority of staff and faculty within the college as a means to facilitate its transformation into a model for collaborative and inclusive community. During AY17, the Change Team came together to participate in two 2-day workshops facilitated by an external consultant, as the first steps in carrying out their charge. Moving forward in this way, we took care to ensure that seminar content would be designed in alignment with and in support of other seminars/workshops available across campus that engage issues surrounding inclusive, equitable, and just practices in our work settings. Representatives from SJEI as well as the Search Advocate and ADVANCE programs were included in our work with the external consultant and provided valuable input to our ongoing assessment of progress in relation to development and empowerment of the Change Team.

With appropriate (and customizable) diversity training available on campus — and recognizing that: (i) training seminars, while necessary, are not sufficient; and (ii) real change work must be
multifaceted and include evidence-based adaptations and revisions in organizational structures, policies, and practices — midway through AY17 the Change Team altered its course, choosing to envision and develop member-selected projects and multiple modalities to build the more inclusive, equitable, and just community we seek with Goal 1.

For that purpose, the Change Team met twice more in spring 2017 for two half-day workshops to envision mechanisms for engaging faculty and staff in discussions and actions that support equity, inclusion, and justice in the COE. During those two workshops, through mainly small group and individual work, the team first identified “what the problems are,” or the opportunities for improvement (i.e., opportunities for improvement of climate, equity, inclusivity, diversity, and just practices). Then for each problem/opportunity, the team identified various modalities (actions, activities) that might help realize the needed improvement.

In order to get individual team members to commit to working on a specific opportunity and selected modality in AY18, each individual was asked, as a change agent, to consider what each is most passionate about, i.e., which among the opportunities, problems, and/or activities discussed might each be motivated to target in their own unit (or outside); how/where does each want to spend their time and energy, etc. These thoughts were written down by each participant after some time for self-reflection, then organized into project categories. Team members then gravitated to the project category most attractive to them and, once their subgroup was formed, began to articulate what their AY18 project objectives might be and what resources might be needed in order to meet those objectives.

As a result of this process, the Change Team proposed five projects for AY18, altogether requiring about $50,000 in addition to some minor redistribution of FTE and approval for course release in specific instances. The projects are briefly summarized below.

*Increasing competency, changing culture, and building an organizational conscience.* The initial goal of this project is to enhance COE community members’ cognitive and affective knowledge around issues related to inclusion, equity and justice. Next, the increased knowledge is spread throughout the college by the marketing and communications group via the communications tools they use, the events they organize, and the stories they tell. The marketing and communications staff members possess unique expertise and access to communication channels that position them well in spreading the knowledge. The ultimate and long-term goal of this effort is to build an organizational conscience for the college and turn it into a community where all members feel welcome and engaged — a community that reflects and diversity and richness of the discipline of engineering itself. During AY18, the group will bring two learning opportunities to campus. The first is *Spinning into Butter*, a play that explores the dangers of racism and political correctness in America, with the main narrative situated on a college campus. Three free performances will be offered over a two-day span, with the theater group hosting talkback sessions after each performance. The second event will bring Tricia Rose, an internationally acclaimed social justice scholar, to campus. While at OSU, she will present a public lecture titled “Creating Anti-Racist Communities,” engage in in-depth conversations with college and university leaders on how to build an inclusive and socially just community in STEM, and meet with faculty, staff, and students. After AY18, the group will seek funding to
continue bringing acclaimed scholars, authors, and other resources to campus to help elevate our collective knowledge around the topics of diversity, inclusion, equity and collaboration.

*Design of modules to enhance graduate students’ capacities to engage issues of inclusivity, equity, and social justice.* The goal of this project is to develop modular learning materials that introduce graduate students to the concepts of difference, power, and privilege, especially as they relate to engineering culture and contexts. For each module, learning outcomes will be established, supporting reading material identified, content and delivery strategies designed, and assessment strategies developed. Specific topics being considered for development include: stereotypes and cognitive bias; ideological pillars underlying engineering culture that impede progress toward inclusive, equitable, and just practice; social construction of difference and the role of forced binaries (along gender, race, ability, etc.); how perceived differences, combined with unequal distribution of power across economic, social, and political institutions, result in subordination and domination; and the symbolic dimension of oppression. The subgroup is designing 10 contact hours of content that will be piloted across multiple graduate engineering programs in spring 2018. Several members of this group have experience teaching social justice concepts in the context of engineering, which helps situate this group for success.

*Development of a scaffolded approach to enhancing undergraduate students’ knowledge and skills supporting inclusive and socially just teaming practices.* As originally conceived, this project was to facilitate the design of a progressive, four-year curriculum that supports development of productive and inclusive teaming practices for engineering students. However, this scope was quickly reduced to engaging with first-year curriculum only (applicable across all engineering disciplines) in order to ensure the project objectives could be met considering the limited time faculty have available to invest. The team is designing several modules that could be integrated into introductory engineering courses across the college fall 2018, including an introduction to productive teaming skills through a collaborative game; use of product archeology to help student explore ways in which products are gendered or racialized; exploration of cognitive bias and how it manifests in our personal and professional lives; a critical history of engineering; and exploration of team roles and the importance of understanding one’s own personality and inclinations when participating on a team. In addition, two members of this subgroup are participating in a parallel effort supported through an NSF Revolutionizing Engineering Departments award: a Professional Learning Community (PLC). PLCs are collegial groups that provide educators across disciplines facilitated opportunities for extensive inquiry-based faculty development around a focal point. This group’s focal point is the design of instructional content, pedagogy, and assessment metrics for productive, inclusive, and socially just teaming practice. Obviously, there is considerable overlap between the two initiatives, and the COE Change Team members are positioned to act as a bridge to best align the efforts. Several members of this subgroup are formally trained engineering education researchers, and their expertise provides a solid foundation for the group’s work.

