MUTUAL MENTORING GUIDE

Mary Deane Sorcinelli, Jung Yun, and Brian Baldi

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THE INSTITUTE FOR TEACHING EXCELLENCE & FACULTY DEVELOPMENT

Contents

PART ONE
Overview of Mentoring in Academia 4

PART TWO
Introduction to Mutual Mentoring 4

PART THREE
Proposing a Mutual Mentoring Project.....6

PART FOUR
Examples of Mutual Mentoring Projects 6

PART FIVE
Building Productive Mentoring Networks.....10

PART SIX
Establishing a Culture of Mutual Mentoring 15

PART SEVEN
Assessment and Evaluation 17

References.....18

Appendices A–D..... 19–27

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Mutual Mentoring Guide

By Mary Deane Sorcinelli, Jung Yun, and Brian Baldi

Mentoring has long been viewed as a powerful means of enhancing the professional success and personal well-being of faculty members, particularly early-career and underrepresented faculty.

In response, a number of institutions have developed mentoring programs, often shaped by the traditional one-on-one mentoring model of a senior faculty member guiding the career development of his/her mentee. Over time, however, mentoring has evolved, reflecting new models, research, approaches, and experiences. This guide describes an innovative, faculty-driven, and flexible model of "Mutual Mentoring" that encourages faculty at all stages of the academic career to think differently about how they approach and engage in mentoring relationships.

For individual faculty, departments, and interdisciplinary groups interested in enhancing their networks of professional support through mentoring, this guide provides substantive ideas, suggestions, and strategies for implementation. It includes an overview of mentoring in academia; an introduction to network-based mentoring; examples of individual, departmental, and interdisciplinary mentoring partnerships; best practices in building productive mentoring networks for mentees, mentors, and academic leaders; and advice on assessing the impact of Mutual Mentoring.

Please note that throughout this guide, we try to avoid the use of the hierarchal terms "mentee" and "mentor," preferring instead to refer to participants in a Mutual Mentoring relationship by the more egalitarian term "mentoring partners." However, we revert to the traditional terms when we believe that doing so will help promote clarity and amplify the differences between traditional mentoring and Mutual Mentoring.

PART ONE
OVERVIEW OF MENTORING IN ACADEMIA

Mentoring is often cited in the literature of higher education as one of the few common characteristics of a successful faculty career, especially for early-career and underrepresented faculty (Zambrana et al., 2015).

Mentoring can address a number of possible roadblocks to faculty success, offering an effective method for promoting professional socialization, productivity, and satisfaction. It has been shown to further career development through increased research productivity, more effective teaching, more dynamic networks, and improved tenure and promotion prospects. It also fosters social connections and relationships with colleagues who can provide advice, encouragement, and feedback, thus reducing the isolation often reported by early-career faculty. Mentees, however, are not the only beneficiaries of mentoring relationships. Mentors benefit from the development of new networks, the satisfaction of helping another person develop professionally, and the acquisition of ideas and feedback on their own work. Finally, institutions benefit from mentoring through better retention, an improved working environment for faculty, and a stronger sense of campus community (Johnson, 2007; Ragins & Kram, 2007; Sheridan et al., 2015; Trower, 2012).

It can be argued that the need for mentoring is greater today than ever before. Based on our own research, as well as a comprehensive review of the literature on faculty development and mentoring, we know that early-career and underrepresented faculty experience a number of significant challenges that can act as "roadblocks" to productivity and career advancement. These include: getting oriented to the institution; excelling in research and teaching; managing expectations for performance, particularly the tenure process; finding collegiality and community; and creating balance between professional roles and also between work and family life (Sorcinelli & Yun, 2007; Yun & Sorcinelli, 2008; Yun, Baldi & Sorcinelli, 2016).

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Given the wide range of areas in which early-career faculty seek support, how has mentoring evolved to better address the realities of academia as experienced by a new generation of scholars? And how can mentoring help institutions not only recruit and retain their faculty, but also promote their long-term professional development and well-being? The answer to both these questions might well be found in the concept of Mutual Mentoring.

Figure 1
Traditional Model of Mentoring

PART TWO
INTRODUCTION TO MUTUAL MENTORING

Mentoring in academia has been defined by a "traditional model," a top-down, one-on-one, informal relationship in which an experienced faculty member instructs, guides, and supports the career development of an early-career faculty member by taking him/her "under his/her wing." (See Figure 1) Formal mentoring programs at many colleges and universities have attempted to duplicate this traditional model with mixed success (Gibson, 2006; Yun, Baldi & Sorcinelli, 2016).

In recent years, however, the literature on professional development has indicated the emergence of new, more flexible approaches to mentoring in which no single person is expected to possess the expertise of many. Early-career faculty are now encouraged to seek out "multiple mentors" (de Janasz & Sullivan, 2004), "constellations" of mentors (van Emmerik, 2004), "developmental networks" (Dobrow et al., 2012), or a "portfolio" of mentors (Higgins & Kram, 2001) who address a variety of career competencies.

Based on these findings and our own needs assessment data (Sorcinelli & Yun, 2007, 2009) we developed a flexible, network-based model of support called "Mutual Mentoring" in which faculty work with multiple mentors who provide support in their respective areas of expertise, rather than a single mentor who is less likely to be able to address the wide variety of opportunities and challenges faced by diverse scholars in a modern academic career. The model's five key characteristics (Yun & Sorcinelli, 2008) are:

- Mentoring partnerships with a wide variety of individuals including peers, near peers, tenured faculty, chairs, administrators, professional staff and librarians, students, and off-campus mentoring partners (e.g., faculty from other campuses in the U.S. or abroad, a program officer at a funding agency or foundation);
- Mentoring approaches that accommodate the partners' personal, disciplinary, and cultural preferences for contact (e.g., one-on-one, small group, large group, in person and/or online such as via email, chat);
- Partnerships that focus on specific areas(s) of experience and expertise (e.g., teaching), rather than generalized, "one-size-fits-all" knowledge;
- Benefits to not only the person traditionally known as the mentee but also the person traditionally known as the mentor (as the bi-directional arrows in Figure 2 illustrate); and
- A sense of empowerment in which early-career and underrepresented faculty are not seen or treated solely as the recipients of mentoring, but as proactive, intentional agents of their own career development.

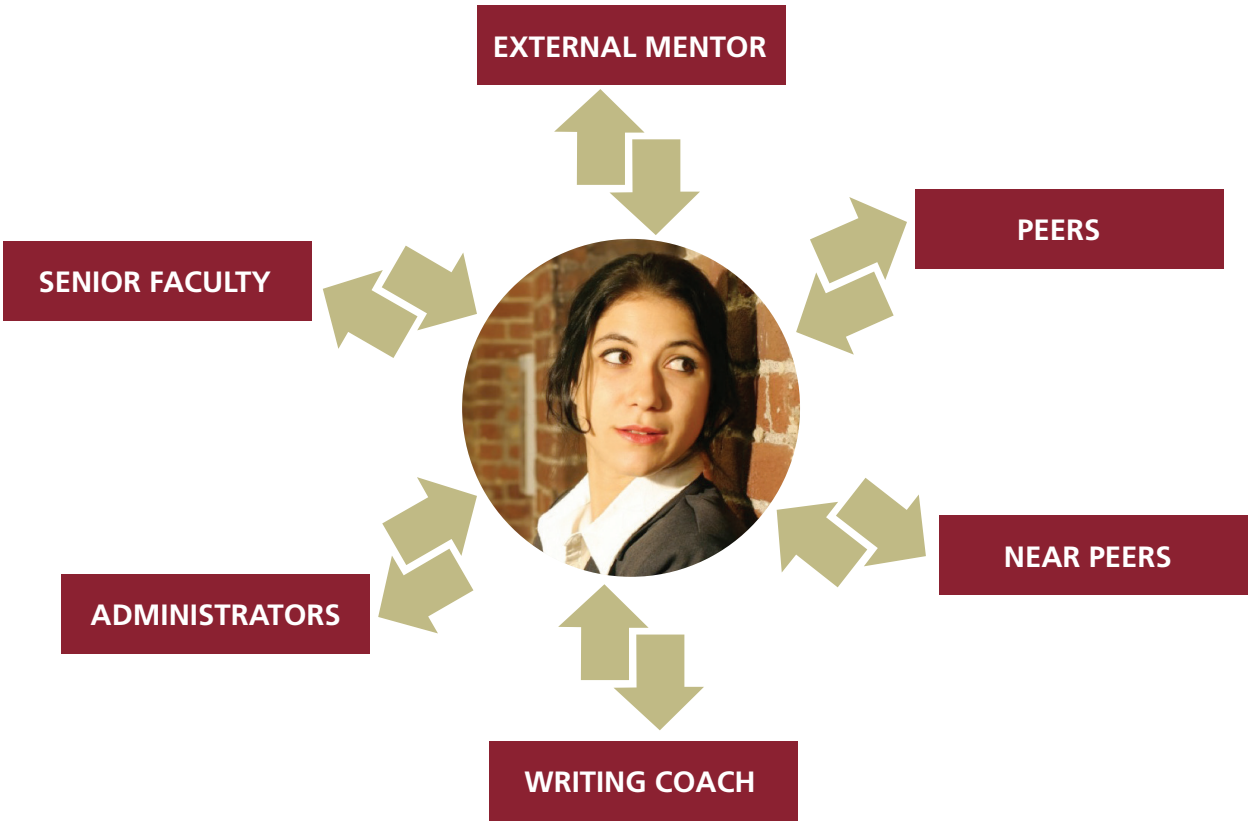

Figure 2
Mutual Mentoring Model

PART THREE
PROPOSING A MUTUAL MENTORING PROJECT

Key to implementing the Mutual Mentoring model is to give faculty members a sense of autonomy and agency to develop their own context-sensitive mentoring relationships and activities, but within a programmatic structure that promises equitable access to resources and support.

At our university, a large, research-extensive public university, we chose to use grants as the medium to encourage individuals to develop their own Mutual Mentoring networks. Writing grant proposals is a fundamental part of the academic culture, and a particularly effective means to incentivize mentoring.

On an annual basis, pre-tenure faculty can apply for Micro Grants to support small networks of two or three individuals, while Team Grants are available for networks of four or more faculty at any career stage (see detailed descriptions and examples of Micro and Team Grants in Part Four).

In a Mutual Mentoring model, each grant year ideally begins with a call for proposals (see Appendices A and B for the application forms) and several drop-in informational sessions that guide potential applicants through the process of developing a successful proposal. These sessions also address the five priority mentoring areas for both Micro and Team Grants, which are organized around the themes identified from our needs assessment as well as the literature on faculty development as most important to the satisfaction and success of faculty across the career stages. Grant proposals are required to address one or more of the following "Priority Mentoring Areas":

- *Getting to Know the Institution.* Understanding the academic culture of departments, schools/colleges, and the institution; identifying resources to support research and teaching; and creating a trusted network of junior and senior colleagues.
- *Excelling at Teaching and Research.* Finding support for research such as developing a research/writing plan, identifying sources of internal and external funding, soliciting feedback on manuscripts and grant proposals; and finding support for teaching such as developing new courses, pedagogical methods, technologies, and interdisciplinary curricula.
- *Understanding Tenure and Evaluation.* Learning more about the criteria for evaluating performance; understanding the specific steps of the tenure process; developing the tenure dossier; soliciting substantive feedback on the annual faculty review.
- *Developing Professional Networks.* Establishing substantive, career-enhancing relationships with faculty members on and off campus who share a teaching, research, or career-stage interest.
- *Creating Work/Life Balance.* Prioritizing/balancing teaching, research, and service; finding support for goal setting; developing time management skills; attending to quality of life issues such as dual careers and childcare.

Proposals are ideally reviewed by a faculty committee. The committee evaluates each proposal based on the following criteria:

- Does the project build upon the Mutual Mentoring model to address one or more of the university's five priority mentoring areas?
- Does the project apply the concept of mentoring networks in a fresh, innovative way to address faculty needs? (This does not preclude replicating other successful projects.)
- Does the project include a plan of action that is realistic, practical, and fiscally responsible?
- Does the project bring faculty together in a way that respects, promotes, and encourages dialogue about diversity and inclusion?
- Can the project be replicated and serve as a model for mentoring in other individual, departmental, school/college, and interdisciplinary scenarios?