*Alignment of ‘Action Plans’ developed by engineering faculty and administrators who completed the NSF-supported ADVANCE seminar.* As mentioned above, 20 COE faculty and administrators are alumni of the ADVANCE seminar and, as such, each has developed an Action Plan. These plans are informed by the new understandings of difference and systems of power gained by the participants and outline intentions toward effecting positive change in policies and practices
within each participant’s own sphere of influence. The goal of this subgroup is to review the 20 action plans submitted to date by ADVANCE alumni in the COE and to identify any evident alignments and/or synergies. This assessment will inform a story of how change is occurring in the COE, help college leadership advance our inclusivity/equity work, and inform our current efforts toward faculty advancement as well as our next steps. This subgroup will also coordinate with colleagues conducting similar efforts in other colleges to compare and align action plan goals across the university. The members of this subgroup include ADVANCE seminar alumni as well, so they have strong relationships with the ADVANCE leadership and a good understanding of how COE goals around inclusion and equity fit within the larger institutional context as framed by the ADVANCE project.

Revision of the manufacturing engineering undergraduate curriculum. This subgroup will undertake revision of the manufacturing engineering undergraduate curriculum in order to enhance its flexibility and accessibility. The group will work in concert with industry partners, focusing on the need for a changing/more diverse workforce, in order to broaden participation by developing program and recruiting materials, among other activities. One specific gap in the curriculum noted by the manufacturing engineering industrial board was strategic development of teaming, communication, and project management skills. We expect this initiative to benefit by the materials produced by the productive and inclusive teaming initiative described above, and since there are members of the teaming project’s subgroup who also participate in this initiative, there ought to be good communication and alignment of efforts.

The Change Team meets quarterly to stay aware of progress and achievement on each project and identify any actions needed to ensure project objectives are met. We expect current projects will evolve, new projects will be developed, and membership will grow as we take on initiatives requiring added skills and energy.

Next steps for the Change Team
Since its inception, employees from every sector of our faculty and staff have found the office of the associate dean for faculty advancement to be a safe venue for discussing their experiences and exploring options for avoiding or otherwise mitigating work-related inequities. In some cases, these interactions have helped leadership to envision and implement procedures or policies to better ensure that all COE employees remain a part of our culture change process. For example, several elements of search advocacy have recently been extended beyond tenure-track faculty searches to those for all unclassified faculty, including advisors, managers, and program coordinators. But the considerable majority of positive outcomes from this ad hoc process have so far been for the benefit of tenure-track and research faculty (i.e., faculty contributing to the research enterprise). This is presumably owing to the fact that the problems they bring are generally less complicated by issues surrounding job classification and organizational hierarchy.

Professional faculty and classified staff within the COE are stratified in relation to job function and level of responsibility. The duties performed by this population include research but also fall broadly into other categories supporting academic, administrative, business and finance, marketing and communications, human resource, information technology, and student concerns. Training opportunities under each category are available either within the college or across campus and, in some cases, through meetings of professional organizations. However, a good
number of professional faculty and classified staff endure a sense of instability in their positions. Many are hired on contracts reviewed and renewed annually, and all of them live in a university town where the employment market is characterized by a good supply of well-educated and skilled candidates who could replace them. Thus, the scope of their professional growth and advancement may be limited by the level of cooperation they receive from co-workers and the support they receive from supervisors.

OSU is explicit in its conviction that commitment to personal and professional growth is critical to employee effectiveness and, by extension, to the continued health and growth of the university. But we do not currently enjoy a college-wide culture where professional development is at once sought by employees and encouraged by supervisors. In order to truly realize Goal 1, it will be important to find a way to create a culture of development and professional advancement and a way to foster supervisor-employee relationships that support that development and advancement. This is a worthy aim but also a high challenge, as some professional faculty and classified staff may see little or no opportunities for advancement in their positions and, in such cases, have little or no reason for continued learning (beyond their own personal fulfilment). It will be important to be able to envision and articulate potential career paths for jobs across the college so employees understand what advancement options are potentially available to them and how they might go about pursuing those options. Often staff must stay focused on meeting basic work-related demands, and so resign themselves to believing their work setting is not a place for meeting self-actualization and related cognitive needs. The problem is only exacerbated when managers must focus on meeting increasing demands with limited resources, in which case development is an easy item to cut. While the Change Team has not mapped out a strategy to solve this problem, we certainly possess the knowledge and experience base, and the motivation, to begin the process.

Summary

The most innovative approaches to culture transformation described in this paper rely on individual community members from different COE employment sectors coming together to take ownership of needed change work, in addition to the implementation of new and revised policies and practices on the part of a dedicated college leadership. Both mechanisms are critical, and we hope our collaborative approach to college transformation may serve as a useful model for others engaged in similar initiatives in STEM institutions and academic units. Through the kinds of projects and actions outlined here, we expect our own mission-specific work will become more relevant and productive, and the college itself will become a much more welcoming and attractive place for faculty, staff, and students — a national model of inclusivity and collaboration.

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