Prior to the launch of Mutual Mentoring projects, the principal investigator(s) (PI) of the Micro Grants and Team Grants attend an intake session in which they introduce themselves and their projects. They also learn about the Mutual Mentoring initiative, how to report their grant activities, and the timeline for the mid-term evaluation, end-of-year evaluation, and spending down their budget.

PART FOUR
EXAMPLES OF MUTUAL MENTORING PROJECTS

At our institution, faculty use the Micro and Team Grant guidelines to create a diverse range of projects that are custom-designed by and for the participants. In some instances, participants choose to focus on building mentoring partnerships between peers and near peers, while others dedicate themselves to strengthening connections between early-career and senior faculty. Some teams plan their efforts around developing disciplinary or interdisciplinary on-campus mentoring networks, while others seek out off-campus expertise. Some teams form

into what we call "affinity groups." We think of affinity groups as belonging to the same population demographic, such as women faculty, faculty of color, or post-tenure faculty members who share a research, teaching, career stage, or identity interest. Notably, women and faculty of color have been the most likely to form affinity groups. The flexibility of the Mutual Mentoring model empowers grant recipients to make informed choices about the types of mentors and mentoring activities they need most. As a result, every network looks different. Below are descriptions of and examples from the Micro and Team Grant programs.

MICRO GRANTS

The Micro Grant Program provides support (typically up to $1,200) to early-career faculty to build a small Mutual Mentoring network of their own design. Examples of projects that can be funded by Micro Grants include: on- or off-campus meetings with a mentoring partner to learn or discuss a new research or teaching method; travel expenses to co-present with a mentoring partner (or partners) and/or meet new or existing mentoring partners at a professional conference; modest honoraria to bring a mentoring partner to campus for in-person mentoring and/or a public event, such as a departmental workshop or talk; editing services from a writing coach or editor to proofread, fine tune, or edit a scholarly manuscript for submission; and one-on-one or small group coaching services to improve writing, productivity, and/or time management skills. Below are some exemplars of these small networks involving two or three individuals.

Building On-Campus Mentoring Partners

An assistant professor in the Department of Chemical Engineering who had jump-started an impressive research program chose to focus his grant on increasing his limited experience in teaching. His goal was *to strengthen his pedagogical skills and build a network of support from senior faculty.* In doing so, he discovered that many of his most productive mentoring relationships were close to home. As part of his grant, the assistant professor asked his department chair to co-teach an undergraduate course with him, followed by one-on-one mentoring on teaching practices after each class. He also arranged regular pedagogical meetings with his chair and two other noted teachers in his college. Finally, he attended a career development pre-conference institute at his professional association's annual conference. There, he met a small cohort of early-career faculty in his disciplinary area with whom to share syllabi, teaching activities, assignments, and assessments.

Inviting an Off-Campus Mentoring Partner to Campus

An assistant professor in the Department of Art and Art History set a goal *to better integrate her life as a teacher and artist.* To foster these two sides of her career, she used her Micro Grant to build upon her fledging mentoring partnership with an internationally acclaimed artist, critic, curator, and professor at another research university. The assistant professor brought him to campus, where he met with her and her colleagues, provided studio critiques to her students, and gave a talk on studio teaching and career development. His versatility as a teacher, scholar, and artist made him an ideal mentor for both students and faculty. The mentoring relationship continued beyond his visit. The mentor attended her painting exhibition, communicated regularly with her about teaching and arts funding opportunities, and met with her at their professional conference.

Visiting an Off-Campus Mentoring Partner

An assistant professor in the Department of Biology applied for a Micro Grant *to learn new research skills and mentor her students.* She used her grant to reach out to a renowned senior professor – someone she didn't even know – at a research university in Texas. The assistant professor asked to visit the laboratory of her external mentoring partner for two or three days to learn more about lab techniques for a future field study. While visiting her mentoring partner, she also developed connections between their two departments. Upon returning to campus, the assistant professor trained her graduate students in the same techniques, thus extending mentoring relationships in and beyond her department.

Attending Skills Training to Meet Mentoring Partners

An assistant professor in the Department of Psychology used her grant *to seek external mentoring as she prepared a new graduate course.* She attended a week-long training session sponsored by the Marine Biological Laboratory, which enabled her to build a network of research and teaching faculty from the medical schools at Harvard, Johns Hopkins, and the University of Pittsburgh. She remained in regular contact with her fellow session participants who were designing their own courses at their home campuses.

Meeting Mentoring Partners at a Disciplinary or Professional Conference

An assistant professor of the Department of Architecture + Design used her grant to attend the Building Technology Educators' Society conference with the goal *of developing a national network of digital technology educators.* She also strengthened her local network by meeting with a senior faculty member

on campus who taught digital design, to discuss ways to integrate digital technology with design studio courses. In order to create mentoring relationships to support her program's development of digital fabrication resources, she also traveled to the University of New Mexico and visited colleagues at their facilities.

Establishing Peer Mentoring and Coaching Partners

The goal of two assistant professors in the Classics and English Departments was *to build more accountability and support for their scholarly writing.* Their grant proposal demonstrated that mentors don't always need to be senior faculty members. They established a peer writing and mentoring partnership to work on their respective book manuscripts and book proposals. They met every other week to track their writing progress and dedicated most of their funds to work with a professional writing coach and editor over the course of the year. They also applied many of their newly-acquired strategies for writing into their courses on business and technical writing, web design, advanced composition, and Greek literature and drama.

TEAM GRANTS

Team Grants provide support for departmental, school/college, interdisciplinary, and affinity teams (typically up to $6,000 per year). Below are examples of how Team Grant recipients have put their grants into practice. The teams demonstrate a wide range of mentoring forms: one-on-one, small and large groups, peer and near peer, cross-disciplinary, and intra- and inter-institutional. They also focus on a variety of different topics – mostly selected by pre-tenure faculty as areas of interest and concern – including research productivity, tenure preparation, work/life balance, teaching tools, and professional networking.

DEPARTMENT-LEVEL TEAM GRANTS

Anthropology

The Anthropology Department designed its Team Grant to support seven pre-tenure faculty members, primarily in the areas of research, tenure preparation, and professional networking. The department used its grant to host monthly peer mentoring meetings on a wide variety of topics (e.g., tenure preparation, grant writing, support for scholarly writing); sponsor a Mutual Mentoring reception at the American Anthropological Association annual meeting to bring together alumnae/i of the Anthropology Department; and provide modest networking funds for pre-tenure faculty to invite senior scholars to speak on campus or travel elsewhere for the purposes of professional development.

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English

The English Department's prior mentoring program was based largely on the traditional one-on-one model. With its Team Grant, the department expanded its efforts and hosted a fall retreat to allow faculty across career stages to collaboratively plan their mentoring activities; organized peer mentoring sessions on topics of the pre-tenure faculty's choice (e.g., academic publishing and the department's expectations of teaching, research, and service); sponsored alumnae/i receptions at two national conferences to promote professional networking; provided modest travel grants to enable new faculty to attend a major conference in their subject area; and also produced an online handbook to support new incoming faculty.

Physics

The Department of Physics established a peer and near-peer mentoring network focused on promoting teaching excellence across the department's wide range of course offerings. As part of the grant, the team convened weekly to discuss individual teaching projects; created a blog to archive and build upon their in-person discussions; hosted regular meetings to discuss broader teaching techniques and issues, such as identifying diverse learning styles, adopting new technology, assessing student preparation, using grading rubrics, and making effective use of teaching assistants; and brought nationally-renowned experts on physics education to speak at department colloquia.

Political Science

The Political Science Department created a Group Mentoring System (GMS) that matched new faculty with a variety of on- and off-campus mentoring partners, including mid-career and senior faculty, advanced graduate students, and an external senior scholar. Funds enabled each new faculty member to meet one-on-one with his/her mentoring partner(s), invite an external senior scholar to campus to give a public talk, and work in small peer mentoring groups with other GMS participants. New faculty also received modest travel stipends to present research and build professional networks at key disciplinary conferences.

COLLEGE-LEVEL TEAM GRANTS

College of Social and Behavior Sciences

The College-Level Mentoring in Social and Behavioral Sciences team implemented a "cross-departmental interdisciplinary mentoring initiative" in which all new pre-tenure hires in the College selected a mid-career mentoring partner from their home department. In addition, all of the new pre-tenure hires met in monthly interdisciplinary group discussions over the course of the academic year. There was an opening Mutual Mentoring mini-conference to introduce the new faculty to the mentoring program, a January retreat for the new pre-tenure hires and their mentoring partners, and a reception in the spring. All participants received a modest stipend to facilitate regular one-on-one or small group discussions on teaching and research topics of their choice throughout the year over meals.

Isenberg School of Management

The Isenberg New Faculty Roundtable aimed to help pre-tenure faculty members in the Isenberg School become productive, well-respected contributors to their respective fields, the School, and the broader UMass scholarly community. The team used their mentoring grant to organize a New Faculty Orientation that familiarized new hires with the school's vision and expectations; hosted monthly lunches in which assistant professors discussed teaching, research, and work/life balance; programmed weekly coffee hours in which all faculty met informally; and provided travel stipends so pre-tenure faculty could visit and network with a leading scholar in their field.

School of Nursing

In order to address the development needs of nursing faculty and students, the School of Nursing established a comprehensive mentoring program featuring mentoring dyads of pre-tenure and senior faculty; professional conference attendance for mentoring partners; monthly networking gatherings on topics such as career goals and work/life balance; the development of a mentoring best practices packet and a mentoring guide for future faculty; as well as interviews, surveys, and focus groups to solicit student input on mentoring strategies for all levels of undergraduate and graduate programs. The team received an award as an exemplary model from the Mentor/Mentee Recognition Program of the Eastern Nursing Research Society, and is currently working on a student-inspired mentoring program.

INTERDISCIPLINARY TEAM GRANTS

Cross Kingdom Interactions Study Group

The Cross Kingdom Interactions Study Group gathered faculty at different career stages with common interests in integrating biological and environmental data in a meaningful way. Each team member chose a highly regarded researcher as an external mentor, and hosted the mentor for a campus visit and public talk. The team also organized monthly lunchtime meetings to discuss grants, manuscripts, preparations for mentor visits, and evolving research ideas. They also reviewed group members' grant applications.

Interdisciplinary Seminar on the New Meanings of Race

This team gathered a diverse group of faculty from the Afro-American Studies and English Departments to focus on the emergent challenges of scholarship and teaching about race in the twenty-first century. The group met regularly to discuss pedagogical strategies for facilitating "difficult dialogues in the classroom," the changing scholarship of race, and professionalization strategies centering on networking, publications, and web presence, as well as individual faculty teaching and research projects. The seminar also hosted talks by prominent scholars.

Life Sciences Women Faculty

The Life Sciences team connected women across the fields of Science, Technology, Engineering and Mathematics (STEM) by establishing a range of large and small group mentoring opportunities, including regular small group meeting forums; a visit, public talk, science seminar, and mentoring meeting with a prominent female scientist and mentoring pioneer from the University of California San Francisco; and a networking event for all female STEM faculty. Participants also received a small travel stipend to pursue career development opportunities.

Women's Interdisciplinary Writing and Publishing Network

The Women's Interdisciplinary Writing and Publishing Network brought together women faculty in the humanities for an ongoing writing group and professional network. The team scheduled bi-weekly meetings to discuss manuscripts and the writing process and worked under the guidance of a local professional writing coach. In addition, the group hosted workshops and campus visits from editors at noted academic publishing venues such as Duke University Press, Pennsylvania State University Press, and Oxford University Press. They concluded their grant year with a Mindfulness Workshop, facilitated by an instructor from the UMass Mindfulness Institute. The workshop offered tips and techniques for stress reduction, academic productivity, and workload/life management through mindfulness meditation.

AFFINITY TEAM GRANTS

International Scholars Mutual Mentoring Network

The International Scholars Mutual

Mentoring Network was created to address the challenges unique to faculty from international backgrounds. The team was comprised of a culturally diverse group of pre-tenure international scholars, tenured UMass faculty, and non-UMass scholars, from a variety of disciplines. Together, they held regular meetings where participants shared information, discussed their challenges, and provided support on matters related to teaching, research, tenure and evaluation, and work/life balance. The network also provided an opportunity for a number of participants to develop mutual mentoring relationships with peer and senior scholars in their respective fields.

Together, they held regular meetings where participants shared information, discussed their challenges, and provided support on matters related to teaching, research, tenure and evaluation, and work/life balance.

Mother Wit (We are in this together)
Mother Wit was comprised of academic mothers in several education and social science departments who shared a motivation to excel in their careers while balancing the care and well-being of their young families. As part of the grant, assistant professors paired up with associate professors for one-on-one mentoring, gathered for regular writing sessions to discuss manuscripts and the writing process, hosted speakers on parenting and mothering, discussed possible formal recommendations to influence institutional policy on supporting families and work/life balance, and supported participation at its various meetings by providing team members with child care. The group also launched a website to track participants' writing progress.

Mutual Mentoring for Mid-Career Women Associate Professors
This diverse, interdisciplinary group of seven recently-tenured female faculty members met in a year-long program of monthly seminars on mentoring and professional development. Participants selected on-campus mentors and traveled to meet with external mentors, met by audio conference with a scholar on mid-career faculty work satisfaction, conferred with a time management consultant, and helped pilot a focus group study of associate professors at UMass Amherst. They also met with their department chairs, school/college deans, and provost to discuss expectations for promotion from associate to full professor.

Supporting Faculty of Color through Tenure and Beyond
This team strengthened the connection between pre-tenure faculty of color at UMass Amherst and the Five Colleges (most notably, Mount Holyoke College) and broadened their disciplinary networks by creating several peer mentoring opportunities. The team organized a large Five College networking reception in the fall and hosted a series of on-campus workshops on time management, writing, mentoring, and solo success, which were conducted by an external consultant and author on faculty professional development and diversity.

PART FIVE
BUILDING PRODUCTIVE MENTORING NETWORKS

This section addresses the ways in which faculty members within and across disciplines and career stages can begin to work together to build and participate in strong, productive, and substantive Mutual Mentoring networks.

TIPS FOR MENTEES
Establishing a Mutual Mentoring network requires early-career faculty to be highly proactive and intentional, two key attributes of successful professional development (Haring, 2006). While some mentoring relationships can and do happen "organically," it is not advisable for early-career faculty to wait for a mentor to choose them or be assigned to them, and then hope that the relationship will prove valuable over time. Today, the pressures to publish often, teach well, earn tenure, and juggle the demands of work/life are simply too great to go it alone or remain passive. A Mutual Mentoring network functions as a safety net of concerned and interested individuals committed to helping an early-career faculty member achieve success over both the short and long term.

This section describes some of the ways in which early-career faculty can determine what their mentoring needs are, find mentoring partners who fit those needs on a wide variety of levels, and make the most of their mentoring partners' knowledge, experience, and skills.

Characteristics of a Successful Mentee
A successful mentee…
- Pro-actively identifies what types of

knowledge, relationships, and support could be potentially helpful and career-enhancing to a mentoring partner.
- Recognizes and accommodates the time constraints of his/her mentoring partners.
- Follows up promptly when a mentoring partner offers to make helpful introductions or referrals.
- Asks for – and also provides – feedback on how the mentoring relationship is or is not working.
- Offers his/her expertise or support whenever appropriate; understands that the benefits of the mentoring relationship can be reciprocal.
- Suggests specific options and alternatives to improve a mentoring relationship, as needed.
- Treats all information exchanged with his/her mentoring partners ethically and confidentially.

To Do List for Mentees

- Your department may have a formal mentoring program in place. If so, take advantage of this important resource, but keep in mind that the mentor chosen for you (or by you) as part of this program should not be your only source of professional support.
- Clarify your needs before you begin to identify or approach potential mentoring partners. "Drill down" to the specifics whenever possible. For example, asking someone for "help with time management" is different from asking for "help understanding which types of departmental service commitments will be most manageable while you're preparing for mini-tenure." Knowing what you need helps others determine if they have relevant or useful knowledge to share with you.
- For newcomers to an institution (or academia at large), it is often difficult to know what questions to ask a mentoring partner, and/or what information is necessary to succeed. Near peers – colleagues who are close to your career level – can be particularly invaluable in such situations because their experiences as newcomers are still reasonably fresh. Helpful "global" questions to ask include: What do you wish you had known when you first arrived? What were the most unexpected surprises or obstacles that you encountered along the way? What is the most valuable thing you've done in support of your teaching/research/service, etc.?
- Ask some key colleagues who they think you should approach about your specific subjects of interest. Keep in mind that there are many different ways that you can "click" with a mentoring partner. Whose research methods are closest to your own? Who teaches classes similar in size to yours? Who uses a particular classroom technology that you're interested in adopting? Who seems like the best overall personality match?
- Extend your mentoring network beyond departmental colleagues. Identify colleagues in related departments and external scholars who have significant overlap with your academic specialization. These mentors often can serve as more knowledgeable reviewers of your research and grant proposals. They can introduce you to a broader network of scholars, and can give you information about other successful academic models and resources.
- Look for mentoring partners outside the faculty ranks. A talented, tech-savvy student may be invaluable in helping you navigate the learning curve of a new class management system, while a librarian specializing in your discipline may be helpful in suggesting hard-to-find resources for a research project.
- After engaging with your new mentoring partners, clarify expectations as early as possible – yours *and* theirs. Failed mentoring relationships are often the result of unmet and/or unrealistic expectations. Try to decide (or get a clear sense of) how often and over what time frame the two of you would like to or are able to meet, whether your interaction will be mostly in person or online, if your mentoring partnership will cover more general topics or more specific ones, if there will be a product or outcome to signal the end of the mentoring relationship, etc.
- Thank and acknowledge your mentoring partner(s) whenever possible and appropriate.
- Remember that information shared by your mentoring partners is confidential.

SUGGESTED QUESTIONS TO ASK YOUR MENTORS

Getting Started

- How is the department, school/college, or university organized? How are decisions made? Are there interpersonal or departmental dynamics that would be helpful to know about?
- What resources are available (e.g., travel funds, typing and duplicating, phone, computer equipment, supplies)? Is there support staff? What should be expected from support staff?
- How does the department fit into the college (or university) in terms of mission, personnel standards, and culture? Do I need to take two sets of standards into account when planning my professional development?
- How much time do I need to spend in my office and/or lab being visible

in the department? Is it considered acceptable/appropriate to work from home?
- Are there department or university events that I should be sure to attend?

Research
- Is there help available for writing grant proposals, preparing budgets, etc.? How much time should I spend seeking funds?
- What kind of publication record is considered excellent in my department and college? How many refereed articles do I need? In what journals? How are online journals viewed? Do I need a book?
- How are journal articles or chapters in edited collections viewed? May material published in one place (conference, workshop) be submitted to another journal? How much work is necessary to make it a "new publication"?
- How is collaborative work viewed within the department/college? Do co-authored articles count in my discipline? Is being first co-author considered important? Should I put my graduate students' names on my papers? How is alphabetical listing of authors viewed?
- Do conference and workshop papers/presentations count as research in my discipline?
- Should I give talks within my department? How are colloquia organized in my department? How do I publicize my work within the department?
- What conferences should I go to? Is it better to go to national conferences or smaller ones? How much travel is allowed/expected/demanded? What support is available for travel expenses? From where? How else can I gain the type of exposure I need for good tenure letters?
- Would it be advisable to further develop my dissertation or branch out into a new area of research?
- What is the process of selecting graduate and/or undergraduate students for my lab?

Teaching
- What is the normal teaching profile for early-career faculty in my department/college?
- How many independent studies should I agree to sponsor? How do I choose them?
- How do I find out what the content of a course should be? Does the department share syllabi, assignments, etc.?
- If I teach undergraduate courses, are resources available for grading, section leadership, etc.? Does the department/college take the nature of the course into consideration when analyzing student evaluations of teaching?
- Does the department use student evaluations? Does the department use any other methods beyond student ratings to assess teaching effectiveness?
- How is advising handled in the department? How many undergraduate advisees should I have? How much time should I spend in advising them? What campus resources are available if I have questions about departmental and institutional degree requirements?
- How many graduate student advisees should I have? How much time and effort should I invest in working with graduate students? How do I identify "good" graduate students? How aggressive should I be in recruiting them? Do I need to find resources for them? What should I expect from them? How do I promote my graduate students to the rest of the community?
- What is considered an appropriate response to a student who is struggling with course work or is clearly troubled in some way? What resources are available for students? What can/should I suggest?
- What kinds of files should I keep on my students?
- What am I expected to teach? Should I ask to teach service courses? Should I teach the same course, stay within a single area, or teach around? Should I develop a new course? An undergraduate course? A specialized course in my research area?
- Are there department guidelines for grading? What is the usual frequency of midterms, exams, or graded assignments?
- What documentation on teaching and advising should I retain for my personnel file?
- How do I establish an excellent teaching record? What resources are available at the department/college/university level to help me do so?

What am I expected to teach? Should I ask to teach service courses? Should I teach the same course, stay within a single area, or teach around? Should I develop a new course? An undergraduate course? A specialized course in my research area?

Service
- What kind of service to the department, college, and university is expected of me?
- What kind of outreach is expected of me?

- When should I begin service and outreach? How much should I take on?
- Are there committees I should seek out as a new faculty member? Any I should turn down if I am asked to serve?
- How much service to the profession or communities outside of the university is recommended or expected?
- How do I develop and document an excellent record of service and outreach?

Tenure and/or Evaluation Processes

- What is the approximate balance between research, teaching, and service that I should aim for?
- How important is the annual faculty report in merit, reappointment, tenure, and promotion decisions in my department? What sort of documentation of my achievements will help me succeed in these decisions?
- What kind of record-keeping strategies can I adopt to make compiling my annual faculty report and/or tenure package both accurate and manageable?
- Will I be explicitly told if there are specific concerns about my performance, or will I have to "read between the lines" in my annual evaluation?

Balancing Professional and Personal Life

- What are the resources for meeting and socializing with other early-career faculty?
- Where can I get help with dual career issues, childcare, and other personal concerns?
- What sort of support is available to me through the campus and surrounding communities?
- Where can I find advice on balancing a professional life (e.g., teaching, research, service) with a personal life (e.g., time for significant others, children, leisure, civic responsibilities)?

TIPS FOR MENTORS

Results of numerous studies suggest that intellectual, social, and resource support from senior colleagues, chairs, deans, and campus administrators may be critical to attracting, developing, and retaining new and underrepresented faculty (Bensimon, Ward & Sanders, 2000; Rice, Sorcinelli & Austin, 2000). In particular, findings point to the importance of the essential mentoring role played by individuals within an early-career faculty member's department, including other early-career faculty, more senior colleagues, and the department chair.

What issues and opportunities should colleagues be aware of in supporting early-career faculty? The guidelines and suggestions in this section can be used to reflect on how to create an effective and supportive mentoring partnership, to prepare for mentoring sessions, and/or to identify areas for learning that might contribute to further development as a mentoring partner.

Characteristics of a Good Mentor

A good mentor…

- Is willing to share his/her knowledge and academic career experience.
- Listens actively and nonjudgmentally – not only to what is being said, but also to how it is said.
- Asks open and supportive questions that stimulate reflection and makes suggestions without being prescriptive.
- Gives thoughtful, candid, and constructive feedback on performance, and asks for the same.
- Provides emotional and moral encouragement, remaining accessible through regular meetings, emails, calls, etc.
- Acts as an advocate for his/her mentoring partner, brokering relationships and aiding in obtaining opportunities.

To Do List for Mentors

- Consider your own motivation for being a mentor. How will your experience and expertise contribute to the relationship? What concrete things can you do to help your mentoring partner? What skills are your strengths as a mentor (e.g., coaching, goal setting, guiding, promoting, problem solving, navigating political shoals, etc.)?
- Make contact with your mentoring partner as soon as possible and establish a regular meeting time, perhaps for coffee or lunch.
- Get to know your mentoring partner and his/her circumstances and concerns; be willing to share information and perspectives. Also, it may be difficult for an early-career faculty member to approach you with problems or questions, so suggesting topics for discussion or asking questions may be helpful.
- Remember that information shared by your mentoring partner is *confidential.* A breach of confidentiality can irreparably damage even the best mentoring relationships. To avoid this, make clear decisions about confidentiality early on (e.g.,"what we say to each other needs to be held in confidence, unless we give each other permission to talk about it with others").
- Offer your mentoring partner "insider's advice" about the campus, department, or profession. What do you know now that you wish you had known earlier in your career? What were the roadblocks that you encountered along the way? What have you learned? How do your experiences compare with those of your mentoring partner?
- Provide support and help with any questions or problems that might

arise relating to professional and/or personal matters. You don't need to have the answer for every question. Rather, you can act as a resource or a guide and direct your mentoring partner to the appropriate office or person who can help.

- Focus on your mentoring partner's development; you should respond to his/her needs and to what he/she is looking for in the relationship. This might mean helping your mentoring partner sort out expectations and priorities for the relationship.
- Provide constructive feedback. Help your mentoring partner solve his/her own problem rather than giving him/her directions. Remember you are not directing or evaluating your mentoring partner – you are assisting, coaching, and supporting.
- Introduce your mentoring partner to colleagues outside of the department and institution whenever possible and appropriate. These colleagues might be in the same field or specialization, use similar research methods, have parallel teaching interests, or be at a similar or different career stage. Connections with different faculty will encourage your mentoring partner to build a network of mentors who can offer specific knowledge, skills, and new perspectives.
- Look for opportunities to meet face-to-face, but also explore other options for connecting (e.g., telephone, email, videoconferencing, etc.).
- Mentoring is one of many other personal and professional commitments that you and your mentoring partner are juggling. Be open to setting a mutually reasonable number of meetings, rescheduling meetings if necessary, calling a "time-out" during a particularly busy month.
- Recognize when the relationship may be moving toward closure and encourage your mentoring partner to seek new mentors as his/her needs change.

Provide constructive feedback. Help your mentoring partner solve his/her own problem rather than giving him/her directions. Remember you are not directing or evaluating your mentoring partner – you are assisting, coaching, and supporting.

SUGGESTED ACTIVITIES TO DO WITH YOUR MENTEE

Getting Started

- Introduce your mentoring partner to colleagues and "useful" people in the department/school, so he/she can benefit from a range and variety of colleagues.
- Show a new faculty member the physical layout and resources of the department and campus, making sure to explain any local rules, customs, and practices.
- Help your mentoring partner locate basic written information on teaching, research, and administrative requirements and responsibilities in your department, college, and/or university (e.g., course management system, forms for annual faculty review, office of grants and contracts).
- Explain the various support systems within your college or university (e.g., the ombudsperson, psychological services, learning and other student support services).

Research

- Discuss your mentoring partner's research focus. Is he/she developing a consistent theme, theory or model, and direction?
- Advise on the kind of publications that are considered "first-tier" in your department and estimate a realistic "benchmark" in terms of the kinds and numbers of articles, monographs, or books expected.
- Suggest appropriate journals for publication – both traditional and online, if appropriate – and offer feedback on the writing of research articles and conference papers.
- Encourage participation in departmental/interdisciplinary research activities, such as informal discussions about writing projects, colloquia for ideas in progress, and visiting scholar presentations.
- Introduce your mentoring partner to departmental and/or interdisciplinary research groups to provide an avenue for co-authored papers and co-authored/collaborative grant-writing or research projects (if viewed positively in your department).
- Help your mentoring partner identify on-campus and external resources for research, such as sessions on academic coaching and writing, grant proposal writing workshops, summer research grants, and funds for travel to professional meetings.

Teaching

- Provide information to your mentoring partner about teaching, such as a profile of students, sample syllabi, teaching exercises, technology resources, and office hours.
- Discuss teaching norms such as course structures, assignments, and exam questions as well as departmental standards for fairly assessing and grading students' work.

- Offer to visit your mentoring partner's classroom and provide constructive feedback – and invite your mentoring partner to visit your classes.
- Encourage your mentoring partner to connect with the teaching and learning center on campus, in particular to access processes that provide early, formative feedback on teaching (e.g., confidential midterm feedback from students), but also for workshops, teaching fellowships, and grants.
- Discuss key student issues, such as advising, sponsoring independent study, and working with and supervising graduate students.
- Discuss how to deal with student problems, such as issues of motivation, class management, emotional difficulties, students who are underprepared for a course, and what to do about cheating and academic dishonesty.
- Discuss how colleagues in the department get, interpret, and use feedback on teaching from students, peers, teaching improvement consultants, etc., to improve their teaching and student learning.
- Encourage discussions about teaching and learning among the early-career and senior colleagues in your department and/or college.
- Recommend a book/online resources on teaching strategies for college and university teachers for your mentoring partner.

Service

- Advise your mentoring partner on what kinds and amount of service and/or outreach are expected in the department.
- Advise your mentoring partner on how to select administrative duties and committee work that will support his/her research and teaching agenda (e.g., graduate student admissions; departmental speaker series).
- Be alert to whether or not your mentoring partner's service to the department, school, university, or external organizations is perhaps hindering his/her accumulation of evidence for tenure, and share your concerns with your mentoring partner.

Tenure and/or Evaluation Processes

- Help your mentoring partner set challenging but realistic goals that match the particular mission and resources of your department and align with the central missions of your college or university.
- Encourage your mentoring partner to keep an ongoing log or record of his/her scholarly activities in teaching, research, service, and outreach.
- Regularly solicit feedback from your mentoring partner about his/her perceptions of and experiences with the tenure process.
- Encourage your mentoring partner to attend department, college, or campus-level seminars on preparing for tenure.

Balancing Professional and Personal Life

- Help your mentoring partner set up a plan of short- and long-term goals, and encourage your partner to measure progress and success on the goals identified.
- Share your experiences of setting priorities, managing time, handling stress, and balancing workload effectively.
- Connect your mentoring partner to special resources or networks on campus that might be of relevance and support (e.g., networks for women or faculty of color).
- Link your mentoring partner to information and services for dual-career couples and for flexible employee benefits such as parental leaves, flexible time limits for tenure, part-time status for childrearing, and childcare.
- Provide information and facilitate access to non-academic resources in the area, such as housing, schools, and child care options, as well as cultural, entertainment, and sporting events both on and off campus.

PART SIX
ESTABLISHING A CULTURE OF MUTUAL MENTORING

This section addresses the ways in which chairs, deans, and other administrators of mentoring activities can work together to build and sustain programs that contribute to a culture of mentoring and professional development support on their campuses.

TIPS FOR DEPARTMENT CHAIRS, DEANS, AND OTHER ADMINISTRATORS

If you are a chair or dean, you play a particularly important role in setting the tone and agenda for mentoring early-career faculty in your department or college. The following suggestions focus on your mentoring role, not only for professional development but also for personnel decision-making. They also encourage a model in which the entire department and/or college is collectively responsible for establishing and maintaining a culture of Mutual Mentoring.

To Do List for the Chair/Dean
Getting Started

- Help manage new faculty members' transition by providing an orientation to the department, including information on departmental expectations, policies for promotion

and tenure, collegial culture, and the names and "faces" of departmental faculty and key staff. Urge new faculty to also attend college and campus-wide orientations (and accompany them if invited).

- Facilitate the acquisition of resources (adequate office, lab, studio space, a computer) and staff support (e.g., research assistants, clerical personnel, technicians) to ensure new faculty receive timely assistance and can meet your department's expectations.
- Assign new faculty courses that fit their interests and priorities and offer fewer courses or, at the very least, fewer preparations during the first year or two of appointment.
- Support a flexible leave program to allow pre-tenure faculty to complete scholarly projects before tenure review.
- Encourage new faculty to seek out research and teaching development activities beyond the department (e.g., teaching and learning center, office of research support, library, office of academic computing).
- Be especially mindful of women and underrepresented faculty to ensure that they are protected from excessive committee assignments and student advising prior to tenure.

Tenure and/or Evaluation Processes

- Sponsor a yearly meeting for all pre-tenure faculty during which you review the specific details of the tenure process, including the names of evaluators, timetables and deadlines, the kinds of information needed for tenure files, and what pieces faculty members are responsible for collecting and submitting (e.g., record of professional activities, names of outside reviewers). Be sure to invite the tenure review committee to the meeting.
- Give frequent, accurate feedback. Formally evaluate all early-career faculty at least once a year. Highlight what is going well, clarify what merits attention, and offer concrete suggestions for improvement through discussion and written comments.
- Encourage your pre-tenure faculty to explore options such as "stopping the clock" or counting previous work for credit to "early tenure," based on individual circumstances.
- Encourage an ongoing discussion of the tenure process and the values that inform it through departmental meetings, written guidelines, seminars, etc.
- Work with your personnel committee to create clear criteria for the tenure process so standards don't change when/if the tenure review committee experiences turnover.
- Appoint pre-tenure faculty each year to sit on the personnel committee to provide more information on the tenure process.

SUGGESTED ACTIVITIES TO BUILD A DEPARTMENT/COLLEGE/UNIVERSITY MENTORING PROGRAM

- Assess the needs of faculty (e.g., hold individual discussions or focus groups) to better understand the state of mentoring in your unit(s) and to inform planning, development, and modification of a mentoring program.
- Ask a broadly representative group of faculty to explore different mentoring programs and recommend a context-specific, workable model (e.g., assigned or self-selected mentoring partners, a mentoring committee for each new faculty, multiple mentors of limited term, mentors outside the department, etc.).
- Offer any program to all early-career faculty versus targeted groups. Women and faculty of color may be overrepresented in such programs because network-based mentoring models provide the type of nonhierarchical, relational, and reciprocal mentoring structure desired by these populations.
- Consider investing in faculty through grants, with principal investigators. Grants are the coin of the realm in many colleges and universities, and faculty members are eager for opportunities to apply for them, even if the funds are modest. In addition, these seed grants often assist participants in later achieving significant career milestones such as major research grants, book awards, and grants for the development of innovative curricula.
- Encourage mentoring partners to set concrete goals, to develop a roadmap or specific steps for each meeting (how to get from here to there), and to measure their progress along the way.
- Help clarify the roles of mentoring partners early on. This guide can provide a useful starting point for such a discussion.
- Respect the important role of a senior faculty mentor but also make it clear that the faculty role is increasingly complex and that no single person or mentor holds all the knowledge and skills needed to be successful. All members of the academic community – peers, near peers, and senior colleagues – have something to teach and learn from each other.
- Build responsibility for nurturing new colleagues into the evaluation of faculty and seek ways to recognize and reward peers, near peers, and senior faculty members for the time spent working with their early-career colleagues.
- Check department/college schedules and the campus calendar to minimize scheduling conflicts, overlap in

mentoring activities, and over-scheduling. Consider that attendance at early breakfast, dinner/evening sessions may be difficult for faculty with families.

PART SEVEN
ASSESSMENT AND EVALUATION

Without data, institutions can only speculate on whether or not their mentoring program is effective. In order to understand if the Mutual Mentoring grants actually increase faculty learning, agency, and capacity for building substantive relationships, as well as whether they contribute to a culture of mentoring and professional development support, we developed an assessment plan to regularly collect multiple sources of qualitative and quantitative data each year.

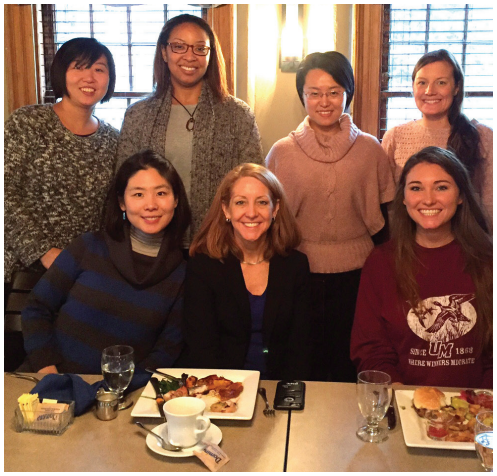
On an annual basis, we collect data from three sources: a one-on-one *intake meeting with all Micro Grant and Team Grant leaders prior to the release of grant funds* to discuss their proposed activities and determine if any new opportunities or challenges have developed since writing their proposals; a one-on-one or team *formative assessment conducted midway through the grant year* to determine if the proposed activities are progressing as planned, or if any changes are needed to ensure the quality and quantity of mentoring activities before the grant concludes; and *a standardized summative assessment at the end of the grant year*, using a 14-point online survey that we administer to all Micro Grant and Team recipients (see Appendices C and D).

For example, grantees now include many early-career and underrepresented faculty, but they also include new teams comprised of female faculty exploring transitions into institutional leadership roles, and lecturers within a college who created a network of support responsive to the needs of full-time contract faculty.

Responses to online surveys at the end of each grant year indicate a high level of satisfaction with Mutual Mentoring activities and suggest the long-term sustainability of Mutual Mentoring relationships. Also, faculty who participate in the Mutual Mentoring Initiative are more likely than nonparticipants to report concrete, visible outcomes of their mentoring relationships, such as the publication of an article or book, presentation of a paper, submission of a grant, and/or other meaningful professional achievements. In addition, findings reveal that faculty members who participate in this initiative are more likely to regard mentoring as a career-enhancing activity, and to develop mutually beneficial mentoring relationships, than are their nonparticipating peers (Yun, Baldi & Sorcinelli, 2016).

The Mutual Mentoring Initiative has been institutionalized on our campus with a few notable changes. We have expanded the pool of eligible beneficiaries for Team Grants to include full-time lecturers and post-tenure faculty, an acknowledgment of the need for mentoring at all ranks and stages of the faculty career. For example, grantees now include many early-career and underrepresented faculty, but they also include new teams comprised of female faculty exploring transitions into institutional leadership roles, and lecturers within a college who created a network of support responsive to the needs of full-time contract faculty.

Beyond our own campus, we are also deeply gratified by the growing number of research universities, comprehensive universities, and liberal arts colleges in the U.S. and internationally that have adopted or adapted the Mutual Mentoring model and/or one or both of our Mutual Mentoring grant programs on their own campuses. Perhaps most importantly, at our own and other institutions the Mutual Mentoring Initiative has enabled early-career and underrepresented faculty to experience, through relationships with individuals across career stages, disciplines, and institutional boundaries, the collegiality that is the essence of an academic community.



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Appendix A

APPLICATION FOR THE MUTUAL MENTORING MICRO GRANT PROGRAM

Please do not leave any spaces blank.

Full Name	
Department	
School/College	
Campus Mailing Address	
Email Address	
Position Title/Rank	
Full Name of Your Bookkeeper (who will process your bills)	
Bookkeeper's Email Address	
Department I.D. Code (for fund transfer)	E.g., A68940000
List of Mentoring Partners	Include full name, title, department/office, and institution (if not at UMass Amherst)
UMass Start Date (Month, Year)	

Micro Grant Proposal

The typical length for a Micro Grant proposal is 3 typewritten pages in 12-point font (this includes your cover sheet, proposal narrative, and budget). Please do not exceed 4 pages. Proposals should include responses to the following items:

1. What is/are the mentoring challenge(s) you seek to address?
2. What are your goals regarding this project? What do you aim to accomplish and why is this important at this point in your career?
3. How does your project build on the Mutual Mentoring model? How will you engage faculty, staff, students, and/or others in mentoring relationships?
4. Please provide a 75- to 100-word summary (maximum) of the proposed project, which may be used online and in promotional materials if your proposal is awarded funding. Describe specific activities and mentoring partners, as shown in the examples on the program's website.

Budget

How will you use the grant? Please list all of your estimated expenditures (up to $1,200) using the following table format. Detailed instructions for completing a budget will be distributed at the Mutual Mentoring informational sessions (dates listed on page 2).

Expense	Description	Personnel Expenses	Non-Personnel Expenses
Undergraduate Assistant	2 hrs. per week to assist with publicizing lecture (15 hrs. total)	$300.00	
Honorarium	Honorarium for Dr. Jane Doe, Yale University		$500.00
Travel Expense	Rail, food, 1 night hotel for Dr. Jane Doe		$400.00
	TOTAL: $1,200.00	**$300.00**	**$900.00**

Appendix A

Information Sessions

First-time proposal authors are strongly encouraged to attend one of the following informational sessions for an overview and discussion on preparing a complete proposal and budget submission. These sessions will take place on the following dates/times at the Institute for Teaching Excellence and Faculty Development, which is located in Goodell 301.

- Wednesday, February 27, 9 AM to 10 AM
- Thursday, February 28, 1 PM to 2 PM
- Tuesday, March 5, 10 AM to 11 AM
- Wednesday, March 6, 2:30 PM to 3:30 PM

Submitting Your Application

Microsoft Word or PDF submissions are preferred – please do not send scanned PDFs.

Please name your application file using the following format:

- MICRO_LastName_FirstName
- E.g., MICRO_Johnson_Kristina

The deadline for submitting applications is Monday, March 25, at 5 PM. For further information consult the program's website.

Appendix B

APPLICATION FOR THE MUTUAL MENTORING TEAM GRANT PROGRAM

Please do not leave any spaces blank.

Name of Team	
Name(s), Title(s), and Department(s) of Proposal Author(s)	Jane Smith, Assistant Professor, Department of X John Anderson, Lecturer, Department of Y
Type of Team Project	Select one of the following: Departmental, School/College, Interdisciplinary, or Inter-Institutional (e.g., Five Colleges)
Full Name of Primary Contact Person	
Contact Person's Campus Mailing Address	
Contact Person's Email Address	
Full Name of Your Bookkeeeper (who will process your bills)	
Bookkeeper's Email Address	
Department I.D. Code (for fund transfer)	E.g., A68940000
Name of Chair/Head	
Have you consulted with your Chair/ Head about this project?	Yes/No
List of Team Members	Please list all members of your team. Include: names, titles, departments, and institutions (if not at UMass). Larger teams are not likelier to receive funding than smaller ones, or vice versa, so please provide as accurate a list as possible.

Team Grant Proposal

The typical length for a Team Grant proposal is 5 typewritten pages in 12-point font (this includes your cover sheet, proposal narrative, and budget). Please do not exceed 6 pages. Proposals should include responses to the following items:

1. What is/are the mentoring challenge(s) you seek to address?
2. Which Priority Mentoring Area(s) will your project focus on and how?
3. What are your goals regarding this project? What are your intended outcomes?
4. How does your project build on the Mutual Mentoring model? How will you engage faculty, staff, students, and/or others in mentoring relationships?
5. How does your project promote inclusion and diversity?
6. Please provide a 75- to 100-word summary (maximum) of your proposed project, which may be used online and in promotional materials if your proposal is awarded funding. Describe specific activities and mentoring partners, as shown in the examples on the program's website.

Budget

How will you use this grant? Please list all of your estimated expenditures (up to $6,000) using the table format below. Detailed instructions for completing a budget will be distributed at the Mutual Mentoring informational sessions (dates listed on page 2).

Appendix B

Expense	Description	Personnel Expenses	Non-Personnel Expenses
Undergraduate Assistant	3 hrs. per week to assist with publicizing lectures (15 hrs. total)	$450.00	
Small Group Lunches	6 lunches at Faculty Club, approx. 8 people each		$950.00
Honoraria for External Mentors	8 mentors at $200 each (listed on cover sheet)		$1,600.00
Travel Expense for External Mentors	Rail, food, 1 night hotel for 8 mentors ($375 per mentor)		$3,000.00
	TOTAL: $6,000.00	**$450.00**	**$5,550.00**

Information Sessions

First-time proposal authors are strongly encouraged to attend one of the following informational sessions for an overview and discussion on preparing a complete proposal and budget submission. These sessions will take place on the following dates/times at the Institute for Teaching Excellence and Faculty Development, which is located in Goodell 301.

- Wednesday, February 27, 9 AM to 10 AM
- Thursday, February 28, 1 PM to 2 PM
- Tuesday, March 5, 10 AM to 11 AM
- Wednesday, March 6, 2:30 PM to 3:30 PM

Submitting Your Application

Microsoft Word or PDF submissions are preferred – please do not send scanned PDFs.

Please name your application file using the following format:

- TEAM_Team_Name
- E.g., TEAM_Chemical_Biology_Network

The deadline for submitting applications is Monday, March 25, at 5 PM. For further information consult the program's website.

Appendix C

END-OF-YEAR ASSESSMENT: MICRO GRANT PROGRAM

Please help us assess the effectiveness of the Mutual Mentoring Micro Grant Program. Your feedback will help contribute to its continued improvement. Also, please be assured that we will protect your identity – reporting will be done in the aggregate; no individually identifiable results will be disseminated. THANK YOU!

1. How many years have you worked at UMass Amherst?

- ◯ 1-3 years
- ◯ 4-6 years
- ◯ 7+ years

2. How many mentoring relationships did you have PRIOR to receiving a Micro Grant?

- ◯ None
- ◯ 1
- ◯ 2-5
- ◯ 6+

3. How many NEW mentoring relationships did you develop as a result of receiving a Micro Grant?

- ◯ None
- ◯ 1
- ◯ 2
- ◯ 3+

4. Are these new mentoring relationships likely to continue after your grant year ends?

- ◯ Most of them are likely to continue
- ◯ Some of them are likely to continue
- ◯ None of them are likely to continue

If you selected "None..." could you briefly share why?

5. Who have you developed new mentoring relationships with? (Please check all that apply.)

	In your dept.	In another UMass dept.	Within the Five Colleges	At another institution
Assistant Professor(s)	☐	☐	☐	☐
Associate Professor(s)	☐	☐	☐	☐
Full Professor(s)	☐	☐	☐	☐
Other	☐	☐	☐	☐

If "Other," please specify.

6. What topics did you address during your grant year? (Please check all that apply.)

- ☐ Departmental resources/culture
- ☐ School/college resources/culture
- ☐ Institutional resources/culture
- ☐ Obtaining grants
- ☐ Writing/publishing
- ☐ Teaching
- ☐ Advising students
- ☐ Mini-tenure or tenure
- ☐ Balancing teaching, research, and service
- ☐ Balancing work and family
- ☐ Professional networking
- ☐ Other

If "Other," please specify.

Appendix C

7. Please estimate the degree to which your experiences during the grant year have helped you enhance your knowledge and/or skills in the following areas:

	N/A	Very helpful	Somewhat helpful	Not too helpful	Not helpful at all
Getting oriented	☐	☐	☐	☐	☐
Teaching	☐	☐	☐	☐	☐
Research	☐	☐	☐	☐	☐
Navigating tenure	☐	☐	☐	☐	☐
Creating work/life balance	☐	☐	☐	☐	☐
Professional networking	☐	☐	☐	☐	☐

8. Overall, what do you see as the key strengths of Mutual Mentoring?
(Please check UP TO THREE.)

- ☐ Encourages faculty to design their own mentoring projects
- ☐ Empowers faculty to be proactive about their mentoring needs
- ☐ Promotes "networks" of mentors instead of a single senior mentor
- ☐ Encourages a variety of mentoring approaches (e.g., group, 1-on-1, trios, etc.)
- ☐ Strengthens connections between early, mid-career and senior colleagues
- ☐ Signals an institutional investment in mentoring
- ☐ Other

If "Other," please specify.

9. Overall, how would you rate your Mutual Mentoring experience?

- ○ Excellent
- ○ Very Good
- ○ Good
- ○ Fair
- ○ Poor

10. What suggestions for change or improvement would you like to offer?

11. Any other comments?

Demographics

The last two questions ask for demographic information. This data will allow us to compare differences, if any, among groups.

12. Which of the following best describes your gender?

- ○ Female
- ○ Male
- ○ Transgender

13. What is your race/ethnicity? Please check all that apply.

- ☐ African, African American or Black
- ☐ Asian or Asian American
- ☐ Cape Verdean
- ☐ Hispanic or Latino(a) or Chicano(a)
- ☐ Native American, North or South American Indian or Alaskan Native
- ☐ Native Hawaiian or other Pacific Islander
- ☐ White or Caucasian
- ☐ Other

Appendix D

END-OF-YEAR ASSESSMENT: TEAM GRANT PROGRAM

Please help us assess the effectiveness of the Mutual Mentoring Team Grant Program. Your feedback will help contribute to its continued improvement. Also, please be assured that we will protect your identity – reporting will be done in the aggregate; no individually identifiable results will be disseminated. THANK YOU!

1. What is your current rank?

- ◯ Assistant Professor
- ◯ Associate Professor
- ◯ Professor
- ◯ Lecturer
- ◯ Other

Other (please specify)

2. Which team(s) did you participate in this year? (Please check all that apply.)

- ☐ Creative Production Group
- ☐ Developmental Science Initiative
- ☐ Division of Environmental Health Science
- ☐ Five Colleges prosody community
- ☐ IN-SYNK
- ☐ Interdisciplinary Transnationalism Network
- ☐ International Scholars Mutual Mentoring Network
- ☐ Laboratory for Transformative Practice in Anthropology
- ☐ Multi-disciplinary Association for Remote Sensing (MARS)
- ☐ Transnational Feminisms and Sexualities

3. How many mentoring relationships did you have PRIOR to participating in your team(s)?

- ◯ None
- ◯ 1
- ◯ 2-5
- ◯ 6+

4. How many NEW mentoring relationships did you develop as a result of participating in your team(s)?

- ◯ None
- ◯ 1
- ◯ 2
- ◯ 3+

5. Are these new mentoring relationships likely to continue after the grant year ends?

- ◯ Most of them are likely to continue
- ◯ Some of them are likely to continue
- ◯ None of them are likely to continue

If you selected "None..." could you briefly share why?

Appendix D

6. Who have you developed new mentoring relationships with? (Please check all that apply.)

	In your dept.	In another UMass dept.	Within the Five Colleges	At another institution
Assistant Professor(s)	☐	☐	☐	☐
Associate Professor(s)	☐	☐	☐	☐
Full Professor(s)	☐	☐	☐	☐
Other	☐	☐	☐	☐

If "Other," please specify.

7. What topics did you address during your grant year? (Please check all that apply.)

- ☐ Departmental resources/culture
- ☐ School/college resources/culture
- ☐ Institutional resources/culture
- ☐ Obtaining grants
- ☐ Writing/publishing
- ☐ Teaching
- ☐ Advising students
- ☐ Mini-tenure or tenure
- ☐ Balancing teaching, research, and service
- ☐ Balancing work and family
- ☐ Professional networking
- ☐ Other

If "Other," please specify.

8. Please estimate the degree to which your experiences during the grant year have helped you enhance your knowledge and/or skills in the following areas:

	N/A	Very helpful	Somewhat helpful	Not too helpful	Not helpful at all
Getting oriented	☐	☐	☐	☐	☐
Teaching	☐	☐	☐	☐	☐
Research	☐	☐	☐	☐	☐
Navigating tenure	☐	☐	☐	☐	☐
Creating work/life balance	☐	☐	☐	☐	☐
Professional networking	☐	☐	☐	☐	☐

9. Overall, what do you see as the key strengths of Mutual Mentoring?
(Please check UP TO THREE.)

- ☐ Encourages faculty to design their own mentoring projects
- ☐ Empowers faculty to be proactive about their mentoring needs
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- ☐ Signals an institutional investment in mentoring
- ☐ Other

If "Other," please specify.

Appendix D

10. Overall, how would you rate your Mutual Mentoring experience?

- ◯ Excellent
- ◯ Very Good
- ◯ Good
- ◯ Fair
- ◯ Poor

11. What suggestions for change or improvement would you like to offer?

12. Any other comments?

Demographics

The last two questions ask for demographic information. This data will allow us to compare differences, if any, among groups.

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- ☐ Native American, North or South American Indian or Alaskan Native
- ☐ Native Hawaiian or other Pacific Islander
- ☐ White or Caucasian
- ☐ Other

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Mentoring Strategies that Advance Faculty

Academic Impressions | November 2017

GOAL

- Explore network-based mentoring to support all faculty at every career stage, particularly for women and faculty of color.

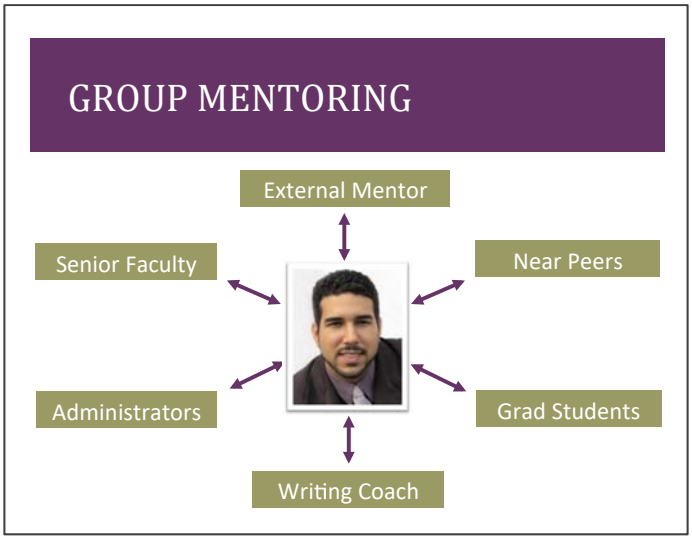
DEFINITION OF NETWORK-BASED MENTORING

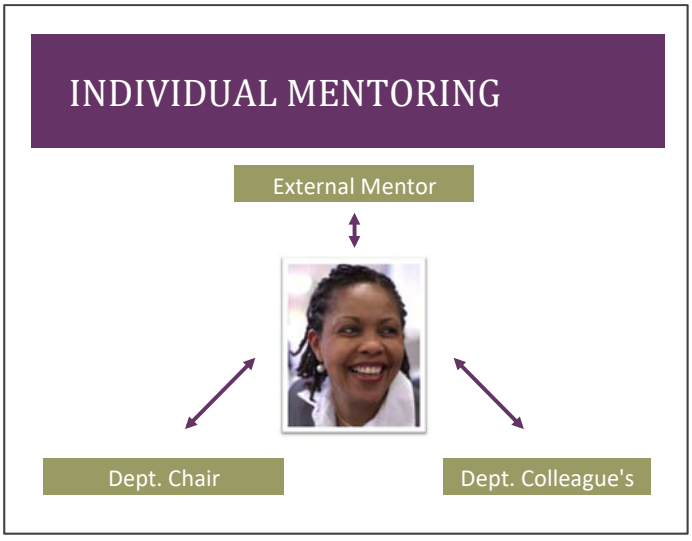
- Traditionally, mentoring has taken the form of a **one-on-one, hierarchical relationship** in which a senior faculty member takes a junior faculty member "under his/her wing." *Network-based mentoring encourages the development of a* ***wider variety of mentoring partnerships*** *to address specific areas of knowledge and expertise.*

NETWORK-BASED MENTORING REDEFINES "MENTORING" BY FOCUSING ON

- **Self-identified** needs and goals, rather than generic, one-size-fits-all knowledge
- A network of **multiple, diverse mentors**, (peers, near-peers, senior faculty, chairs, same-race/cross-race, same-gender/cross-gender);
- Approaches that accommodate personal, professional preferences for contact (one-on-one, group, face-to-face, online);
- A more **intentional, proactive approach** to mentoring --agency of own career development;
- **Reciprocal/relational** vs. hierarchical mentoring
- In sum, mentoring that is **faculty-driven, functional, and flexible**

WHAT NETWORK-BASED MENTORING MIGHT LOOK LIKE





POSSIBLE FORMATS/LOCATIONS FOR NETWORK-BASED MENTORING

- **Curricular programs** where faculty already come together *(e.g., team-taught, interdisciplinary courses; first-year seminars or capstone courses; courses with multiple sections)*
- **Scholarly programs** where faculty already come together *(e.g., works-in-progress seminar, scholarly work achievement group)*
- **Workshops, forums, conversations** *(e.g. how to prepare for tenure, sabbatical planning, how to build a mentoring network)*
- Semester or year-long **learning communities** *(e.g. new faculty seminar, teaching fellowship, reading group, peer writing and review group, grant writing group, mid-career professor group)*
- **Internal grants** to build mentoring networks *(micro-grants, team grants)*
- **Informal formats** *(e.g., mentoring luncheons, pot-lucks, TGIF, receptions)*
- Panels and workshops at **professional association** annual conferences that offer strategies for mentoring
- In sum, when and wherever **two or more faculty come together**, there can be "mutual mentoring"

INNOVATIVE NETWORK-BASED MENTORING PROGRAMS AT DIFFERENT LEVELS

- **Departmental/Interdepartmental/College** (e.g., college-level group mentoring across career stages, individual mentoring committees for all incoming faculty, mentoring group for teaching in the digital humanities, for psychology research mentoring, for mentoring teaching physics, for interdisciplinary seminar on new meanings of race)
- **Intra-institutional** (e.g., college-wide mentoring policy, customized and implemented at department level)
- **Inter-institutional** (e.g., micro-grant or career development grant to develop national or international networks outside of the institution)
- **Affinity** (e.g., mentoring group for new faculty, for women in the life sciences, for faculty of color moving toward tenure, for mid-career women faculty, for Asian/Pacific/American studies faculty, for engineering and computing women faculty)

WHY A NETWORK-BASED MENTORING MODEL

- Studies suggest that faculty with "multiple mentors" have **significantly higher levels of career success** than those with a single or no mentor (Van Eck Peluchette & Jeanquart, 2000; Van Emmerik, 2004).
- A "networking model" may be **more inclusive of women and minorities** than the "grooming model of traditional mentoring. Combining both models in mentoring programs can take advantage of the strengths of each (Girves, Lepeda, Gwathmey, 2005).
- Formal network-based programs **extend benefits of mentoring to all faculty of whatever background**, and for whom informal mentoring might not be available, and make mentoring a natural part of institutional culture (Lottero-Perdue, Fifield, 2010).
- Pre-tenure faculty who design their own mentoring networks **benefit from approaching mentoring more proactively and intentionally,** while tenured faculty invited to participate in a network **benefit from strengthened connections** between early-, mid-career, and senior colleagues (Sorcinelli & Yun 2009; Yun & Sorcinelli, 2013).
- Faculty members who participate in mentoring networks are more likely to regard mentoring as a career-enhancing activity as well as to develop mutually beneficial mentoring relationships than are their non-participating peers (Yun, Baldi & Sorcinelli, 2016).

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Mutual Mentoring for Early-Career and Underrepresented Faculty: Model, Research, and Practice

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Abstract In the beginning, "Mutual Mentoring" was little more than an idea, a hopeful vision of the future in which a new model of mentoring could serve as a medium to better support early-career and underrepresented faculty. Over time, Mutual Mentoring evolved from an innovative idea to an ambitious pilot program to a fully operational, campus-wide initiative. This article describes the conceptualization, design, implementation, and evaluation of a Mutual Mentoring initiative from 2006 to 2014. Findings indicate that faculty members who participated in this initiative were more likely to regard mentoring as a career-enhancing

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activity as well as to develop mutually beneficial mentoring relationships than were their non-participating peers.

Keywords Mentoring · New faculty · Faculty of color · Women · Faculty development

Colleges and universities live in a world of changing expectations and new challenges. The three primary forces of change that directly affect faculty members' abilities to carry out their teaching, research, and service include a changing professoriate; a changing student body; and the changing nature of teaching, learning, and scholarship (Sorcinelli and Austin 2013). The population of full-time, tenure track faculty at four-year colleges and universities is shrinking, and these faculty members increasingly struggle to prioritize multiple responsibilities and take on new and different roles. Students are more diverse than in the past (in race, ethnicity, class, age, sexual orientation, preparation, and prior academic performance), requiring instructors to provide additional supports in and outside of the classroom. As well, a changing paradigm for teaching, learning, and scholarly pursuits calls for the development of new knowledge and skills not only in evidence-based teaching practices, instructional technology, and assessment of student learning, but also in arenas such as professional networking, interdisciplinary collaboration, research and grant production, and career advancement.

We know that mentoring can address a number of the potential roadblocks to faculty success, offering an effective method for promoting socialization, productivity, and satisfaction, especially for early-career and underrepresented faculty. The potential of the mutual benefits of mentoring is one of its most appealing features. It has been shown to further career development through increased research productivity, more effective teaching, more dynamic networks, and improved tenure and promotion prospects. It also fosters social connections and relationships with colleagues who can provide collegial support, encouragement, and guidance, thus reducing the isolation often reported by early-career faculty (Johnson 2007; Ragins and Kram 2007; Trower 2012).

Despite these potential benefits, not all early-career faculty members receive adequate mentoring. We discovered this a decade ago, when the provost's office charged our faculty development center, a campus-wide unit in a large, public, research-extensive university, with creating a mentoring program for new, early-career, and underrepresented faculty. At the time, the state of faculty mentoring at our university varied greatly from one department to another. Some chairs offered excellent formal mentoring programs for their new hires, while others did not. Some senior faculty initiated informal but useful mentoring relationships with their junior colleagues, while others had few positive memories of or associations with mentoring; and some junior faculty members proactively sought out support from their colleagues, while others waited for support that never arrived.

As a result, isolated pockets of mentoring occurred across the campus, but such activities were inconsistent at best, and ineffective or inequitable at worst. Further complicating matters was the lack of a clear institutional message about the importance of faculty mentoring and the requisite guidance and resources to encourage the adoption of good practices across departments and schools/colleges. Given this environment, our challenge was to design a campus-wide mentoring initiative for new, early-career, and underrepresented faculty that would succeed within the unique context of our institution, which, at the time this work began in 2006, was comprised of eight schools/colleges, eighty-five academic departments and programs, and over 1,200 full-time faculty, of whom approximately 23 % were pretenure.

Working in collaboration with the Provost, deans, department chairs, and other academic leaders, we initiated what we called the "Mutual Mentoring Initiative."

When we first began our work on this initiative, mentoring was already considered one of the few common characteristics of a successful faculty career, particularly for women and faculty of color (Blake-Beard 1999; Ragins 1999; Stanley and Lincoln 2005). Yet the form of mentoring most frequently cited in the literature was the "traditional model," a top-down, one-on-one relationship in which an experienced faculty member guided and supported the career development of a junior faculty member. Formal mentoring programs at many colleges and universities, including ours, had attempted to duplicate this traditional model, with mixed success (Gibson 2006).

Based on a comprehensive needs assessment of our faculty, including surveys, interviews, and focus groups conducted over a six-month period, we determined that a traditional, one-on-one mentoring model was not sufficiently flexible enough for our faculty members, who reported a wide range of professional and psychosocial mentoring needs that were unlikely to be addressed by a single mentor. As a result, we turned to newer literature that documented emerging forms of mentoring in which new and early-career faculty worked with "multiple mentors" (de Janasz and Sullivan 2004), "constellations" of mentors (van Emmerik 2004), "networks" of mentors (Girves et al. 2005), "developmental networks" (Dobrow et al. 2012), or a "portfolio" of mentors who address a variety of career competencies (Higgins and Kram 2001). While theories and empirical research on this kind of mentoring were helpful, we were unable to find any examples of how to operationalize networked mentoring, especially in a formal mentoring program.

Our contribution to the mentoring literature is the translation of the theory and research on network-based mentoring to a formal mentoring program for new, early-career, and underrepresented faculty. We describe the Mutual Mentoring model, outline the design and development of the initiative, offer exemplars from faculty members who built their own innovative networks of mentors, and present compelling evaluation data on the positive outcomes of this approach to mentoring and professional networking.

Mutual Mentoring Conceptualization and Design

The Mutual Mentoring model and program design was informed by an extensive review of research on new and early-career faculty and mentoring. The elements most critical to early-career faculty satisfaction and success include: understanding the expectations for performance, especially the tenure process; finding support for teaching and research; developing substantive mentoring relationships; and balancing work and home life (Fink 1984; Menges 1999; Rice et al. 2000; Sorcinelli 1994; Trotman and Brown 2005; Trower 2012). We learned that mentoring, both formal and informal, is seen as perhaps the most effective method for socializing and supporting new faculty in all these aspects of their career (Johnson 2007; Ragins and Kram 2007). We also found remarkable congruence in findings across disciplines, research approaches, and some three decades of scholarship (Austin et al. 2007). Based on these findings and our own qualitative and quantitative needs assessment data (Sorcinelli and Yun 2007, 2009), we developed a flexible, network-based model of support called "Mutual Mentoring," in which faculty work with multiple mentors who provide support in their respective area(s) of expertise, rather than a single mentor who is less likely to be able to

address the wide variety of opportunities and challenges faced by diverse scholars in a modern academic career. The model's five key characteristics (Yun and Sorcinelli 2009) are as follows:

- Mentoring partnerships with a wide variety of individuals, including peers, near peers, tenured faculty, chairs, administrators, librarians, and students;
- Mentoring approaches that accommodate the partners' personal, cultural, and professional preferences for contact (e.g., one-on-one, small group, group, and/or online);
- Partnerships that focus on specific areas of experience and expertise (e.g., teaching) rather than generalized, "one-size-fits-all" knowledge;
- Benefits to not only the person traditionally known as the "protégé" or "mentee," but also the person traditionally known as the "mentor;" and
- A sense of empowerment in which new, early-career, and underrepresented faculty are not seen or treated solely as the recipients of mentoring, but as proactive, intentional agents of their own career development.

A key challenge in implementing the model was to give faculty members a sense of agency and freedom to develop their own context-sensitive mentoring relationships and activities, but within a campus-wide programmatic structure that promised equitable access to resources and support. We chose grants as the medium to encourage individuals to develop their own Mutual Mentoring networks. Incentives such as grants are an important way for faculty development centers to attract faculty, especially at research universities where writing grant proposals is a fundamental part of the academic culture.

On an annual basis, up to ten Team Grants (maximum of $10,000) were available for networks of four or more individuals, while up to fifteen Micro Grants (maximum of $1,200 each) supported smaller networks of two to three individuals. We want to note that a grant from a private foundation enabled our Institute to create its Team and Micro Grant Programs; however, we have worked with our institution and some 25 other colleges and universities to apply the Mutual Mentoring model to internal resources for faculty, such as professional development funds and start-up funds.)

Each grant year began with a call for proposals in the spring semester and several drop-in informational sessions during which we guided potential applicants through the process of developing a successful proposal. These sessions included an overview of the Mutual Mentoring model and research on networked mentoring, a guidebook of best practices for working with mentors and mentees (Sorcinelli and Yun 2011), and instructions on building a budget. The sessions also addressed the university's five priority mentoring areas for both Team and Micro Grants, which were organized around the themes identified from needs assessment data as most important to the satisfaction and success of early-career faculty. Grant proposals were required to address one or more of the following priority mentoring areas.

Getting to know the institution. Understanding the academic culture of departments, schools/colleges, and the institution; identifying resources to support teaching and research; and creating a trusted network of junior and senior colleagues.

Excelling at teaching and research. Finding support for teaching such as developing new courses, pedagogical methods, technologies, and interdisciplinary curricula and/or finding support for research, identifying sources of internal and external funding, and soliciting feedback on manuscripts and grant proposals.

Understanding tenure and evaluation. Learning more about the criteria for evaluating performance; understanding the specific steps of the tenure process; developing the tenure dossier; soliciting substantive feedback on the annual faculty review.
Developing professional networks. Establishing substantive, career-enhancing relationships with faculty members on- and off-campus who share similar interests in teaching and/or scholarship.
Creating work-life balance. Prioritizing/balancing teaching, research, and service; finding support for goal setting; developing time management skills; attending to quality of life issues such as dual careers and childcare.

Proposals were reviewed by a faculty committee. After the first year of the initiative, the committee was composed of former Mutual Mentoring Grant recipients. The committee evaluated each proposal based on the following criteria:

- Does the project build upon the Mutual Mentoring model to address one or more of the University's five priority mentoring areas?
- Does the project apply the concept of mentoring networks in a fresh, innovative way to address faculty needs? (This did not preclude replicating other successful projects.)
- Does the project include a plan of action that is realistic, practical, and fiscally responsible?
- Does the project bring faculty members together in a way that respects, promotes, and encourages dialogue about diversity and inclusion?
- Can the project be replicated and serve as a model for mentoring in other individual, departmental, school/college, and interdisciplinary scenarios?

Faculty Customization and Implementation of Mutual Mentoring

Tenure-system faculty members at all career stages worked within the Team and Micro Grant guidelines to create a diverse range of projects that were custom-designed by and for the primary benefit of the early-career participants. In some instances, participants chose to focus on building mentoring partnerships between peers and near peers, while others dedicated themselves to strengthening connections between early-career and senior faculty. Some teams planned their efforts around developing disciplinary or interdisciplinary on-campus mentoring networks, while others sought out off-campus expertise. Some teams formed what we call "affinity groups," focused on a shared research, teaching, career stage, or identity interest. Notably, women and faculty of color were most likely to form affinity groups, such as "Blacklist: A Women of Color Faculty Group," "Supporting Faculty of Color through Tenure and Beyond," "The Women's Interdisciplinary Writing and Publishing Network," and "Life Sciences Women Faculty." The flexibility of the Mutual Mentoring model empowered grant recipients to make informed choices about the types of mentors and mentoring activities they need most. As a result, every network looked different. Below are exemplars of both Team and Micro Grants.

Exemplars of Mutual Mentoring Team Grants

The Team Grant Program provided support to departmental, school/college, interdisciplinary, and affinity teams for a Mutual Mentoring project of their own design. The following offers one example of each of these kinds of mentoring networks.

Mentoring Teaching in the Physics Department. The Department of Physics established a peer- and near-peer mentoring network focused on promoting teaching excellence across the department's wide range of course offerings. As part of the grant, the team convened weekly to discuss individual teaching projects; created a blog to archive and build upon their in-person discussions; hosted regular meetings to discuss broader teaching techniques and issues, such as identifying diverse learning styles, adopting new technology, assessing student preparation, using grading rubrics, and making effective use of teaching assistants; and brought nationally-renowned experts on physics education to speak at department colloquia.

College-Level Mentoring in Social and Behavioral Sciences. This team implemented a "cross-departmental interdisciplinary mentoring initiative" in which all new pre-tenure hires selected a mid-career mentoring partner from their home department. In addition, all of the new pre-tenure hires met in monthly interdisciplinary group discussions over the course of the academic year. There was an opening Mutual Mentoring mini-conference to introduce the new faculty to the mentoring program, a January retreat for the new pre-tenure hires and their mentoring partners, and a reception in the spring. All participants received a modest stipend for meals to facilitate regular one-on-one or small group discussions on teaching and research topics of their choice throughout the year.

Interdisciplinary Seminar on the New Meanings of Race. This team gathered female and male faculty, tenure-track and tenured faculty, and white faculty and faculty of color from the Afro-American Studies and English Departments to focus on the emergent challenges of scholarship and teaching about race in the 21st century. The group met regularly to discuss pedagogical strategies for facilitating "difficult dialogues in the classroom;" the changing scholarship of race; professionalization strategies centering on networking, publications, and web presence; and individual faculty teaching and research projects. The seminar also hosted talks by prominent scholars.

Mother Wit (*We are in this together*). Designed as an affinity group, Mother Wit was comprised of academic mothers in several education and social science departments who shared a motivation to excel in their careers while balancing the care and well-being of their young families. As part of the grant, assistant professors paired up with associate professors for one-on-one mentoring, gathered for regular writing sessions to discuss manuscripts and the writing process, hosted speakers on parenting and mothering, discussed possible formal recommendations to influence institutional policy on supporting families and work/life balance, and supported participation at its various meetings by providing team members with child care. The group also launched a website to track participants' writing progress.

Exemplars of Micro-Grants

Micro Grants encouraged early-career faculty to self-identify areas for growth and to develop the necessary mentoring relationships to make that growth possible. Faculty members identified a wide range of goals and innovative mentoring relationships, and below are some exemplars of these smaller networks involving two or three individuals.

A female assistant professor in the Department of Art and Art History set a goal *to better integrate her life as a teacher and artist*. To foster these two sides of her career, she used her Micro Grant to build upon her fledging mentoring partnership with an internationally

acclaimed artist, critic, curator, and professor at another research university. The assistant professor brought him to campus, where he met with her and her colleagues, provided studio critiques to her students, and gave a talk on studio teaching and career development. His versatility as a teacher, scholar, and artist made him an ideal mentor for both students and faculty. The mentoring relationship continued beyond his visit. The mentor attended her painting exhibition, communicated regularly with her about teaching and arts funding opportunities, and met with her at their professional conference.

A female assistant professor in the Department of Biology applied for a Micro Grant *to learn new research skills and mentor her students*. She used her grant to reach out to a renowned senior professor—someone she didn't even know—at a research university in Texas. The assistant professor asked to visit the laboratory of her external mentoring partner to learn more about lab techniques for a future field study. While visiting her "just-in-time" mentoring partner, she also developed connections between their two departments. Upon returning to campus, the assistant professor trained her graduate students in the same techniques, thus extending mentoring relationships in and beyond her department.

A male assistant professor in Engineering who had jump-started an impressive research program chose to focus his grant on increasing his limited experience in teaching. His goal was *to strengthen his pedagogical skills and build a network of support from senior faculty.* In doing so, he discovered that many of his most productive mentoring relationships were close to home. As part of his grant, the assistant professor asked his department chair to co-teach an undergraduate course with him, followed by one-on-one mentoring on teaching practices after each class. He also arranged regular pedagogical meetings with his chair and two other noted teachers in his college. Finally, he attended a career development pre-conference institute at his professional association's annual conference. There, he met a small cohort of early-career faculty in his disciplinary area with whom to share syllabi, teaching activities, assignments, and assessments.

The goal of two female assistant professors in the Classics and English Departments was *to build more accountability and support for their scholarly writing.* Their grant proposal demonstrated that mentors don't need to be senior faculty members. They established a peer writing and mentoring partnership to support each other as they worked on their respective book manuscripts and book proposals. They met every other week to track their writing progress and dedicated most of their funds to working with a professional writing coach and editor over the course of the year. They also applied many of their newly-acquired strategies for writing into their courses on business and technical writing, web design, advanced composition, and Greek drama and voices.

Evaluation of the Impact of Mutual Mentoring

Without data, institutions can only speculate on whether or not their mentoring program is effective. In order to understand if these grant programs actually increased faculty learning, agency, and capacity for building substantive relationships, as well as contributed to a culture of mentoring and professional development support, we developed an assessment plan to regularly collect multiple sources of qualitative and quantitative data over a seven-year period.

On an annual basis, we collected data from three sources: a one-on-one *intake meeting with all Team Grant leaders and Micro Grant recipients prior to the release of grant funds* to discuss their proposed activities and determine if any new opportunities or challenges had developed since writing their proposals; a one-on-one or team *formative assessment conducted*

midway through the grant year to determine if the proposed activities were progressing as planned or if any changes were needed to ensure the quality and quantity of mentoring activities before the grant concluded; and *a standardized summative assessment at the end of the grant year*, using a 14-point online survey that we administered to all Team and Micro Grant recipients from 2006 to 2014.

In addition to these annual sources of data, working in cooperation with our assessment office, we developed and launched an *all-faculty survey* in the spring of 2014 about faculty experiences with and attitudes about mentoring. This survey compared the responses of faculty who had participated in Mutual Mentoring activities against non-participants to understand the longer term effects of Mutual Mentoring on faculty careers.

Records of how many faculty members elected to participate in the Mutual Mentoring initiative provides a good starting point for examining the program's success. From 2006 to 2014, our Institute awarded 69 Team Grants and 73 Micro Grants to faculty members from all eight schools and colleges and 50 departments at the university. During this time period, 518 unique faculty members, approximately 40 % of all full-time instructional faculty on our campus, elected to participate in the Mutual Mentoring Initiative. (Percentages are approximate because of normal faculty population shifts from year to year.) In our needs assessments, women and faculty of color were insistent that the program not be a "special" program for underrepresented faculty but be open to all faculty. It is particularly compelling then, that of the 518 unique faculty participants, 290 were women and 151 were African, Latino, Asian, and Native American ("ALANA") faculty.

Responses to online surveys at the end of each grant year also indicate a high level of satisfaction with Mutual Mentoring activities. For example, when we asked participants, "Overall, how would you rate your Mutual Mentoring Experience," (on a 5-point scale from poor to excellent), an average of 81 % of all Team Grant participants and 93 % of all Micro-Grant recipients from 2006 to 2014 rated their experience as "Excellent" or "Very Good." Responses to the survey also suggested a long term sustainability of Mutual Mentoring relationships. When asked "Are these new mentoring relationships likely to continue after the grant period has ended?", an average of 91 % of all Team Grant recipients and 97 % of Micro Grant recipients expected their mentoring relationships to continue.

Finally, in the spring of 2014, we conducted a large-scale survey to compare the reported outcomes of participants in the Mutual Mentoring initiative (43 % response rate) with non-participants (31 % response rate). We worked with our assessment office to develop and launch a survey of the entire University faculty to assess attitudes toward and experiences with mentoring. Research suggests that effective mentoring programs address two equally important facets of mentoring: (1) career development in order to foster work productivity and (2) relationship development in order to foster work satisfaction (Bland et al. 2009). Our findings indicate that the faculty members who participated in the Mutual Mentoring Initiative were more likely than non-participants to report concrete, visible outcomes of their mentoring relationships, such as the publication of an article or book, presentation of a paper, submission of a grant, and/or other meaningful professional achievements. In addition, Mutual Mentoring participants differed from non-participants in the following statistically significant ways:

- Being involved in current mentoring activities (91.3 % for Team and Micro Grant participants compared to 77.7 % for non-participants).
- Agreeing with the statement that "mentoring resulted in the development of career-enhancing relationships with other faculty" (74.2 % for Team and Micro Grant participants compared to 59.8 % for non-participants).

- "Having current mentoring relationships in which each participant benefited mutually" (71.9 % for Team and Micro Grant participants compared to 52.2 % of non-participants).

As we neared the conclusion of seven years of external grant funding, we sought out internal sources of support in order to institutionalize the Team and Micro Grant Programs, an effort that was greatly aided by our ability to share data on the programs' effectiveness and impact. Today, the Mutual Mentoring Initiative continues on our campus with a few notable changes. We continue to offer up to ten Team Grants per year, but we have lowered the maximum award to $6,000 based on faculty feedback about how challenging it can be to spend down larger amounts within a single academic year. We have also expanded the pool of eligible beneficiaries to include full-time lecturers and post-tenure faculty, an acknowledgement of the need for mentoring at all ranks and stages of the faculty career. In our most recent grant cycle—the first using institutional funds—we received a record number of proposals for both programs, and the selection committee awarded ten Micro Grants and nine Team Grants. As in years' past, these teams include many early-career and underrepresented faculty, but they also include exciting new teams comprised of Associate Professors working together to support each other toward promotion, female faculty members exploring transitions into institutional leadership roles, and lecturers within a college creating a network of support responsive to the needs of full-time contract faculty.

Beyond our own campus, we are also deeply gratified by the growing number of research universities, comprehensive universities, and liberal arts colleges in the U.S. and internationally that have adopted or adapted the Mutual Mentoring model and/or one or both of our Mutual Mentoring grant programs on their own campuses.

Conclusion

On reflection, we believe there are a number of reasons for the Mutual Mentoring Initiative's successful and sustainable impact on our faculty and institution. First, the program was open to all tenure-system faculty versus targeted groups. Women and faculty of color were over-represented in the initiative because the Mutual Mentoring model provided the type of non-hierarchical, relational and reciprocal mentoring structure desired by these populations. Broadening the definition of mentoring to include a network of multiple, diverse mentors, they reported, facilitated their building mentoring partnerships. Studies suggest that of greatest significance to women faculty and faculty of color in determining their satisfaction and capacity to succeed is the kind of climate and collegiality they experience on campus, including opportunities to collaborate with colleagues and to experience professional and personal interactions that are more flexible and less intense than the traditional one mentor and one mentee mentoring model (Wasburn 2007; Trower 2009).

Second, the model expanded the traditional mentoring model, respecting the important role of a senior faculty mentor but also making it clear that the faculty role is increasingly complex and that no single person or mentor holds all the knowledge and skills needed to be successful. As our faculty members participated in mentoring networks with peers, near-peers, and senior colleagues, all of whom brought different types of valuable expertise and experience to the table, they reported that knowledge became more distributed than concentrated. In this way, all members of the academic community had something to teach and learn from each other. As one senior faculty member noted in our large-scale survey, Mutual Mentoring "provides a great mechanism to learn from junior colleagues, who are more up to date on many of the latest advances in technology." Another participant provided further detail:

> Although as a senior faculty member I appear to have more to give than to receive, I find that this is not true at all. Indeed, the Mellon opportunity has alerted me to how much I can learn from younger colleagues. They have helped me sharpen my sense of [my] field … as it is emerging in the work of young scholars today, and they have helped me see the importance and value of social media.

The self-initiated nature of Mutual Mentoring may also have contributed to the level of senior mentor participation; when faculty identify and articulate their own mentoring needs, they provide clearer goals that can lead to more defined, targeted mentoring commitments. Simply put, it is more appealing to commit to a mentoring relationship when the expectations are specific and clear.

The initiative also offered customized, faculty-driven projects versus generic mentoring imposed from above. This empowered early-career and underrepresented faculty to initiate mentoring relationships that addressed their individual professional development needs, cultures, schedules, and preferences for contact. It also avoided the "cloning phenomenon" in which the mentoring relationship primarily promotes the mentor's personal and professional agenda (Johnson 2007). Instead, the Mutual Mentoring model reinforced the notion that we live in an era of networks, not hierarchies.

Fourth, the program invested in faculty through grants, with principal investigators. As noted, grants are the coin of the realm in many colleges and universities and faculty members are eager for opportunities to apply for them, even if the funds are relatively modest. In addition, these seed grants often assisted participants in later achieving significant, career-altering milestones such as major research grants, book awards, and grants for the development of innovative curricula, all of which participants attributed to their work with internal and external mentoring partners.

Finally, the Mutual Mentoring Initiative made mentoring more intentional, purposeful and empowering. It inspired faculty members to initiate mentoring relationships that addressed their context-sensitive professional development needs, accelerated the process of developing professional networks that otherwise could have taken years to establish, and lowered the barriers for collaboration by giving faculty members a reason to make connections with colleagues. It also encouraged them to address a broad range of professional and career issues, integrating teaching, research, mentoring and career advancement in ways often difficult to achieve in traditional mentoring programs (Foote and Solem 2009). Perhaps most importantly, the Mutual Mentoring Initiative enabled new, early-career, and underrepresented faculty to experience, through productive and lasting relationships with individuals across career stages, disciplines, and institutional boundaries, the collegiality that is the essence of an academic community.

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